

Level of Implementation of Strategic Plans to the Adequacy of Physical Facilities in Public Secondary Schools in Arusha Region

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Abstract

This study investigated the level of implementation of strategic plans and its impact on the adequacy of physical facilities in public secondary schools in Arusha Region. The study utilized Resource Dependence Theory (RDT) which was developed by Jeffrey Pfeffer and Gerald R. Salancik in 1978. The literature review revealed that there was inadequacy of physical facilities in public secondary schools in the Region. The study employed convergent research design under mixed research approach. The target population consisted of 163 public secondary schools, 978 Student Leaders (SLs), 4694 teachers, 163 Heads of Schools (HoS), seven District Chief School Quality Assurance Officers (DCSQAOs), and seven District Secondary Education Officers (DSEOs). Probability and non-probability sampling procedures were employed to determine the study sample of 16 schools, 16 HoS, 469 teachers, 98 SLs, six DCSQAOs and six DSEOs, resulting in a total of 595 respondents. The data collection instruments were questionnaire, interview guides, focus group discussion guides and document analysis guides. The quantitative data were analyzed descriptively and inferentially in frequencies, percentages, means, and presented in tables and interpreted in relation to research questions. The qualitative data were analyzed by coding the contents into themes, interpreting direct quotations, and presented in narrative form. The findings revealed that there was moderate level of implementation of strategic plans leading to inadequate improvement of physical facilities in public secondary schools. The hypothesis was tested by Pearson Correlation Product Moment and found a significant relationship between level of implementation of strategic plans and adequacy of physical facilities. The study concluded that the level of implementation of strategic plans was moderate as most public secondary schools with strategic plans had shortage of physical facilities. The study recommended that Quality Assurance Officers should conduct regular visits and follow-upsto public secondary schools to ensure effective implementation of strategic plans.

Keywords: level of implementation, implementation, strategic plans, adequacy, physical facilities

Introduction

The United Nations proposed seventeen Sustainable Development Goals (SDGs) namely; (1) no poverty, (2) zero hunger, (3) good health and well-being, (4) quality education, (5) gender equality, (6) clean water and sanitation, (7) affordable and clean energy, (8) decent work and economic growth, (9) industry, innovation and infrastructure, (10) reduced inequality, (11) sustainable cities and communities, (12) responsible consumption and production, (13) climate action, (14) life below water, (15) life on land, (16) peace, justice, and strong institutions, (17) partnerships for the goals (UN, 2015).

Provision of quality education is SDG number four and is the focal concern of this study as it calls for promotion of sustainable development and sustainable lifestyles, human rights, gender equality, culture of peace and non-violence, global citizenship and appreciation of cultural diversity (UN, 2018). To achieve this, educational institutions must ensure adequacy of physical facilities since they play a great role in the process of learning. Gervas (2019) observes that, lack of sufficient classrooms, latrines, dormitories, and housing for teachers, have undermined the quality of the teaching environment leading to poor quality of education in Tanzania. Thus, raises a concern on whether schools were sufficiently preparing and implementing strategic plans for improvement of physical facilities. This concern has been addressed by the findings of the current study. The ongoing poor performance in public secondary schools is largely associated with inadequate physical facilities (Gervas, 2019, URT, 2018/2019 & Lyimo et al., 2017). It is from this perspective; the government of Tanzania introduced strategic plans to enhance the performance of various sectors, including improving physical facilities in schools (URT, 2018; Paulson, 2016).

A study by Lyimo et al. (2017) found out that public secondary schools in Arusha Region had classrooms but were not enough. The study further revealed that the available classrooms were too small with few desks and chairs leading to many students attending lessons in a single congested room. The congestion of students in classrooms could limit teacher-student and student-student interaction leading to poor students' academic performance.

The Education Sector Performance Report of 2018/2019 further shows that, 5,554 schools out of the 8,769 which were visited by quality assurance officers in 2018/2019 were rated below the target quality standard of 'Good', and a follow up for improvement, particularly in Arusha schools, was recommended. Specifically, Arusha Region had shortage of 9,910 students' chairs, 12,207 students' tables, and 171 science laboratories (URT, 2021). Physical facilities are fundamental in the realization of the academic objectives for they help in creating conducive learning environment to both students and teachers. Thus, the ESPR raised concerns on how secondary schools in Arusha Region planned for physical facilities; and whether such plans were adequately implemented. Thus, the study on level of implementation of strategic plans to the adequacy of physical facilities in public secondary schools was inexorable.

Statement of the Problem

The problem stated in the context is the poor physical facilities and unsatisfactory performance of learners in public secondary schools, despite the government's directives on the preparation and implementation of strategic plans. Strategic plans intend to improve physical facilities and to facilitate learning for better performance. However, the current situation indicates that learning in public secondary schools in Arusha is conducted in inadequate facilities, resulting in poor academic performance.

To address the concern, there is a need to investigate the level of implementation of strategic plans in relation to the adequacy of physical facilities in public secondary schools. Previous studies, such as those conducted by Edward (2018), Arshad (2019), and Priyambodo and Hasanah (2021), have shown that strategic plans contribute significantly to the adequacy of physical facilities in schools, leading to improved learner performance. However, these studies did not specifically address the levels of implementation of strategic plans in relation to the adequacy of physical facilities, which is the focus of the current study. Therefore, the objective of the current study is to investigate the level of implementation of strategic plans in public secondary schools to the adequacy of physical facilities in Arusha Region.

Research Question and Hypothesis

The study was guided by the following research question and hypothesis:

How do strategic plans contribute to the adequacy of physical facilities in public secondary schools in Arusha Region?

Ha: There is a significant relationship between the level of implementation of strategic plans and the adequacy of physical facilities in public secondary schools.

