Challenges of Implementing Total Quality Management (TQM) Principles in Public Secondary Schools in Arusha City Council

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Abstract: *This study examined challenges of implementing Total Quality Management (TQM) principles in public secondary schools in Arusha city council. The study was conducted in 29 secondary schools whereby 87 respondents were involved. Qualitative research approach was used based on descriptive survey design. Data were collected through interviews and questionnaires. Purposive sampling technique was used to obtain the sample. Analysis of data was assisted by SPSS (Version 20) utilizing descriptive statistics for frequencies, mean, and percentages in which findings were presented in form of tables while data obtained from Interviews were thematically analyzed and presented in form of tables and paraphrasing. Challenges of implementing Total Quality Management (TQM) principles in public secondary schools found in the current study were; - inadequate teaching and learning materials, low quality and inadequate infrastructure, lack of motivation as well as teamwork. Other challenges were shortage of science teachers, lack of teamwork and cooperation. The study recommends that, education should be provided to all education stakeholders through seminars, workshops and on - the job training to help to create common understanding of the concept, principles and practices of TQM for effective implementation. On the other hand, there should also be deliberate efforts by the government and other stakeholders to invest in education by committing adequate financial and non - financial resources.*

Keywords: Challenges, Implementation, Quality, Total Quality Management Principles, Public Secondary Schools

1. Introduction

Total Quality Management (TQM) propounded in America has become a worldwide concern in the 21st Century (Edward, 2013). It entails various quality improvements principles articulated by Deming. The principles include create constancy of purpose toward improvement, adopt the new philosophy, cease dependence on inspections, use a single supplier for any one item, improve constantly, institute on - the - job training, institute leadership, eliminate fear and break down barriers between departments. Other principles are to eliminate slogans, exhortations, and targets, eliminate quotas and numerical targets, and remove barriers to pride of workmanship, institute education and self - improvement programs and making transformation everyone's job. Japan was the first nation, which adopted this concept to recover their economy after the World War II. The achievement of TQM in Japan resulted into making the concept famous. Thereafter, many countries aspired to apply TQM for quality improvement. At that time, the concept of TQM was developed for manufacturing organizations; but afterwards, it gained popularity for other service institutions including banks, insurance, non - profit organizations and health care as well as education institutions.

Moreover, many educators believe that the concept of TQM provides guiding principles for needed educational reform. TQM is recognized as a broad management tool that can be applicable to any organization for quality improvement in education (Wani & Mehraj, 2014). Currently, there has been high demand for quality education leading to the desire for educational improvement. The success of academic institutions at all levels depends on the quality of education.

Therefore, educationists, policy makers, scholars and researchers are displaying their sincere interest towards the TQM as it is recognized as an effective management philosophy for continuous improvement, customer satisfaction and organizational excellence (Farooqi, Arshad, & Qadir, 2015)

TQM is a concept that has been applied in Tanzania with the aim of creating reforms and improving services and products. Manufacturing industries, educational institutions and health services have attempted to apply TQM. Sumwa(2012) asserted that the TQM has been recognized as an enabler for performance improvement of institutions in most countries. In Tanzania the embracement of TQM which has the potential to improve performance or eliminate the current bottlenecks in performance is still very low with challenges still found. Mpangule(2013) observed that in Tanzania education sector, TQM has been applied to several education institutions for quality education in the growth and development of Tanzania. However, there were challenges of little knowledge on TQM application, quality culture and low top management commitment. Therefore, TQM incorporation into curriculum development and reviews was still low (Mpangule, 2013).

Moreover, United Republic of Tanzania (URT) through health services inspectorate unit, pointed out about TQM adoption in Tanzania. In October 2007, URT advised the Ministry of Health and Social Welfare (MHSW) officials and Hospital Management Team (HMT) of Muhimbili NationalHospital (MNH) to implement TQM approaches (URT, 2014). Since this concept was initially developed in the manufacturing sectors for products improvement, there is a great concern that this philosophy can be applicable in

education too, basically to ensure quality improvement (Msafiri & Tshabangu, 2018). In this view, this study was set to examine the challenges forimplementing Total Quality Management (TQM) in Secondary Schools in Arusha City, Tanzania.

