

Assessment on the Application of Total Quality Management (TQM) in Improving Students' Learning and Academic Performance in Government Secondary Schools in Manyoni District-Singida, Tanzania

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Abstract— This study aimed at assessing the implementation of TQM in government secondary schools in improving students' academic achievement in Manyoni district Singida region. The researcher used three objectives to guide the study. To examine the association among total quality management principles and students' school success in public secondary schools in Manyoni District, to identify the challenges encountered by school heads in the whole process of quality supervision in schools and learners' academic attainment and to identify possible measures to the challenges in the implementation of total quality management in public secondary schools in Manyoni District. The study employed total quality management theory that founded by Deming in 1950s. It employed a mixed approaches research design, specifically convergent parallel mixed-method research design. The study used probability and non-probability in selecting sample. A total of 164 respondents from four public secondary schools were involving in the current study. The major instruments used were questionnaires that had a coefficient coloration of 0.73 to prove the reliability of the instruments. Other instruments used were in-depth interview guide. The researchers employed Statistical Package for Social Sciences version 20 for analysis of quantitative data. The information were analysed using descriptive approaches such as frequencies, percentages, means, and standard deviations, and results presented using tables, pie charts, and bar graphs. Qualitative data were analysed by means of open coding, categories, meaningful themes, as well as summarization of data. The results indicated that total quality management ideologies were very crucial in enhancing academics development in secondary schools. However, the study found that total quality management in public secondary schools in Manyoni is not implemented effectively. Therefore the government should ensure that all secondary schools are implementing TQM.

Keywords— Total, quality, management, implementation.

I. INTRODUCTION AND BACKGROUND TO THE STUDY

The primary stimulus of school development and academic success of the students is quality management. Many leaders from different discipline have quite proven that

total quality management is crucial in not only academic success but also in life itself. With that means, professionals are unceasingly trying to find ways to improve quality managements for organizations development. Total quality management has been debated by different intellectuals. Witther (1990) defined TQM

as a phrase consisting of three words that are, total, quality, and management; where "total" seeks for every person to be involved (customer and suppliers), "quality" implies that customers' requirements to meet exactly and "management" means that senior executives committed to achieve the objectives and concentrate on the role of functional managerial. Wan and Mehraji (2009) supports by defining TQM as a management philosophy that builds a customer-driven learning organization, dedicated to total customer satisfaction through continuous improvement in the effectiveness and efficiency of the school organization and its processes. Although there is difference in every definition from scholars on total quality management, the given definitions carry one meaning. One can say that TQM is the great principle that helps top management, teachers, students, and parents be involved in its implementation learning progress to gain the best students' academic achievement.

Kistian and Permana (2020) conducted a study on the use of total quality management in higher education in Indonesia. The findings indicated that TQM helped in long-term planning, fulfilling the vision of the school organization, and helped the school to win a global competition through the quality product. The finding was supported by Mercy (2015) who conducted a study on strategic imperatives of TQM and customer satisfaction which came up with a positive impact on customer satisfaction in management commitment, quality of goods services as well as continuous improvement. Hence, total quality management is observed as the means for collaboration to each individual within the school to enhance good academic achievement to school heads to be committed to the plan to reach the goal of school, teachers, students, and parents should be committed to teaching and learning progress.

II. STATEMENT OF THE PROBLEM

Globally, Total quality management enhances learners' academic concert in schools. However, statistics from the National Examination Council of Tanzania (NECTA) 2012 to 2019 shows that government secondary schools in the Manyoni district has been performing as not expected. Students return to the community without the ability to proceed for further studies and even to employ for self-reliance. A study conducted by Lugayila (2014) found that inadequate learning facilities such as inadequate teachers, lack of facilities such as well-equipped laboratories, standard libraries, instructional materials, and standard classrooms hinder the chances of students' success in

schools. One can ask why community secondary schools in Manyoni District are not performing well. Do the schools adopt total quality management? Therefore, it is from this light researcher wanted to examine the implementation of TQM practices in improving students' academic success in secondary schools in the Manyoni district council in Tanzania.