Significance of the Study

The findings of the study will help educational officers, heads of schools, and quality assurance officers make informed decisions and take appropriate actions to improve the physical infrastructure of schools under their supervision. By understanding the level of implementation of strategic plans to adequacy of physical facilities in schools, they can allocate resources more effectively and ensure a conducive learning environment for students. Furthermore, the findings of the study will assist board members in the education sector in making informed decisions about resource allocation and infrastructure development. School board members can use the findings to formulate strategies that prioritize the improvement of school infrastructure leading to better planning and resource management. The study findings will be relevant to the Tanzania Ministry of Education, Science and Technology (MoEST) as it will provide insights into the existing policies in ensuring adequate physical facilities in public secondary schools. The MoEST will utilize the study's findings to review, modify, or amend educational policies related to physical infrastructure. This can lead to more targeted interventions and policy changes that address the identified gaps and improve the overall quality of education in the country. The study will contribute to the wider body of knowledge on the implementation of strategic plans for ensuring the adequacy of physical facilities in schools. By making the study material accessible to a broader audience, such as teachers, students, researchers, and the society at large, it can serve as a valuable resource for learning and reference.

Theoretical Framework

The study utilized Resource Dependence Theory (RDT) which was developed by Jeffrey Pfeffer and Gerald R. Salancik in 1978. The RDT posits that organizations rely on resources to ensure long-term survival (Zehir et al. 2019). The basic assumption of RDT is that every organization tries to ensure the organizational survival. According to the RDT, the most important thing for organizational survival is the organizational ability to acquire and maintain resources (Pfeffer & Salancik, 1978). Organizational resources in this regard include all assets, capabilities,

organizational possessions, attributes, tools and knowledge controlled by management in the implementation of strategies leading to efficiency and effectiveness of the organization (Greener, 2019).

Resource Dependency Theory suggests that, if one school possesses more resources, there could be a great possibility of another school to depend on it in order to accomplish its operations hence dependency syndrome. Resource dependence theory is vital for school's success and the access and control over resources is a sign of power. According to Kumar (2021) resources are often organized by schools and strategies must be carefully put in place in order to maintain open access to resources. One of the important resources in school is educational material resource. Educational material resources are physical facilities used by teachers and learners in the process of learning. They include playgrounds, buildings, furniture and other materials applicable in education system. Osuji et al. (2021) adds that educational material resources are facilities that are used to develop and add value to learners. The implementation of strategic plans becomes successful if such educational resources are available, modern and adequate.

Strengths, Weaknesses and Relevance of RDT

The RDT facilitates the achievement of school targets including academic targets. It helps in building new relationships and partnerships with other organizations. It also helps in developing internal resources hence improving infrastructure. One weakness of the RDT is that it focuses on power and structures to control resources and ignores economic factors like costs and efficiency. The theory is relevant to the study as it predicts the physical facilities required in the school. It also ensures availability of physical facilities for better and conducive learning environment. By applying RDT in schools, educational leaders can develop strategies to diversify resources, and establish partnerships to enhance school performance.

Literature Review

Arshad et al. (2019) conducted a study in Pakistan on assessment of implementation of strategic plans in enhancing school support facilities on academic achievement at Punjab Education Foundation Partner Schools. The aim of the study was to assess the effect of school support facilities. The study utilized a descriptive research design and collected data through a survey approach. The sample consisted of 146 Principals selected using multi-stage random sampling technique. The findings of the study showed that strategic plans highly contributed to the availability of school support facilities and such resources had a positive impact on students' academic achievement. However, the study's generalizability is limited because it was conducted in Pakistan, where the economic status and educational context might differ from Tanzania. Thus, it is difficult to generalize the findings. It had been noted that public secondary schools in Tanzania had limited access to modern facilities, with most teachers relying on textbooks and chalkboards for instruction (Kweka & Ndibalema, 2018). The current study addressed this limitation by conducting research in Tanzanian schools. The focus of the study was to examine the level to which the implementation of strategic plans contributed to the availability or unavailability of essential teaching and learning facilities, particularly modern resources like tablets, laptops, and other IT facilities. The current study further explored the relationship between strategic planning and the availability of teaching and learning resources in Tanzanian schools, considering the imbalance in the textbook-student ratio reported in public secondary schools (URT, 2018).

Priyambodo and Hasanah (2021) conducted a study in Indonesia on strategic planning in increasing quality of education in secondary schools. This study aimed to explore school strategic planning, analyse, and plan strategic planning in improving the quality of education at SDN Jetis Bantul. Researchers used descriptive research with a qualitative approach. Data collection techniques in this study were in-depth interviews, participant observation and documentation. The study subjects were the principal, members of the principal's work deliberation, supervisors, teachers, and the school committee. Data analysis techniques used were data reduction, data presentation, drawing conclusions and levers. The results showed that the implementation of school strategic plans highly motivated educators and education personnel leading to development of educational organizations. The previous study yielded educative findings on the motivation of educators by the aid of strategic plans. However, the study concentrated on motivation of educators which partially informed the current study. The current study focused on the level of implementation of strategic plan to the adequacy of physical facilities and how that impacted on school's performance.