2. Statement of the Problem

Currently, there has been high demand for quality education leading to the desire for educational improvement. Every education institution aspires for quality measures that can make its activities to succeed. The implementation of TQM in the institution leads to change and therefore, TQM is an instrument for change in management. According to URT (2020) educational report, the Tanzanian education system is facing a number of challenges in ensuring quality of education. Most of the educational institutions do not fully implement the TQM partly due to lack of enforcement from top management and lack of employees' involvement (Msafiri & Tshabangu, 2018). Thus, there is need for a paradigm shift that would ensure quality education in Tanzanian educational institutions, yet it seems, that the implementation of TQM in educational institutions has not fully seen the light of the day.

There could be several factors for this failure that need to be unearthed if Tanzanian education system has to raise its quality (MoEST, 2020). Those factors combine to negatively affect quality of education hence poor academic performance as seen in candidates' performance in the years2018 to 2020 in Arusha City council. This is exemplified by Secondary School National Examination quality of passing with many students getting division zero (O) in the year 2018. The candidates who scored division I - III were 48% while those who scored division "O" were 16%. In the year 2019, the candidates who scored division I - III were 52%while those who scored division "O" were 18% and inthe year 2020, the candidates who scored division I - III were 51.3% but those who scored division "O" were 20.5% (URT, 2020). According to the report from District Educational Office (2018 - 2020), Arusha city council similarly seems not to perform satisfactorily academically and this could be due to several factors. With this problem in context, it's worth an investigation to examine challenges of implementing Total Quality Management (TQM) principles in public secondary schools in Arusha city council. Hence the formulation of this study was guided by a research questions, that asked, what are the challenges facing the implementation of TQM in public secondary schools in Arusha city council?

3. Literature Review

Najafahadi, Sadeghi, and Habibzadeh (2018) conducted a study in Boras, Sweden aiming at highlighting the general principles of TQM involved, how the approach has been and can be used to improve the quality of academic institutions. The study findings revealed that there were obstacles facing the TQM implementation in education institutions. Some obstacles were; lack of awareness on the best way to implement TQM effectively and how it works by stakeholders, poor involvement of stakeholders, poor allocation of resources and poor planning for paradigm shift.

A recommendation based on the study was that, TQM concept should be prioritized to all members in the organization through training since it could serve as a roadmap and an experiment to quality - focused organizations. Najafahadi, Sadeghi, and Habibzadeh, (2014) study employed qualitative approach on TQM in education institutions in Boras, Sweden similar to the current study. Hence the former study provided useful insights on challenges facing the implementation of TQM in secondary schools in Arusha city Council in Tanzania.

Pushpa, (2015) conducted a study on the Implementation of Total Quality Management with the view understand the importance of quality management, the principles of TQM that are important for quality sustenance and improvement, in economic development and sustainability in order to improve Secondary and higher education institutions in Bangalore, India. The study found the following obstacles; Lack of proper management in educational institutions, commitment, poor vision and plan statement, the government influence, lack of highly qualified professionals, lack of knowledge about the self - assessment mechanisms, resistance to institutional assessment and change. Others were poor co - ordination between employees and departments, lack of interest in training, expectation of immediate results, instability of leaders and departments, rigid organizational structures, lack of clarity about role and responsibilities and lack of employees' commitment.

The recommendations of the Pushpa, (2015) study according to the findings were; to understand and identify TQM decisions for change through motivating others to adapt to changes, training and education to employees, initiatives of new programs, and evaluation for identifying any obstacle that is responsible for failure of implementing TQM. Moreover, recognition of employees, which can boost their morale and self - interest, continuous improvement and monetary or non - monetary rewards, should be awarded to employees. The previous study was broad since it dealt with issues of sustainability through implementation of TQM in secondary schools and higher education in India but the current study, concentrated on the status of challenges of TQM implementation in public secondary schools in Arusha city, Tanzania. Both studies however came up with comparable recommendations.