III. THE AIM OF THE STUDY WAS

To Investigate total quality management application for improving academic achievement in public secondary schools in Manyoni District.

To identify the challenges encountered by school leaders in enhancing total quality management practices in public secondary schools in enhancing students' academic achievement in Manyoni District.

To identify measures to prohibit the challenges for the implementation of total quality management practices in government secondary schools in Manyoni District.

IV. BENEFICIAL OF THE STUDY

This study is significant to many stakeholders such as policymakers, students, teachers, school heads as well as educational researchers as follows;

Policymakers will gain clear information that will guide in the promotion and practice of TQM in schools. Also, school heads will highlight the worth of the TQM in improving the quality and quantity of school outputs, on delegation of power whereby the teachers will be willing to accept new changes for stability and flexibility of the school. Consequently, school heads will alight on resource allocation and the effective use of vacant assets in the provision of educational services. Based on TQM principles, school heads will be able to agree with the subordinates on a transparent appraisal tool for monitoring and evaluating the school's success. In the same vein, students will yield from total quality management practices by absorbing various skills such as commitment, hardworking, communication, and then can use it later in life.

Moreover, teachers will equip with knowledge and skills on the significance of practicing total quality management in department and hence be able to help students in using the skills. The teachers will also be well-positioned to help their students to meet their life requirements and reduce school dropout in government secondary schools. Finally, apart from opening room to conduct more studies in other

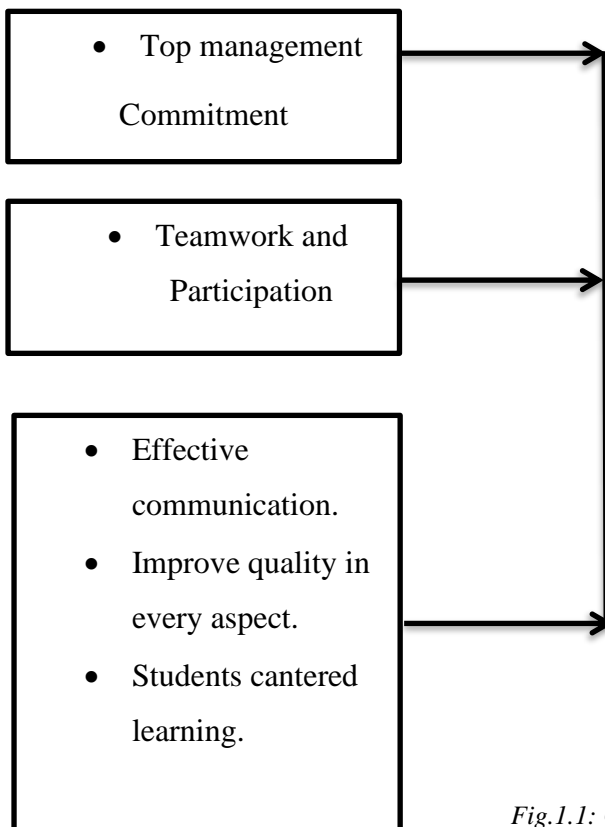
places in the country and other parts of the world in general, the study will provide knowledge to the researchers on various issues regarding TQM practices, thus a deeper understanding of the significance of total quality management services in enhancing students' academic achievement.

V. THEORETICAL CONCEPTUAL FRAMEWORK

This conceptual framework shows the relation between TQM and Academic Achievement

Independent variable

TQM Principles



Dependent variable

Academic Achievement

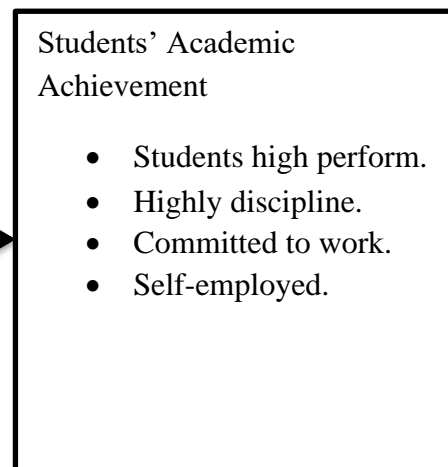


Fig.1.1: Conceptual Framework

Source: Researcher, 2020

Figure 1.1 conceptualizes the association among independent variables and dependent variables. The independent variable is abstracted as total quality management carrying out and measured by concepts such as Top management commitment, teamwork and participation, and effective communication, improves quality in every aspect as well as students' cantered learning. The dependent variable indicates that TQM affects learners to perform well in their academics. Students' been highly disciplined, committed to work, and involve in self-Reliance.