Akomolafe et al. (2017) conducted a study in Nigeria on the impact of physical facilities on students' level of motivation and academic performance in senior secondary schools in South West Nigeria. The purpose of the study was to examine the relevance of physical facilities in enhancing the level of motivation and the academic performance of senior secondary school students. The study adopted ex-post facto design. The population consists of all senior secondary students in South West Nigeria. The sample for the study included one thousand and fifty senior secondary school students. The researcher made use of a questionnaire to collect data. The findings revealed that the availability and adequacy physical facilities play a significant role and had a moderate level of motivation in enhancing students' academic performance, while inadequacy of such physical facilities could contribute to poor academic performance in students. The study recommended more physical, human and material resources that are of high quality to be made available in public school to motivate students towards learning. The study is credited by its findings on the significance role of strategic plans to adequacy of physical facilities in schools, nevertheless, the study involved only students as participants thereby limiting triangulation of information for comprehensive understanding of the research problem. The current study involved a wide range of stakeholders including heads of schools (HoS), teachers, student leaders (SLs), District Secondary Education Officers (DSEOs), and District Chief School Quality Assurance Officers (DCQAOs), to obtain a wide range of information for comparison reasons before drawing conclusions. The variety of participants enriched the study hence the findings of the current study were different. Furthermore, the previous study used questionnaire alone as the data collection instrument which limits the in-depth information which could otherwise be obtained through qualitative data collection instruments which were used in the current study.

Nyangia (2021) conducted a study in Kenya on strategic plan implementation and its effect on internal efficiency in public secondary schools in Kisumu and Uasin Gishu Counties. The study purpose was to establish effect strategic plan implementation on internal efficiency in government post primary schools. The study utilized a convergent design in mixed methods approach. The target population was 2226 consisting of 371 principals, 1484 teachers and 371 PA chairpersons. The sample size was 342 which consisted of 57 public secondary schools selected using stratified sampling technique hence 57 principals, 57 PA Chairpersons which were purposively sampled; and 228 teachers selected by simple randomly selection technique.

Interview schedule, document analysis observation schedule and questionnaires being research instruments were also employed. The findings established that there was moderate participation of schools in co-curricular activities which impacted on positive influence on students' grade promotion rate and retention rate hence internal efficiency. The findings of the study on moderate participation of schools in co-curricular activities are relatively informative. However, the study focused on school's participation on various activities in the implementation of strategic plans and how the participation improved efficiency. This focus inadequately informed the current study. The current study therefore focused on levels of strategic plans and its implications on physical facilities in schools.

Eliufoo and Maro (2019) conducted a study on an examination of school buildings' physical condition and students' examination performance in Tanzania. The purpose of the study was to examine the relationship between schools' building physical condition and students' examination performance. Data were collected through physical observation of schools' building facilities and examination results from the National Examination Council of Tanzania for O-Level results for a period of seven years. A total of 97 government secondary schools were examined where a correlation analysis was made between a weighted physical condition status of a school and pass/fail ratio in examinations. The results established a positive correlation between a school's physical condition and examination performance. The findings from the study enriched the current study in what is expected to be put in place to enhance performance that is, physical facilities. However, the study used observation as the only data collection instrument. Physical observation as a tool for data collection is limited by nature as observation only focuses on what is physically available at that particular moment. The tool can limit triangulation and interaction with a sizable number of respondents who could be a rich source of information. The current study collected data through questionnaire, interview guides, focus group discussion guides, and document analysis guides. This enabled the researcher to triangulation information collected. Thus, increasing the trustworthiness of the information obtained from different instruments.

Mgimba (2021) conducted a study in Tanzania on influence of school infrastructure on students' academic performance in rural public secondary schools in Iringa District. The study aimed at assessing the availability of school infrastructure on enhancing students' academic performance. The research used a mixed method approach and employed convergent research design. The study involved 151 respondents comprised of 48 teachers, 97 students, 5 heads of schools, and 1 District Education Officer. Simple random sampling and purposive sampling techniques were used to select the respondents. The study used questionnaires, interviews and observation to collected data. Data were analysed descriptively and thematically. The findings of the study revealed that students' performance in rural public secondary schools in Iringa District was unsatisfactory due to misuse of physical facilities. The study revealed situations of students using broken chairs and desks leading to lack of peace of mind hence poor academic performance. This information gave a clue on some of the issues expected in the findings of the current study. The current study investigated the adequacy of physical facilities in public secondary schools.

Edward (2018) conducted a study in Tanzania on strategic planning in enhancing physical facilities on students' academic achievement in community secondary schools in Karagwe District. The study employed mixed approach and convergent parallel design. The study involved 287 participants. Data was collected through questionnaires, interviews, observation and document review. Quantitative data was analysed by using descriptive statistics and qualitative data by thematic analysis. The findings of the study revealed that students' performance in

community secondary schools at Karagwe District was not promising due to inadequacy of physical facilities like library, chairs and desks, teacher's houses, laboratory and game facilities. The study recommended the government to set up adequate budget to enable improvement of facilities in schools. The findings of the previous study revealed inadequacy of physical facilities and suggested to the government to increase the budget for physical facilities, which was quite informative. Nevertheless, from the study, what caused the inadequacy of physical facilities was unknown. The current study established the levels of implementation of strategic plans and the cause of inadequacy of physical facilities in schools.

Knowledge Gap

On methodology, most studies used one category of participants leading to biased, narrowed and limited information (Akomolafe et al., 2017, Arshad et al., 2019, Eliufoo and Maro, 2019). The current study used different categories of participants including District Chief School Quality Assurance Officers (DCSQAOs), District Secondary Education Officers (DSEOs), Heads of Schools (HoS), teachers, student leaders (SLs) to get different opinions. This diverse range of participants allows for a more comprehensive understanding of the research problem. On the findings, most studies have revealed unsatisfactory academic performance of schools due to inadequate of physical facilities (Edward, 2018, Akomolafe et al., 2017, Mgimba, 2021). However, these studies have not explored the level of implementation of strategic plans to the improvement of physical facilities and overall school performance. The current study investigated the level of implementation of strategic plans in relation to the adequacy of physical facilities. By addressing these gaps in the literature, the current study provided a more comprehensive and in-depth understanding of the relationship between strategic planning, physical facilities, and school performance.