Suleman, Pakhtunkhwa, and Gul (2017) conducted a study to identify the challenges faced by public secondary schools and the way forward for effective and successful implementation of TQM in secondary schools in Kohat District, Pakistan. The study findings showed that; ineffective leadership, lack of findings and research resources, insubordination of work force, lack of management commitment, poor and ineffective planning, political interference and poor teachers' status and morale were challenges that faced the implementation of TQM in public secondary schools. It was strongly recommended that, all educational institutions should be bound by the philosophy of TQM. Secondary school heads may be equipped with modem techniques of successful TQM implementation through a special professional in - service training program. Sufficient funding and infrastructure

facilities should be provided to secondary schools on priority bases.

Jabbarifar, (2019) carried out a study for the purpose of looking for the range of contributions of TQM concept in education system in India as one of the key elements in the realization of sustained TQM socio - cultural development policies. The findings of the study implied that; education institutions were in charge of training expert personnel and scholars while providing qualified services. Therefore, through its output, the education system paved the way for development. India needed to examine its concern with making its education institutions qualitative and competitive by world standards. Thus, both the students and industry have become quality conscious for improvement, which involved statistical tools, consumer research, goal setting, teamwork, problem solving, human resource development, and strategic planning. It has been recommended that implementation of a quality management system should be done, preferably with the help of a consultant to ensure success and education institutions should prove their efficiency by responding to the needs of the country's development and by offering relevant outcomes. The previous study investigated onthe level of awareness of Total Quality Management in education institutions in the 21[st]Century, in India while the current study investigated challenges facing implementation of TQM in secondary schools in Arusha city council. The two studies ultimately are complementary.

Al - Tasheh, (2015)carried out a study aimed at finding out the obstacles of TQM application in secondary schools in Alodeleh, Kuwait. The findings of the study revealed that there were; lack of an integrated sample for the TQM in secondary school institutions, lack of support and commitment of top leaders in ensuring that TQM is practiced. Also, there was lack of highly qualified professionals in the field of quality in secondary schools, lack of knowledge and difficulty of self - assessment mechanisms, lack of knowledge of continuous improvement methods, large burden of the TQM application. The recommendations based on the study included: promoting the concept of quality in education institutions before adopting it, providing financial and material support for supervisors dealing with the application of TQM in education institutions of Kuwait. Other recommendations were providing education in institutions with qualified members, holding training courses and workshops in the field of TQM application as well as continuous improvement and self - assessment. While the previous study relied on interview for data collection, involving 20 respondents, the findings find convergence to the current study which however employed both questionnaire and interview guide to collect data from 87 respondents.

Al - Nabhani(2017)conducted a study in order to identify the issues that need addressing in the Ministry of Education in Oman (MEO) so as to improve its education system through implementation of TQM. Moreover, the study sought to present a background survey on different approaches of managing change and to discover the underlying philosophy of TQM, its gurus, its development and its tools and techniques, review the experience of TQM and its success in education field. The study also aimed to identify the limitations of TQM and examine the feasibility of applying TQM in the MEO and design a model for implementing TQM in MOE.

The findings of the study identified the following obstacles to implementation of TQM. Obstacles were centralization, ineffective communication, insufficient management support, lack of strong teamwork, motivation and defective planning, provision of in - sufficient number of qualified teachers, lack of educational research and difficulty in funding educational development projects, reluctance to participate in the educational sector paradigm shift and low enrolment rates in adult education system.

Furthermore, the findings revealed that TQM principles and an implementation framework for the TQM Tree Model in the MEO in Oman was proposed. They comprised of the TQM principles that suit the MOE namely; commitment toward TQM, focus on stakeholders' involvement and empowerment such as top management, internal stakeholders and external stakeholders, continuous improvement, training, tools and techniques, as well as rewards. It was recommended that TQM Tree Model was a possible approach by top management and stakeholders to develop the MOE in Oman to adopt paradigm shift and be able to deal with the internal and external challenges. The study further recommended that new ways of thinking and management were required before discussing the different approaches of managing change and solving the challenges encountered by the organization. This implies that it is better to have a general vision of the particular institution, its geography, history, economy and education in order to have the advancement of knowledge and technology before doing anything. The previous study sought to identify the issues that need to be addressed in the Ministry of Education in Oman (MOE) for expansion and improvement of its education system but the current study dealt with challenges facing the implementation of TQM in secondary schools in Arusha city Council, Tanzania.