VI. RELATED LITERATURE REVIEW

In this part, the researcher demonstrated the finding based on the objectives of the present-day study. From the previous work results, the researcher observed research gaps that have been filled by this study.

6.1 Relationship between TQM Principles and Academic Achievement

TQM has a significant impact on student academic achievement. Kistiani and Permana (2020) conducted a study on the use of Total quality management in advanced schooling in Indonesia. The findings indicated that total quality management helped in long-term planning, fulfilling the vision of the school organization, and helped

the school to win a global competition through the quality product. Also, Mercy (2015) supported in her study those strategic imperatives of TQM and customer satisfaction and found that use of total quality management have a positive impact on customer satisfaction in management commitment, quality of goods, services as well as continuous improvement. Despite the sound effects of total quality management practices on bringing school achievement, school heads have no skills for planning sometimes lack the commitment to ensuring the students' achievement.

Likewise, Taahyadin and Daud (2018) made a critique of total quality administration in school institutions. The study demonstrated that TQM practices created a positive school culture environment and helped to generate student excellence performance. Similarly, Hassan, Islam, Shams, and Gupta (2018) supported that total quality managing is a tool for ensuring quality in the entire organization. It is believable that Total quality supervision has a vital role in the progress of school culture. However, school heads have little knowledge of how effective practiced promoting students' academic achievement.

In Mauritania, Ah-Teck, and Starr (2014) conducted a study examining the principals' views on the use of total quality management for school improvement. The findings demonstrated that qualitative information based on professional discourses, human judgments, and lived experiences should be equally important for making informed educational decisions. Generally, this study stressed the need for school administrators to involve all education stakeholders before making informed decisions. However, in many circumstances, some school heads do not value the contribution of stakeholders in enhancing students' academic achievement that led to bad academic achievement in students. Participation for stakeholders in the decision-making process in education plays a significant role in achieving the goal set.

A similar study was conducted by Llantos and Pamatmat (2016) on Total Quality Management in School-Based Practices of Principals in Philipines. The findings indicated that utmost of the TQM in School-Based Management (SBM) practices have a significant impact on school headship and improvement in high average and low performing schools. In the same line, Mukolwe, Okwara, and Jack (2017) on the operation of total quality management in primary schools in Kenya added that the extent of implementation of the TQM principle of top management support predicted the academic achievement of pupils. The researchers pointed that accountability and

commitment in school management determine the level of academic achievements in students so, to get good academic achievement in students, at hand is a need to consider the criteria for the selection of school heads.

Additionally, in Kenya, a study conducted by Kiprotich, Njuguna, and Kilika (2018) examined the influence of Total Quality Management practices and operational performance of the Kenya Revenue Authority. The findings indicated that total quality management helped the Kenya Revenue Authority (KRA) to achieve operational excellence. This study focused on Total quality management practices in the Revenue Authority. However, total quality management practices enhance operational excellence in other sectors. In the education sector, school heads ensure school efficiency in its operation when Total quality management practices are applied. Likewise, failure in controlling school management practices to bring students' academic achievement is directly related to poor practices in total quality management.

6.2 Challenges in the Implementation of Total Quality Management

In Greece, Saiti (2012) conducted a study to investigate whether educational leadership implemented the values of total quality management and contributes to the improvement of the educational process. Findings indicated that a lack of a long-term educational strategy, the absence of an education leadership development program, and limited financial support are the hindrances of TQM practices. Likewise, in Kenya, Ater (2013) supported that challenges that hinder total quality management practices in secondary schools were organizational culture, lack of commitment in management, and inadequate resources. Despite the findings that school-related factors have the benefit implementation of total quality management practices to deal with the challenges is still minimal that leads to failure of Total quality management practices in school.