Research Methodology

The study employed convergent research design under mixed research approach. The target population consisted of 163 public secondary schools, 978 SLs, 4694 teachers, 163 HoS, seven DCSQAOs and seven DSEOs. Probability and non-probability sampling procedures were employed to determine the study sample of 16 schools, 16 HoS, 469 teachers, 98 SLs, six DCSQAOs and six DSEOs, making a total of 595 respondents. Instruments used in data collection were questionnaires, interview guides, focus group discussion guides and document analysis guides. The quantitative data were analyzed using descriptive and inferential statistics with the aid of Statistical Packages for Social Sciences version 25.0. The quantitative data were presented in tables then were coded and analyzed through frequencies, percentages, means, and interpreted in relation to research questions. The qualitative data were analyzed by coding contents into themes, interpreting direct quotations and presenting them into narrative form.

Findings and Discussion

Level of implementation of strategic plans to the adequacy of physical facilities

The research question inquired about the level of implementation of strategic plans in relation to the adequacy of physical facilities in public secondary schools in Tanzania. The respondents for this research question included heads of schools, teachers, chief district school quality assurance

officers, district secondary education officers, and student leaders. Quantitative data were collected from teachers using questionnaire while qualitative information was obtained through interviews with heads of schools, district secondary education officers, and chief district school quality assurance officers. Additionally, student leaders provided their responses through focus group discussions.

Data presentation is presented in a way that the percentage of strongly Agree (SA) and Agree (A) are combined together to form the overall percentage of agreement opinion, the percentage of Undecided (U) is presented as it was responded, without combining it with any other category, and the percentage of Disagree (D) and Strongly Disagree (SD) are combined to form overall percentage of disagreement opinion. The combination of scores was guided by Warmbrod (2014) who postulated that scores derived from a Likert scale should be summated scores that consider the composite of responses to multiple items, rather than responses to individual items.

The study classified the mean scores into three levels based on ranges. Mean scores ranging from 3.5 to 5 are categorized as high, mean scores ranging from 2.5 to 3.4 are categorized as moderate, and mean scores ranging from 1.0 to 2.4 are categorized as low (Wanjohi & Syokau, 2021). This classification helped in capturing the level of implementation of strategic plans. To determine the score values, positive statements were assigned the following values: strongly disagree (SD) = 1, disagree (D) = 2, undecided (U) = 3, agree (A) = 4, and strongly agree (SA) = 5. On the other hand, a reverse value was assigned to all negative statements. This means that for negative statements, the values assigned were: strongly disagree (SD) = 5, disagree (D) = 4, undecided (U) = 3, agree (A) = 2, and strongly agree (SA) = 1. In this regard, Table 1 presents data from the teachers' questionnaire on the level of implementation of strategic plans to adequacy of physical facilities. The responses for teacher's questionnaire are then interpreted in conjunction with the supportive responses obtained from interviews, focus group discussions, and document analysis guides. This approach allows for a comprehensive analysis of the data, as it incorporates multiple sources of information to provide a deeper understanding of the level of implementation of strategic plans and its impact on the adequacy of physical facilities.

Table 1

Teachers' Responses on Level of Implementation of Strategic Plans to Adequacy of Physical Facilities (n=335)

S/N	Likert scale items	SD		D		U		A		SA		Mean
		f	%	f	%	f	%	f	%	f	%	
1.	Implementation of strategic plans has improved the number and size of ventilated classrooms and staff rooms	71	21.2	140	41.8	43	12.8	51	15.2	30	9.0	2.49
2.	Implementation of strategic plans has improved the number and size of well-equipped libraries and science labs	56	16.7	115	34.3	47	14.0	73	21.8	44	13.1	2.80
3.	Implementation of strategic plans has improved the number and size of sanitation facilities	51	15.2	119	35.5	59	17.6	79	23.6	27	8.1	2.74

4.	Implementation of strategic plans has improved the number and size of Playgrounds	46	13.7	108	32.2	46	13.7	82	24.5	53	15.8	2.96
5.	Implementation of strategic plans has improved the number and size of meeting/study halls	53	15.8	94	28.1	43	12.8	62	18.5	83	24.8	3.08
6.	Implementation of strategic plans has improved the number and size of dormitories	72	21.5	81	24.2	34	10.1	79	23.6	69	20.6	2.98
7.	Implementation of strategic plans has improved the number of furniture- tables, desks, and chairs	71	21.2	113	33.7	51	15.2	71	21.2	29	8.7	2.62
8.	Implementation of strategic plans has improved the number and Size of assembly areas	72	21.5	110	32.8	53	15.8	76	22.7	24	7.2	2.61
9.	Implementation of strategic plans has improved the number of open spaces for recreation	53	15.8	107	31.9	65	19.4	74	22.1	36	10.7	2.80
10.	Implementation of strategic plans has improved the supply of Power and water in school	85	25.4	101	30.1	43	12.8	59	17.6	47	14.0	2.65
Average Mean												2.77

Source: Field Data, (2022). Key: SD- Strongly Disagree, D- Disagree, U- Undecided, A-Agree, SA -Strongly Agree

Data in Table 1 reveal that 63% of teachers strongly disagreed and disagreed that implementation of strategic plans improved the number and size of ventilated classrooms and staff rooms in schools. On the other hand, 24.2% agreed and strongly agreed to the statement. The disagreement was further evidenced by the mean score of 2.4. This implies that the level of implementation of strategic plans to adequacy of physical facilities was low. This is to say the number and size of classrooms and staff rooms in schools were there but did not meet the recommended criteria and standards. This could be due to shortage of funds in schools. The study further revealed that, strategic plans on increasing the number of well-ventilated classrooms and staffrooms were prepared but were not fully utilized. Responding on the utilization of strategic plans, HoS15 had the following to say:

The strategic plans we prepare remain in school and are never utilized to the maximum. Shortage of funds for implementation is one thing but also monitoring an evaluation of the strategic plans is another demanding aspect (HoS15, personal communication, July 21, 2022).