Razak, Wumbie, and Razak(2014) conducted a study aiming on assessment of factors responsible for quality management in school and the effects of TQM on school performance in the Chereponi District inGhana. The study findings revealed that demotion of students and suspension of teachers' salaries are the main factors that affect negatively the school authorities when ensuring quality management is implemented. Lack of in - service training, poor infrastructure, in adequate resources such as inadequate quality teachers and finances, non - involvement of stakeholders in school activities were some of the key problems identified that hinder quality management of schools for effective performance and efforts toward TQM effectiveness. It was recommended from the results that for effective supervision, school authorities to enhance quality education and efficient performance of schools should improve teachers and students behavior. Furthermore, effective supervision of teachers, monitoring of students' behavior and the effective and efficient leadership styles of school heads are important factors to ensure TQM is implementation in schools. Further training, adequate infrastructure, adequate resources such as materials and

financial resources as well as quality personnel should be provided in order to meet the predetermined objectives. The previous study employed quantitative approach but focused on behavioral aspect of human resources in the course of TQM implementation. The view that suspension of teachers and demotion of students were obstacles to TQM implementation, did not ostensibly feature in the current study.

Tirfe (2016) conducted a study for assessing the challenges and opportunities for implementing the school improvement programme in the public secondary schools of Iluababor Administrative Zone in Ethiopia. The findings indicated that the performance of the school improvement programme domains were low and there were insufficient supplies of inputs and processes towards TQM regardless the efforts of improvement put towards averting the challenges affecting set goals and targets in secondary schools. The major challenges found were weak collaboration among stakeholders, lack of capacity building, inefficient administrative services, limited commitment of school leadership and school governing bodies, poor school leadership and management, passive and inactive involvement of parents and local community, as well as students' poor attendance and low achievement in academic affairs.

Based on the findings it was recommended that school principals, teachers, administrative and local school communities should be well equipped with basic knowledge and skills on the school improvement. In addition, school principals and school governing bodies have to apply the recommended strategies in the study to lessen the challenges in secondary schools. A strong team spirit should he established among school principals, secondary school supervisors, teachers, students, parents and local communities to enhance learner's achievement. Consequently, the schools management teams and other stakeholders of secondary schools have to plan for continuous training and orientation on the nature, practice and significance of school improvement programme implementation and expansion of capacity building networks within the organization. This could help in fostering critical thinking, and the problem solving capacity of learners. The previous study employed the sequential explanatory designs focusing on the wider aspect of school enhancement programs generally. The current study besides relaying on descriptive survey design, focused on the perspective of challenges on one aspect of quality improvement through TQM.

Kayode and Aina(2018)conducted a study to examine the relationship between TQM and Students' academic performance in Florin Metropolis secondary schools, Kware state, Nigeria. The study findings indicated that there was no universal standard of effective communication in schools. Principal and staff were not retrained on new methods of school - based management, there was a significant relationship between TQM, and students' academic performance in Florin metropolis secondary schools, there was lack of commitment by the management and some staff members and organizational culture in the school. Based on the study findings, it was recommended that, the State Ministry of Education should set a minimum and universal standard of achievement for all secondary schools, there is a need for the state to regularly organize the re - training programs on new methods based on management for the principals and the staff in Kware state secondary schools

Another study was conducted by Kosgei, (2019) aimed at evaluating the extent to which Total Quality Management principles arc practiced in secondary schools in Eldoret East District, Kenya. The findings of the study revealed that there are a number of challenges in the implementation of TQM such as; lack of commitment by the management and some staff members, poor organizational culture in the school, poor documentation, insufficient training of key team players and in - effective communication. Recommendations based on the study were that the proposed TQM model could be used to ensure the proper implementation of TQM in secondary schools in order to ensure favorable environment for the actualization of TQM through the following stages namely; needs analysis, training, roles of heads of departments, monitoring, evaluation and minimization of challenges. The recommendations of these studies take a different trend from the current study due to the different contexual locations of the studies.