In investigating barriers in the implementation of total quality management in Higher Education in India, Mishra and Pandey (2013) came up with the findings that poor curriculum design, lack of funds and resources, the resistance of employees towards change affects the implementation of TQM in schools. However, the study focused on higher learning institutions, also these challenges are found in public secondary schools. Generally, the inadequate fund is the major constraint that prohibits the development of total quality management practices in schools.

In the same line, Manafa and Ph (2019) conducted a study on the strategies for enhancing Total Quality Management in secondary school administration in Anambra State in Nigeria. The study found that poor total quality management affects school administration negatively. Also, the study recommended that Total quality management is not applied well because of mismanagement in secondary school resources, school infrastructure, and inadequate instructional materials in schools. Therefore, school facilities have a contribution to the efficiency of total quality management in improving students' academic achievement. However, in many public school facilities are inadequate to facilitate Total quality management practices that lead to low academic achievement in students.

Likewise, in Zimbabwe, Ngwenya and Pretorius (2014) conducted a study on Parental involvement with education within a Total quality management framework. The findings demonstrated that parents were not attending school events, not involved in academic issues and the formulation of the vision and mission statement. Therefore, to communicate total quality management. Parents' participation in school is very crucial to have a strong bond between school heads, teachers, students, and parents, thus yielding the better achievement of the teaching and learning improvement.

Similarly, Kigozi (2019) made an investigation of the challenges on the successful implementation of total quality management in educational institutions and demonstrated that ineffective leadership, resources, lack of an integrated model of TQM, low teacher status, resistance against change by the staff, lack of proper training of staff in TQM. The two studies focused on the need for school heads to integrate views of stakeholders in the effective implementation of total quality management practices to improve students' academic achievements. Although they have little concern about the importance of integrating stakeholders such as; Parents and students on how effectively they can implement TQM in improving academic achievement in students. The involvement of all stakeholders leads to the achievement of the desired outcome.

Likewise, in Tanzania, Tshabangu, Icarbord, and Msafiri (2013) examined quality education in Tanzania and the perception of global challenges facing Tanzania. The study employed mixed research methods in collecting and analyzing data by looking at written accounts, questionnaires, and interviews. The researcher showed that lack of sufficient resource, poor infrastructure, poor policy

implementation, and lack of political will to engage stakeholders to threaten a healthy link between education and other social-economic goals.

6.3 Possible Measures on the Challenges Facing TQM Practices in Schools

Sadikoglu and Olcay (2014) examined the effects of total quality management practices on performance and the reasons for the barrier to TQM practices in Turkey. The study recommends the improvement of employee involvement, commitment, awareness of total quality management practices, and provision of resources, and enhancement of firm structure to be measured to overcome barriers in Total quality management practices. Also, Hawi and Alzyadat (2019) on the investigation in total Quality management on students' satisfaction in the Jordanians' private University for achieving institutional excellence supported that participation has a strong influence on students' satisfaction. Even the finding demonstrated that participation has an impact on student satisfaction when the involvement of students in matters concerning their needs in school is underrated. Therefore, students' academic achievement is not achieving. Participation and commitment of teachers in schools have a great concern to students' success.

In Nigeria, Oduwaiye, Sofoluwe, and Kayode (2012) conducted a study on students' academic performance in Ilorin metropolis secondary schools, Nigeria. The findings demonstrated that effective communication in schools between principals and staff as well as school-based management has a significant relationship in total quality management. Therefore leadership has a strong influence on ensuring progress in school through effective communication with subordinates. School heads should effectively communicate the vision and mission of the school with the teachers, students, and parents to enhance commitment and accountability to get student achievement.

An investigation carried out by Avila (2018) on total quality management practices of school administrators concerning school performance among teacher education institutions in the Quezon Province suggested that school administrators are moderately practicing TQM. The researcher further recommended that school administrators should attend training on total quality management for them to apply it in their work. The findings are supporting by Awwad and Mashgba (2014) that there is a positive impact on the development of human resources on the efficiency of academic performance in a Jordanian university. However, the researchers have carried out their

studies in different education levels and context they all indicated the need to focus on human resources and training to develop skills for effective total quality management practices to promote student academic achievement in public secondary schools.