The views from HoS15 show that heads of schools prepared strategic plans through soliciting of funds but never utilized them to the maximum. This is evidenced by the scarcity of funds in schools. This means, schools did not have sufficient funds to facilitate the purchase of physical facilities. The study also revealed difficulties in monitoring and evaluation of the strategic plans on acquisition of physical resources. Evaluation of strategic plans on acquisition of physical resource can help the school administration to know the real state of affair in this regard. Evaluation can help in reviewing the strategic plan on the same. Lack of physical resources could

lead to poor schools performance. The findings concur with Nyangia (2021) whose study established the importance of physical facilities in relation to great achievement in schools.

The DSEOs also expressed a similar opinion as DSEO6 said that:

The issue of strategic plans is very complicated. We insist on preparation and implementation of strategic plans but sometimes we find it difficult to hold heads of schools responsible because they don't have funds for implementation (DSEO6, personal communication, July 25, 2022).

The quotation indicates that heads of schools did not adequately implement strategic plans because they did not have enough funds. The study observed that the low level of implementation process cannot be attributed to insufficiency of funds because funds are always never enough. The available funds could be used to change situation. This means, instead of waiting for more funds from the government, heads of schools could creatively make use of the available funds to implement strategic plans hence development of the school.

Student leaders were also asked to give their views on the implementation of strategic plans to adequacy of sizeable and ventilated classrooms. The response from FGD11 indicates that, *"the classrooms are well ventilated and the size of classrooms is reasonable. The problem is on chairs and desks as they are not enough."* (FGD11, focus group discussion, September 9, 2022).

Information from FGD11 indicates that student leaders were contented with the ventilation and size of classrooms. They were however unsatisfied with the number of furniture in schools. This means there were more students than the available chairs and desks leading to congestion in classes. During data collection, the researcher physically observed that out of 16 sampled secondary schools 4 schools had congested classes and their furniture was old and unrepaired. This might have contributed to discomfort among the students in classroom leading to poor academic performance.

The DCSQAOs were interviewed and commented on the number and quality of furniture in schools as DCSQAO5 said that:

The population in schools differs from one school to another. Some schools have more students than others. The difference is caused by differences in capacity and catchment areas. The furniture in schools is adequate; however some of the furniture in some schools is old. We encourage schools to keep on doing repair and maintenance (DCSQAO5, personal communication, September 14, 2022)

The information given by DCSQAO5 shows that the furniture in schools was adequate. However, there were schools whose furniture required some repairs. This means that some students sat on uncomfortable chairs and desks and this could have affected their academic development. This finding was in agreement with Edward (2018) whose study revealed that students' performance in secondary schools was not promising due to inadequacy of physical facilities like chairs and desks.

Data in Table 1 indicate that 51% of teachers strongly disagreed and disagreed that strategic plans had contributed to the improvement of the number and size of well-equipped libraries and science labs in schools and the mean score for this statement was 2.80. This implies that the level of implementation of strategic plans was moderate and had little contribution to the improvement of physical facilities. This unsatisfactory contribution could be due to inadequate knowledge of heads of schools on the whole process of implementation of strategic plans. If strategic plans had not improved facilities in schools the possible interpretation is that the heads of schools were not well informed on the process of implementation and therefore did not implement them

accordingly. From the document analysis the researcher also confirmed that 7 out of 16 secondary schools which were involved in the study did not have strategic plans in place. This could be associated with little knowledge on how to prepare and implement strategic plans. This finding is in agreement with that of Onuorah (2020) who held that the implementation of strategic plans in secondary schools was very low because principals of secondary schools did not have adequate knowledge of strategic plan implementation processes and procedures. Based on the findings, the researcher is also in an opinion that heads of schools have insufficient skills in strategic plans thereby slowing down the implementation process.

Interview with DSEOs on whether strategic plans contributed to well-equipped libraries and science laboratories in schools were conducted. DSEO4 responded by saying that:

Libraries and science laboratories in public secondary schools remain ongoing challenges. Schools have designated rooms as libraries. These rooms do not qualify to be called libraries as they don't have the essential requirements of libraries. The same can be said to science laboratories (DSEO4, personal communication, September 22, 2022).

The information from DSEO4 signifies that strategic plans had not contributed to the equipping of libraries and science laboratories in schools. Schools had designed ordinary class rooms to be used as libraries or science laboratories but were not equipped with facilities. The lack of well-equipped libraries and science laboratories might have led to poor academic performance. The findings of the study are in agreement with Edward (2018) who established poor performance of students in community schools which did not have well-equipped libraries and science laboratories.

The focus group discussion with students' leaders also revealed crucial information. During the discussion FGD1 said that, *"we do not have a library neither a science laboratory. There are few books in a store. The science laboratory was there but was turned into an ordinary classroom. We go to a neighbouring school for practical lessons"*. (FGD1, focus group discussion, September 7, 2022).

The information obtained from FGD1 indicates that students did not regard the libraries they had as full-fledged libraries. They regarded them as stores for books since they lacked the essential qualities of a library. The information from students leaders also reveal that the science laboratories in schools do not qualify to be called science laboratories as they do not have equipment and chemicals apparently some have been turned into ordinary classrooms. The shortage of such important facilities could have had some negative effect on students' performance in the science subjects. This information is in congruence with the Resource Dependence Theory (1978) which states that the success and the sustainability of any educational institution depends on the resources the institution possesses.