Mpangule, (2013) investigated on the TQM application with the aim of illustrating the need for quality education in the growth and development as well as contributing the best route for the Tanzanian prosperity at Dar - es - salaam, Tanzania. The study found that there were challenges of little knowledge on TQM application, quality culture and low top management commitment, low TQM incorporation into curriculum development and reviews, poor working and living environment for teachers. It was recommended that improving the quality of education might give the best solution to many Tanzanian social, economic and political problems at the end. Embarking on TQM does not imply ignoring Internal Quality Assurance rather making it more embedded in the mind of administrators, teaching staffs, students, supporting staffs and other educational stakeholders. Moreover, developing countries like Tanzania need attention to people's mental power quality in order to achieve the 2025 goals of becoming middle - income economic country. TQM concept should be applied in education institutions for improving, understanding and facilitating the implementation which can meet customers' satisfaction in different educational organizations. The previous study focused on Dar - es - salaam but the current study focused on secondary schools in Arusha city council, Tanzania.

4. Methods

The study was conducted in Arusha City Council in Arusha Region, in Northern Tanzania. The researcher chose Arusha City Council because it has public secondary schools in which Total Quality Management (TQM) principles are implemented and managed. Arusha City Council has 29 public secondary schools. The study involved all 29 public secondary schools. Thus, there was a possibility of selecting suitable participants to be involved in the study. The target population were heads of schools and teachers. Purposive sampling was used to obtain 29 heads of schools and 58

teachers. These were selected because the researcher believed they could provide in depth information.

Applying a qualitative approach and descriptive survey design, data was collected through a self - administered questionnaire that elicited quantitative and qualitative data from teachers. The questionnaire consisted of predominantly closed question items, including varied Likert scale format responses, and some semi structured open - end questions. For the questionnaires, simple random sampling was used to get 58 teachers. Interview was conducted for head of schools that delivered qualitative data. The interviews was face - to - face with this group of respondents. The interview followed an open - ended format with the aim of understanding the challenges of implementing Total Quality Management (TQM) principles in public secondary schools from the perspective and experiences of the participants.

Consideration was given to the research ethics by soliciting and obtaining research clearance and permit before embarking on the data collection process. Of the 58 teachers approached, 58 returned their questionnaires, thus a response rate was 100%. The quantitative data were analyzed using descriptive statistics notably frequencies, mean, and percentages in which findings were presented in form of tables while data obtained from Interviews were thematically analyzed and presented in form of tables and paraphrasing. Precautions was taken to ensure trustworthiness of the qualitative dataaccording to the criteria of credibility, applicability, dependability and confirmability (Creswell & Creswell, 2018). These included peer debriefing to acknowledge and analyze personal preconceptions, biases and beliefs in the context of the research (Blanche & Durrheim, 2011).

5. Findings

The major role of any educational institution is to ensure provision of quality education which depends much on total quality management principles in teaching and learning. However, in doing so school management tends to face some challenges in implementing TQM principles in their respective schools. To examine challenges of implementing TQM in secondary schools in Arusha city Council in Tanzania, the researcher formulated relevant items in the questionnaire for secondary school teachers and an in - interview schedule for heads of schools. Respondents were requested to react to the items in teachers' questionnaire by ticking the option that best described their level of agreement on a Likert scale ranging from strongly agree to strongly disagree and the findings are as indicated in table 1.

Table 1: Challenges Facing the Implementation of TQM Principles (Teachers, *n=58)*

	Variable	Strongly Agree		Agree		Disagree		Strongly Disagree		Tot	M	SD	Remark
		N	%	N	%	N	%	N	%	N			
C1	School has enough learning resources	4	6.9%	22	37.9%	26	44.8%	6	10.4%	58	2.46	0.81	Disagreed
C2	School infrastructure is of high quality	5	8.6%	18	31%	29	50%	6	10.4%	58	2.52	1.02	Disagreed
C3	Qualify managers do their work effectively	4	6.9%	41	70.7%	11	19%	2	3.4%	58	1.45	1.02	Agreed
C4	Planners use appropriate TQM programs in school	3	5.2%	31	53.4%	22	38%	3	5.2%	58	2.33	1.13	Agreed
C5	School has sufficient qualified staff	16	27.6%	24	41.4%	14	24.1%	4	6.9%	58	1.67	0.70	Agreed
C6	There is delegation of responsibility and authority	24	41.4%	24	41.4%	8	13.8%	2	3.4%	58	1.47	1.05	Agreed