In Kenya, Karimi (2016) assessed the influence of total quality management principles on the performance of public secondary schools in Kajiado North Sub-country. The study recommended that; principals be more proactive in checking student progress, enhancing accountability in teachers, as well as teachers should share best practices with others after training. Other recommendations include improving the teacher-student ratio among other necessary resources and schools to have more academic day and prize-giving days to track the performance of students. Bunglowala and Asthana (2016) supported that leadership commitment, evaluation, and motivation through the implementation of total quality management in teaching and learning procedures improve the quality of teaching and learning.

Likewise, in Tanzania, Kabendera (2018) conducted a study on total quality management theory and practices in government secondary schools in the Ngara District council. The study recommended that school management should maintain a close link with their customers such as students, parents, staff, and board of management to know their requirements and to measure or monitor progress to ensure it has been successful in meeting their expectations and satisfaction. Likewise, in Zimbabwe, Nyuke and Gasva (2015) made a qualitative investigation on the implementation of total quality management and its principles in one selected regional center of the Open University. However, the two studies carried out in different contexts have identified customer focus as a priority to attain maximum satisfaction. Therefore, focusing on student's needs is a better way to approve their academic achievement, but in most public schools, students' needs satisfaction is not giving priority that leads to low academic achievement.

VII. RESEARCH GAP

Overall, the reviewed studies showed that total quality management in education is a global concern. The previous studies indicated that total quality management principles have strong relationship with academic achievement. Secondly, the previous researchers demonstrated that there are challenges which prohibit the effective implementation of total quality management principles in schools hence affecting students'

achievement. Moreover, most previous studies employed either quantitative or qualitative research designs in data collection and analysis processes which cannot provide generalized findings as compared to a combination of both. These researchers include; Llantos and Pamatmat (2016), Mukolwe, Okwara and Jack (2017), Ejionueme (2015), Ngwenya and Pretorius (2014), Kigozi (2019), Oduwaye, Sofuluwe and Kayode (2012), Nyuke and Gasva (2015). Similarly, other researchers used only document analysis in the collection of data (Mercy, 2015; Saiti, (2012) and Tshabangu, Icabord & Msafiri; 2013). Moreover, some studies were conducted in other sectors other than education (Kiprotich, Njuguna, & Kalika, 2018). Likewise, other studies were carried out in tertiary education institutions and universities. The reviewed literature indicated that in Tanzania, few studies were documented particularly in total quality management practices in education in principles in public secondary schools. Moreover, there is no study carried on the assessment of implementation of total quality management principles in public secondary schools in improving student's academic achievement in Manyoni District, Singida. As a result of these gaps the researcher was motivated to conduct this study.

VIII. METHODOLOGY

The researcher employed a mixed-method research approach whereby qualitative and quantitative research approach combined in the same study. Creswell and Clark (2011) noted that qualitative research is deficient because the researcher's subjective interpretations and the ensuring biases make it difficult to generalize the finding; hence this supported the adoption of a mixed-method research design as it used in the current study. It purposefully used to complement the weaknesses that could not be addressed by a single method. The researcher used convergent parallel mixed methods research designs. This method allows the researcher to collect qualitative and quantitative data at the same time and analyze it separately and combine it at the end of the study. The target population comprises individuals living in the selected area. The study involved fifty-five teachers, eight parents, ninety-six students, and one educational officer of public secondary schools in the Manyoni District Council in Singida Region, whereby four public secondary schools were selected used in the study. The researcher adopted Yamane's formula to get a sample size. Hence, a total sample size of 180 respondents. The study employed probability and non-probability sampling. The reliability of the research instruments was 0.73. The

results provided proved that the research instruments were reliable and deemed used in the field. Moreover, the researcher observed all ethical considerations to respondents as confidentiality for the information provided, referencing, and proper citation of other scholars' works.

IX. RESULTS AND DISCUSSION

This subsection presents the findings of the study which are organized based on research objectives, such as: relationship between total quality management principles on students' academic achievement, challenges encountered by school heads in enhancing total quality

management and the possible measures to the challenges facing total quality management practices in schools.