Data in Table 1 show that 54.9% of the teachers strongly disagreed and disagreed to the statement that strategic plans contributed to the adequacy number of furniture such as tables, desks and chairs. The mean score for this statement is 2.62 which confirmed the moderate level of implementation of strategic plans to the adequacy of furniture in schools. The inadequacy of furniture could be due to the minimal allocation of financial resources in schools. Scarcity of funds could have contributed to low furniture maintenance plans in public secondary schools as some schools had broken tables, chairs and desks. This finding was in agreement with the finding from interviews with HoS4 who said that:

A good number of students' chairs and desks are broken. Classrooms too don't have tables for teachers. Even in staffroom, the teachers' chairs and tables are not enough and

not up to the standard. In classrooms, some of the chalkboards are broken and we can't repair them because of scarcity of funds. Funds are not enough for repairs because the funds we receive from the government are allocated for specific usage and we cannot change the usage (HoS4, personal communication, September 10, 2022).

This quotation implies that the funds for repairs in schools were not sufficient to enable schools to implement their strategic plans on maintenance and repairs. A scenario of this kind where schools have inadequate chairs could distract learning leading to poor academic performance of learners and of the schools. Findings from interviews with DCSQAOs also confirmed that schools had shortage of furniture as DCSQAO3 said that:

Although the government is working hard to eradicate furniture problem, some schools are still experiencing shortage of furniture. We have come across situations where new students are supposed to report with chairs and desks, something which we don't support as it creates more burden on poor parents (DCSQAO3, personal communication, July 26, 2022).

This shows that the contribution of strategic plans to adequacy of chairs and desks was negligible. If some schools required new students to report with chairs and desks, it is possible that some students reported late or rather never reported all due to lack of funds for furniture. This in itself created stress on learners thereby affecting their academic progress. The finding concurs with the study by Mgimba (2021) which revealed that despite the efforts made by the government to ensure that classes were furnished, most schools had broken chairs and desks hence students lacked peace of mind in class lessons leading to failure in academics.

Information from the DSEOs revealed no evidence of students lacking chairs and desks as the DSEO1 said that: *I am not aware of any school lacking desks and chairs. The students are assigned to schools in accordance to the facilities available in those schools* (DSEO1, personal communication, September 14, 2022).

Information from the DSEO1 shows that some district councils had enough furniture. This means that the physical facilities differed from one district council to another. During data collection, the researcher observed that the district councils that were situated in urban areas had more physical facilities as opposed to those situated in peripheral areas. This could be associated with differences in level of education among parents, the level of involvement in the learning process of parents to their children and the level of awareness of the parents in supporting their children's education. Thus, most of the people in urban areas supported their children's learning more compared to those living in rural areas. This created the difference in the availability of physical facilities in schools. This concurs with the study conducted in rural areas by Mgimba (2021) which revealed unsatisfactory performance of students due to misuse of physical facilities by the surrounding community.

Data in Table 1 indicate that 55.5% of teachers strongly disagreed and disagreed on the statement that strategic plans improved power and water supply in schools. The mean score for this statement indicated a moderate level of 2.65. That is to say, the supply of power and water in most public secondary schools was unsatisfactory and the implementation of strategic plans had not adequately helped to improve the situation. The finding was in agreement with the opinion of student leaders' focus group discussion where FGD8 said that:

We have water from the city council but the water does not flow every day and the school does not have reserve tanks. When the water doesn't flow, we don't take shower on that

day. For us boarders, sometimes it can take up to two days without bathing (FGD8, focus group discussion, September 22, 2022).

The response from FGD8 indicates that water was a huge problem which might have affected the performance of students in academics. Attending lessons without taking showers as expressed by respondents could cause students to develop uncomfortable feelings and low concentration in class leading to poor performance.

During interviews with heads of schools on utilities, the HoS7 also complained about shortage of funds for provision of electrical power leading to postponement of internal examination in school. HoS7 said that:

The problem of power is not on the lack of electricity, it is on the LUKU in that when the LUKU is finished, it takes about a day or two before it is recharged. Sometimes this affects our internal examinations as printing of examination papers may not take place on time leading to delay in starting time or postponement of exams. I wish the school had enough funds to recharge the electricity” (HoS7, personal communication, September 10, 2022)

This view implies that the utility supply in public secondary schools was not sufficient. Schools did not have alternative sources of electricity and water. The lack of alternatives for electricity and water supply affected the normal operations of schools for example; some schools had to postpone internal examinations due to shortage of electricity as printing of papers became a challenge. This situation signified a failure in implementation of strategic plans. The researcher was therefore worried that if this situation was left unattended, the performance of schools and learners would remain shambled.

During interviews with student leaders from other schools, the researcher observed that some schools did not have problems associated with utilities. For instance, FGD10 said that, *“we use borehole water and we have never run out of water. We have always been having sufficient water. The neighbours too fetch water from our borehole”* (FGD10, focus group discussion, September 9, 2022).

The information from FGD10 show that some schools had sufficient water since they had boreholes and did not experience water shortage. This therefore implies that the schools with boreholes had as well sufficient power source to always pump water to dormitories or water tanks. In such a school students performance was expected to be exemplary. However, the information obtained from analysis of NECTA results indicated that the performance in such schools was average and not pretty different from the schools without reliable sources of water and electricity. From the findings, having sufficient utilities alone cannot influence students’ performance without considering all other aspects of strategic plans. The finding concurs with Arshad et al. (2019) who revealed that the successful implementation of strategic plans determined the academic achievement of learners and competitive performance of schools.