Source: Field Data, 2022

The findings as presented in table 1 show that, on the aspect of schools having enough learning resources 4 (6.9%) strongly agreed, 22 (37.9%) agreed, 26 (44.8%) disagreed and 6 (10.4%) strongly disagreed hence majority disagreed (M= 2.46). About school infrastructure being of high quality 5 (8.6%) strongly agreed, 18 (31%) agreed, 29 (50%) disagreed and 6 (10.4%) strongly disagreed in which the majority disagreed with (M=2.52) These findings indicate that inadequate school infrastructure and learning materials are a major challenge which hinder the smooth implementation of TQM principles in public secondary schools in Arusha city council.

As for managers working effectively, 4 (6.9%) strongly agreed41 (70.7%) agreed, 11 (19%) disagreed and 2 (3.4%) strongly disagreed with a mean score of (M=1.45). On the use of appropriate TQM programs in schools 3 (5.2%) strongly agreed, 31 (53.4%) agreed, 22 (38%) disagreed and 3 (5.2%) strongly disagreed with a mean score of (M=2.33). This implies that, although the implementation of TQM principles faces some challenges but the administration undertakes their responsibility effectively. In addition, participants responded on the presence of qualified staff as

well as delegation of responsibility and authority in which 16 (27.6%) strongly agreed, 24 (41.4%) agreed, 14 (24.1%) disagreed and 4 (6.9%) strongly disagreed. (M=1.67). For the case of delegation of authority 24 (41.4%) strongly agreed, 24 (41.4%) agreed 8 (13.8%) disagreed and 2 (3.4%) strongly disagreed, giving a mean score of (M=1.47). These findings show that a good number of staff members in public secondary schools in Arusha city council are qualified enough to implement TQM as well as to help the administration in conducting different quality improvement activities.

Teachers were also asked to give the greatest challenges which they think hinder the implementation of TQM principles from their own experience by responding to a semi structured question item in their questionnaire guide and data is presented in table 2.

Table 2: Teachers responses on Challenges hindering Implementation of TQM Principles

No	Challenges hindering the Implementation of TQM Principles	Secondary school Teachers (X/58)	
		f	Percentage (%)

1	Poor school infrastructure	40	69%
2	Shortage of science teachers	37	63.8%
3	Lack of teamwork and cooperation	23	39.7%
4	Limited time to implement principles	45	77.6%
5	Enrolment of low achieving students	38	65.5%
6	Lack of in - service training	53	91.4%

Source: Field Data, 2022

According to the findings in Table 2, 40 (69%) respondents mentioned poor school infrastructure, 37 (63.8%) respondents based on shortage of science teachers, 23 (39.7%) respondents commented on lack of teamwork and cooperation and limited time to implement some principles, 38 (65.5%) respondents mentioned enrolment of low achieving students as a challenge while 53 (91.4%) respondents pointed poor motivation of staff and lack of in - service training as a major challenge for implementation of TQM principles. The findings show that although there are a lot of challenges facing the implementation of TQM principles but lack of in - service training, poor motivation and limited time to implement TQM principles were mentioned by the majority as major challenges.

Additionally, Heads of schools were interviewed on the challenges facing the implementation of total quality management principles in their respective schools and their responses are as analyzed and summarized in Table 3.

Table 3: Challenges Facing the Implementation of TQM Principles

No.	Heads of school opinions on challenges facing the Implementation of TQM principles
1	Insufficient learning materials
2	Shortage of science teachers
3	Lack of motivation to the staff members
4	Lack of teamwork and cooperation

Source: Field Interview, 2022

The findings from interview data collected from heads of schools on the challenges of implementing TQM principles show that most of the public secondary schools have no adequate teaching and learning materials, the infrastructure is not good, there is lack of motivation as well as teamwork. One head of school said that,

> ". . . Although we received some funds (capitation grants) from the government for school development but it is not enough to buy all necessary teaching and learning materials as well as the maintenance of infrastructure. Therefore, for the better implementation of TQM principles the government should increase the budget of secondary schools…"

Another head of school added;
> "… I think instead of blaming the government for each and everything concerning our school's improvement it's time for us to work as a team and undertake different responsibilities as a way to implement total quality management……"

Based on the overall findings, challenges facing implementation of total quality management principles in secondary schools in the study area were mainly; few class rooms, inadequate teaching and learning resources, lack of cooperation and teamwork among staff members, inadequate school infrastructure and learning materials, lack of in - service training as well as poor motivation and limited time to implement TQM principles.