9.1 Relationship between Total Quality Management Principles on Students' Academic Achievement

The finding from public secondary schools teachers and students on the relationship between total quality management principles on students' academic achievement were positive hence they explain that the relationship between Total quality management principles on students' academic achievement in Manyoni district help to promote communication in school, enhance commitment, reduce truancy and dropouts and encourage participation. Table 4.4 presents the results.

Table 4.4: Teachers Responses on the Importance of TQM in Academic Achievement (n=55)

Responses	Frequency	Percentage
Promotes communication in school	12	21.8
Enhances commitment in school	7	12.7
Diminishes truancy and dropout	20	36.4
Encourage participation	16	29.1
Total	55	100.0

Source: Field data, 2020

Promotes communication in school

The findings in table 4.4 indicate that 21.8 percent of the participant pointed out that Total quality management practices helped promotes communication in school. Respondents explained that TQM made effective communication between school heads, teachers, parents, and students. Effective communication encourages cooperation and support among education stakeholders. Hence, to improve students' academic achievement, the conceptual framework is showing that effective communication affects students' academic performance. Therefore, there is a need for school heads to make sure there is proper communication between teachers, school heads, parents, and students to promote academic achievement.

Enhances commitment in school

The findings in table 4.4 also indicate that 12.7 percent of the respondents asserted that total quality management practices helped to enhance commitment in school. The results implied that TQM made each individual concerned with education to participate actively to ensure students' performance. Although teachers found TQM practices a

useful factor in the Manyoni district, some teachers were not committed to the teaching process. Similarly, interviewee A stated that "Some teachers are not committing in the school timetable. Some teachers came to school late and sometimes departed before departure time so you can plan for remedial teaching unsuccessful and also they did not teach some lessons properly". (Interviewee A. July 29, 2020: 10:10 am). The findings showed that a lack of commitment among teachers prohibits the achievement of total quality management in school.

Diminishes truancy and dropout

From table 4.4, respondents entail total quality management principles helped to eliminate student truancy and dropout in school by 36.4 percent. Respondents viewed Total quality management practices as an agent for diminishing truancy and dropout in students. TQM principles required each individual in school to committed and accountable to ensure students' needs met for school effectiveness. Despite the importance of TQM practices on eliminating truancy and dropout in school, parents in Manyoni were not accountable to make follow up those

students attended schools until completion. During the interview an interviewee B explained; "generally, the community did not have awareness on education. Some students got pregnant. Sometimes, the parents collaborate with the offenders to dismiss the case."

The findings implied that some parents in Manyoni do not committed and accountable for the education of their children. The results were contrary to the principles of total quality management that required quality in each aspect. Ejionueme (2015), on the application of Total Quality Management in a secondary school in Nigeria, found that; commitment, teamwork, and effective communication have significant impacts on school effectiveness. Thus there is a need for the parents in Manyoni to provide the total commitments in controlling truancy and girl dropout in school for school effectiveness.

Encourage participation

Table 4.4 shows that 29.1 percent of respondents argued that total quality management practices encourage the participation of each individual in schools. The finding implied that Total quality management practices ensure participation. In the Manyoni district, stakeholders of

education did not participate well in school matters to improve academic achievement. For instance, one of the interviewees quoted that; "in our schools, we do plan together and everyone is accountable on the planned strategies but, sometimes we failed to reach the goal because parental participation is minimal" this means that the lack of parental participation in school matters made schools achieve poorly in academics. Therefore all stakeholders, parents should be given seminars to increase their awareness of the importance of participating in schools to improve the academic performance of students.