The average mean score of teachers’ responses on contribution of strategic plans to adequacy of physical facilities was 2.77. This was at moderate level and it meant that the implementation of strategic plans had not adequately contributed to the improvement of physical facilities in schools. This implies that the implementation of strategic has not adequately improved the number and size of ventilated classrooms and staff rooms, well-equipped libraries and science laboratories, sanitation facilities, playgrounds, study halls, dormitories, furniture, assembly areas, open space for recreation and power and water supply in schools leading to poor schools’ performance.

In addition to the closed ended items, the teachers were asked an open ended item to list other physical facilities, apart from those mentioned in Likert scale, which were improved in their schools. The response indicated that 255 out of 335, equivalent to 76.1% of teachers listed tablets. The teachers further said that the tablets were recently provided to teachers by the government to facilitate teaching and learning as teachers were using them for teaching purposes. This signifies that the performance of learners might have improved by the availability and proper use of the tablets. The tablets were used to store materials for teaching and learning including books and extra materials for learners. This further indicates that, when there is proper strategic planning for teaching and learning materials, the academic performance is realized. On the other hand, 40 out of 335 teachers, equivalent to 11.9% of teachers said that the implementation of strategic plans improved washrooms in the schools. The improvement of washrooms increased hygiene for students in schools thereby making students develop good health hence attend school regularly leading to improvement of academic performance. The improvement of washrooms also saved time as students did not have to waste time queuing in the toilet. This made them spent much time in class hence improvement of academic performance. It is the strategic planning that ensured availability of hygiene facilities in schools leading to improved academic performance.

On the other hand, 30 out of 335 equivalent to 8.9% of teachers said that the implementation of strategic plans improved computer laboratories. This means that the percentage of teachers who acknowledged the improvement of computer laboratories in public secondary schools was very negligible. This means the implementation of strategic plans had not much improved the computer laboratories. This further means that the implementation of strategic plans in public secondary schools had not improved basic computer skills for learners. This might have hindered the advancement of scientific and technological research skills thereby impacting on the academic performance of students. Furthermore, 10 out of 335, equivalent to 2.9% of teachers said that implementation of strategic plans improved first aid equipment in schools. This implies that the percentage of teachers affirming improvement of first aid arising from implementation of strategic plans was very negligible. The negligible number of teachers on the improvement of first aid equipment in schools means that most schools did not have a plan to improve first aid equipment. This sends alarming messages to public secondary schools that there is a need to effect first aid equipment in strategic plans in schools as they are important for physical health of learners and staff.

Hypothesis Testing

In this study, the research question was tested. The question states that “How do implementation of strategic plans contribute to the adequacy of physical facilities in public secondary schools in Arusha Region?” Several scholars have claimed that there is a relationship between the level of implementation of strategic plan and adequacy of physical facilities (Arshad et al. 2019, Akomolafe et al. 2016 & Ojuok et al. 2020). The hypothesis was statistically tested to establish the facts of these claims. The hypothesis that was tested focused on the significant relationship between level of implementation of strategic plan and adequacy of physical facilities and was tested using Pearson Correlation Product Moment at a significant level of 0.05.

Null Hypothesis (H₀): There is no significant relationship between level of implementation of strategic plan and adequacy of physical facilities.

Assumptions of Pearson Product-Moment Correlation Coefficient

1. Both variables are continuous data: Both Independent and dependent variables are measured on a continuous scale. They are measured on interval or ratio scale.
2. There are no significant outliers: there should be no outliers present in the data.
3. The samples are drawn from a normally distributed population: both variables X and Y must be sampled from a population that exhibits an approximate normal distribution
4. A linear association exists between the two variables: the two variables must exhibit a linear correlation before running the test.
5. Data contains paired samples: each subject must contain both variable X and variable Y values.
6. The sample is random: the sample should contain a truly random sample that is representative of population of interest.

Before testing the hypothesis, the researcher checked the normality test by using Shapiro wilk and found out that the P- value was greater than the significant level of 0.05. This means that the data was normally distributed and the researcher proceeded with hypothesis testing. The testing of hypothesis was determined by a decision rule.

Decision rule

Given a significant level of 0.05

1. If the observed P- value is less than 0.05 significance level, reject null hypothesis (H_0)
2. If the observed P- value is greater than 0.05 significance level, fail to reject null hypothesis, meaning accept null hypothesis.

The researcher wanted to determine whether there was significant relationship between level of implementation of strategic plan and adequacy of physical facilities. The independent variable was the level of implementation of strategic plans and the dependent variable was the adequacy of physical facilities. The responses obtained from Likert scale items (frequencies) from both independent and dependent variables were entered into SPSS to determine the relationship between the two variables. Pearson Product Moment Correlation Coefficient was run at 0.05 significance level and the results of the hypothesis testing were summarized in Table 2.

Table 2

Results of Pearson Correlation Sample Test

		Adequacy of physical facilities
Implementation of strategic plan	Pearson Correlation	-0.001
	Sig. (2-tailed)	0.003
	N	335

Data in Table 2 show that, $r(333) = -0.001$, $P = 0.003$. The data indicated that P- value (0.003) is less than significant level (0.05), since the P- value (0.003) is less than significance level (0.05), the null hypothesis was rejected. Therefore, there is significant relationship between level of implementation of strategic plan and adequacy of physical facilities. The level of implementation of strategic plans was moderate and therefore did not enable the acquisition of sufficient physical facilities in schools hence the performance of students and schools remained unsatisfactory. If the

level of implementation of strategic plans were high, the physical facilities would increase thus making learning convenient leading to organizational performance. This finding is in agreement with Onuorah (2020) who asserts that the schools that fail to make strategic plans and clarify the school's resources affect the effectiveness of the school to meet the stated objectives of secondary education hence poor organizational performance. The inference further concurred with McKinsey 7s Model by Peters and Waterman (1982) which states that strategies in an organization are deployed by the organization in order to enhance its performance and to make it remain adaptive.