6. Discussion

The study examined the challenges of implementing TQM principles. The findings revealed that most of the public secondary schools have inadequate teaching and learning materials, low quality and inadequate infrastructure, lack of motivation as well as teamwork. This concurs with the findings from Al - Nabhani (2017), who pointed out, among other things that, centralization, lack of strong teamwork, motivation and defective planning and provision of insufficient number of qualified teachers, as challenges hindering implementation of TQM.

Additionally, teachers who were involved in the study revealed that school infrastructures including toilet facilities, libraries and laboratories are of low quality and inadequate compared to the number of users. This may partly be a result of implementation of fee - free basic education policy with effect from 2016, resulting into a tremendous increase in enrollment in public primary schools and consequently an increase in transmission rate to public secondary schools which did not go hand in hand with an increase in the number and quality of infrastructure and learning materials in public secondary schools (URT, 2014).

The teachers who participated in the study identified the greatest challenges that hinder the implementation of TQM principles from their own experience as; poor school infrastructure, shortage of science teachers, lack of teamwork and cooperation and limited time to implement it.

Shortage of qualified teachers is one of the major challenges facing Tanzania today. The number of teachers available in schools does not tally with increasingly enrollment of students currently in provision of quality education making the challenge even more acute (MOEVT, 2010). This observation was also made during implementation of SEDP II (2010/2011). It was pointed out that, the reason for poor performance in Form Four Secondary School examinations is attributed to acute shortage of teachers, unequal distribution of teachers between urban and rural as well as insufficient learning infrastructure such as classrooms, laboratories and other instructional materials (URT, 2010). This affects the implementation of TQM principles. This finding was similarly made by Ater, (2013) and Msafiri&Tshabangu (2018) who pinpointed such challenges as constraint of material and financial resources, ineffective communication, lack of in - service training and development for the organization to meet the goals as hindrances for implementation of TQM principles. Similarly, Teena&Panchoo (2017) pinpointed that such challenges as poor inputs, poor delivery of services, lack of attention paid to performance standards and measurements, unmotivated staff and the neglect of students' skills pose a challenge on implementation of TQM in secondary schools.

7. Conclusion

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The challenges facing implementation of TQM principles in public secondary schools, including inadequate teaching and learning materials, low quality and inadequate infrastructure and lack of motivation implies that, the government has not adequately invested in education to create friendly and enabling environment to facilitate effective implementation of TQM principles. Therefore, it is important that enough resources are committed to ensure availability of quality and adequate facilities and other infrastructures, teaching and learning materials, provision of on - the job training and improved incentives for teachers in order to promote working morale and commitment towards implementation of TQM principles. Any successful implementation of TQM in education institution requires an interplay between conducive working environment, committed leadership and well qualified and motivated staff altogether.

8. Recommendations

Based on the findings and conclusions of the study, recommendations made for improvement for implementation for Total Quality Management (TQM) principles, entail;

- That adequate provision of funds be made for schools to provide quality educational services for total quality management.
- That the government should provide adequate and quality facilities in public secondary schools for effective implementation of total quality management is secondary schools for national development as effective teaching and learning can only take place in a school with quality facilities.
- From the study findings, it is recommended that top management of schools and other bodies such as the ministry of education should organize training courses, seminars, workshops and on - the job training to help to create a common understanding of the concept, principles and practices of TQM to ensure effective implementation of TQM in schools.
- School quality assurers should frequently visit public secondary schools for supervision, directing and offering support to teachers in order to improve implementation of total quality management principles.
- From the study findings, it is clear that TQM sustainability remains a significant challenge due to in - adequate resources. Therefore, while, on one hand education stakeholders and the government should invest more in education, on the other hand schools should establish income generating activities so as to ensure availability of quality and adequate infrastructure and teaching/learning facilities while also putting in place short - and long - term plans for implementing TQM principles.

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