Likewise, the researcher asked students to explain the importance of total quality management practices in school. Participants asserted that Total quality management practices help in parental participation, create conducive environment for study, promotes students' academic performance, and motivate teachers in schools as school heads, teachers, school managers, and parents work together as a team to infuse quality service in every sector, as indicated in figure 4.2

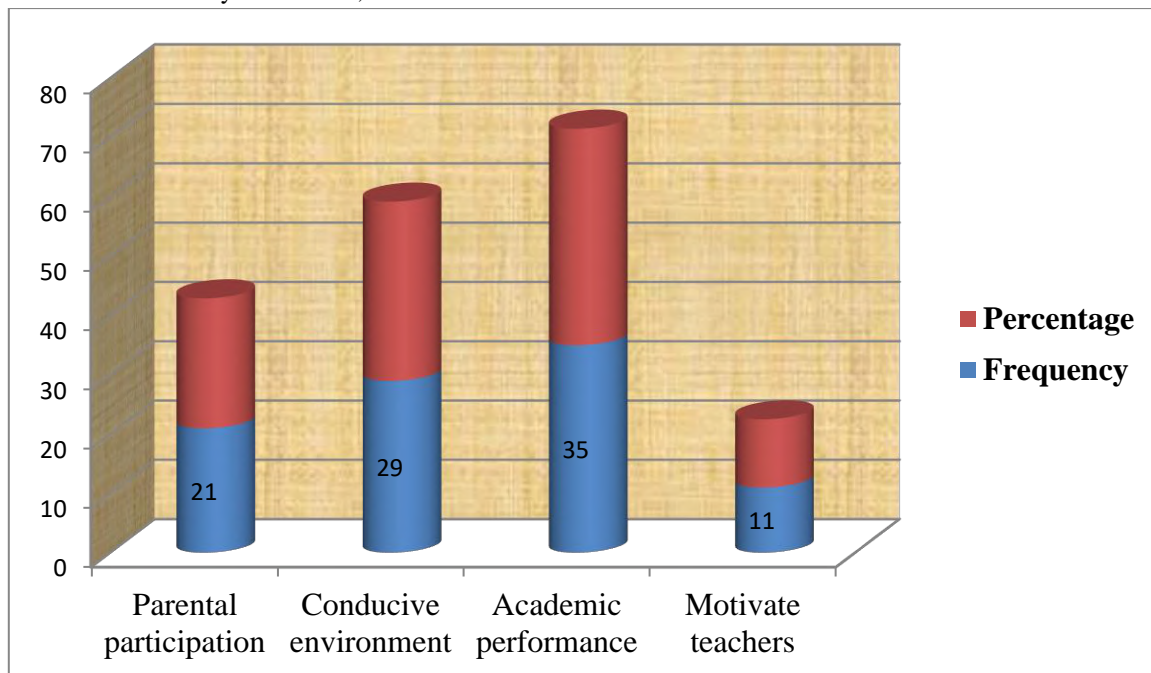


Fig.4.2: Importance of Total Quality Management Principles in School (n=96)

Source; Field data 2020

Parental participation

The findings in figure 4.2 pointed out that total quality management practices in schools helped in parental participation in school activities by 21.9 percent. The results entail that TQM practices required parents to be

committed to participating actively in school activities to ensure a suitable learning environment for students. For example, parents must participate in improving infrastructures like classrooms, laboratories, and libraries and make follow up on the students' progress in schools. In

line with the findings, the theory of total quality management requires each one in schools to be committed to improving the quality of education to infuse quality in all sectors in secondary schools.

Despite the importance of parental participation in improving academic achievement, in the selected schools in Manyoni, the participating of parents in school activities was very low. During the interview, the researcher recognized from the respondents that parents did not participate well in schools related matters. For instance, one of the interviewee C explained;

School heads are very strategic on improving the academic performance of students in schools, but parents did not provide support to the teachers. When they had parents' meetings were very few parents attending, you may call the meeting more than three times to get them. That situation hinders the achievement of school goals (Interviewee C, July 30, 2020: 9:45).

The finding implied that the lack of commitment of parents in the Manyoni district affects the academic performance of students. The results are contrary to the principle of total quality management that requires each individual to be accountable to improve the quality of services in education. Therefore, parents should give knowledge of the importance of being responsible and committed in school matters to promote the academic achievement of students. These findings relate to the theory of total quality management that emphasizes the focus on quality to the main stakeholders that act on students.