Conclusion

Based on findings the study concludes that the level of implementation of strategic plans in public secondary schools was moderate. This suggests that while some progress was made in implementing the plans, there were still significant challenges and shortcomings in achieving the desired outcomes. These challenges primarily revolved around the shortage of physical facilities, including classrooms, science labs, libraries, and furniture. Based on hypothesis, the study also concludes that there is significant relationship between level of implementation of strategic plan and adequacy of physical facilities. The success of the implementation of strategic plans significantly depended on the available physical facilities to facilitate learning.

Recommendations

Based on the findings and conclusion, the study recommends that heads of schools should have strategic plans. These plans should specifically focus on increasing the availability and adequacy of classrooms, science laboratories, libraries, desks, chairs, and tables to facilitate learning for better school performance. Furthermore, the Quality Assurance Officers should conduct regular visits to schools and follow-ups of recommendations to ensure compliance on physical facilities.

Recommendations for Further Studies

Another study could be conducted on monitoring and evaluation of strategic plans in public secondary schools. This would help in tracking progress and interventions of strategic plans in schools.

References

- Akomolafe, C. O. & Adesua, V. O. (2017). The Impact of Physical Facilities on Students' Level of Motivation and Academic Performance in Senior Secondary Schools in South West Nigeria, *Journal of Education and Practice*, 7(4), 38- 42
- Arshad, M., Ahmed, G., Tayyab, M. (2019). Assessing the Effects of School Support Facilities on Academic Achievement at Punjab Education Foundation Partner Schools, *European Online Journal of Natural and Social Sciences* 8 (2) 214-22
- Edward, L. (2018). The Influence of Physical Facilities on Students' Academic Achievement in Community Secondary Schools of Karagwe District in Tanzania
- Eliufoo, H., & Maro, G. (2019). An Examination of School Buildings' Physical Condition and Students' Examination Performance, *Education* 2019, 9(3): 51-62, DOI: 10. 5923/ j.edu. 20190903.03
- Greener, C.D. (2019). Factors Affecting Implementation of Strategic Plans in Tanzania's Local Government Authorities: A Case of Mbeya City Council: Mzumbe University.

-
- Gervas, I. (2019). Educational Quality Management in Public and Private Secondary Schools Under SEDPII: A Case of Selected Secondary Schools in Morogoro Region, Tanzania
- Kumar, P.(2021). Resource Dependence Theory- definition and importance, <https://slidebazaar.com/blog/resource-dependence-theory-definition-and-importance/>
- Kweka, K. H.&Ndibalema, P. (2018) Constraints Hindering Adoption of ICT in Government Secondary Schools in Tanzania: The Case of Hanang District, 4(2) 46-57
- Lyimo, N. S., Too, J. K., &Kipng'etich, K. J.(2017). Perception of teachers on availability of instructional materials and physical facilities in secondary schools of Arusha District, Tanzania, *International Journal of Educational Policy Research and Review* 4(5), 103-112 <https://www.journalissues.org/IJEPRR/>
- Mgimba, A. Elias (2021). Influence of School Infrastructure on Students' Academic Performance in Rural Public Secondary Schools in Iringa District, Tanzania
- Nyangia, O. E. (2021). Strategic plan implementation and its effect on internal efficiency in public secondary schools in Kisumu and Uasin Gishu Counties, Kenya
- Ojuok, J. O.1, Gogo, J. O. &Olel, M. A.(2020). Influence of physical facilities on academic performance in constituency development fund (CDF) built secondary schools in Rachuonyo South Sub County
- Onuorah, H.C.(2020). Challenges affecting the implementation of Strategic plans in secondary schools in Otoucha Education zone of Anambra State.
- Osuji, C. U.& Catherine, I. (2021). Material Resources Management for Effective Teaching and Learning in Nigerian Tertiary Education: Implications for Quality Tertiary Education Delivery, *International Journal of Innovative Education Research* 9(3):13-28.
- Priyambodo, P., & Hasanah, E. (2021).Strategic Planning in Increasing Quality of Education,6(1), 109-126, DOI: <https://doi.org/10.31538/ndh.v6i1.1138>
- Pfeffer, J, & Salancik, G. R. (1978). The external control of organizations: A resource dependence perspective, New York: Harper and Row
- United Nations, (2015). Global sustainable development report 2015 edition advance unedited version, <https://sustainabledevelopment.un.org/documents>
- United Nations (2018). The 2030 Agenda and the Sustainable Development Goals: An opportunity for Latin America and the Caribbean (LC/G.2681-P/Rev.3): Santiago
- UnitedRepublic of Tanzania (2018/2019). Education Sector Performance Report, draft for circulation <https://www.Globalpartnership.org>
- United Republic of Tanzania, (2018a). Public Expenditure Tracking Survey of Primary and Secondary Education in Mainland Tanzania, Final Report February 2018
- United Republic of Tanzania (2021). National Basic Education Statistics in Tanzania (BEST), National Data
- Warmbrod, J. R. (2014). Reporting and Interpreting Scores Derived from Likert-type Scales, *Journal of Agricultural Education*, 55 (5), 30-47. doi: 10.5032/jae.2014.0503
- Wanjohi, A. M., and Syokau, P. (2021). How to Conduct Likert Scale Analysis, <https://www.kenpro.org/how-to-conduct-likert-scale-analysis/>
- Zehir, C., Findikli, M. A., & Çeltekligil, K. (2019). Resource Dependence Theory, Firm Performance and Producers-Suppliers Relationships, *The European Proceedings of Social & BehaviouralSciences*, 160-172 <https://dx.doi.org/10.15405/epsbs.2019.01.02.14>