Creates a conducive learning environment

Figure 4.2 also indicated that 30.2 percent of participants presented that total quality management practices were useful in creating conducive learning environment in school. The findings implied that Total quality management practices helped to build positive school culture. Therefore parents, managers, school heads, teachers, and students got a chance to contribute on how to improve the quality of education in secondary schools, from the findings, (Taahyadin and Daud, 2018) found that total quality management practices create a positive school culture environment help to generate student excellence performance, and promotes quality in every sector in the school environment.

Promotes the academic performance of the school

The findings in figure 4.2 also reveal that total quality management practices in schools helped in promoting

students' academic performance by 36.5 percent. The results demonstrated that students had grasped that Total quality management practices were crucial to elevate academic performance in schools. The findings also showed that TQM practices helped each individual in schools to participate in the decision-making process to enhance the quality of education. However, the involvement of each individual in decision making determines the level of performance in schools. This finding is in the same line as (Mukolwe, Okwara, and Jack, 2017) in Kenya found that the extent of implementation of the TQM principle of top management support predicted the academic achievement of pupils. Therefore school heads should ensure all stakeholders are involved in the decision-making process in schools.

Motivate teachers

Figure 4.2 also shows that 11.5 percent of respondents indicate that total quality management practices were useful in motivating teachers in school. Despite the respondent's views on the importance of Total quality management practices on the motivation of teachers, in Manyoni District, total quality management is not functioning well. During the interview, an interviewee explained: "some parents in school are not committed to making follow up of students' academic progress which hinders the performance of students" (Interviewee Z, 2020). The findings implied that the lack of commitment of parents to support teachers in school affects the academic performance of students. The study of (Terzic 2017) found that supporting academics programs, increasing students' performance, and providing quality education are useful factors to promote TQM in schools. Therefore parental support has a strong influence on motivating teachers in the school to perform their teaching effectively to promote academic achievement.

9.2 Challenges Encountered by School Heads in Enhancing TQM

Respondents involved in this work were school heads, teachers, students, DEO, and parents. The researcher provided questionnaires to students and teachers while the interview was conducting with school heads, district educational officers, and parents. School heads and District education officers were effective because school heads and DEO deal with the whole process of provision of education in public secondary schools. Thus they provided the needed information.

The researcher wanted to know if respondents knew the challenges faced by school heads in the implementation of total quality management in improving student's academic

achievement. The findings displayed that low parental participation, inadequate infrastructure, and lack of commitment of teachers, shortage of science teachers, and

inadequate teaching and learning resources as represented in table 4.6

Table 4.6: Teachers Responses on the Challenges faced School Heads in Implementation of TQM (n=55)

Responses	Frequency	Percentage
Poor parental participation	17	30.9
Inadequate infrastructure	8	14.5
Inadequate commitment of teachers	11	20.0
Shortage of science teachers	14	25.5
Inadequate teaching resources	5	9.1
Total	55	100.0

Source: Field study, 2020

Poor parental participation

The findings in table 4.6 demonist rates that 30.9 percent of the respondents viewed low parents participation as the challenge faced by school heads in the implementation of total quality management in school. Respondents showed that poor parental support in academic-related issues like follow up of students' results and progress report in school has led to the poor performance of students in school. Also, low parental support in Manyoni made schools have poor learning environments that did not motivate students and teachers to work effectively to promote academic performance. For example, in one of the selected schools in Manyoni, some teachers were living in houses made of mud. The researcher concluded that if parents participated well in school matters, they could unveil some of the challenges in school and promote the satisfaction of teachers and students. The findings were also contrary to the principle of system approach in total quality management theory that required an organization to function as a system to improve performance. Therefore parents should be provided with education to supports school heads to promote students' achievement in school.

Inadequate infrastructures

In table 4.6, the results also indicate that 14.5 percent of teachers asserted pointed out that inadequate infrastructure were another challenge faced by school heads in the implementation of total quality management. Also, the researcher asked the students to mention the challenges faced by school heads in Total quality management in school. Respondents about 40.6 percent viewed those inadequate infrastructures as pointed in table 4.6. The

findings imply that infrastructures in Manyoni were not sufficient to promote academic achievement in school. For example, in the selected schools, two schools had no science laboratories, and three schools had no libraries. Also, in one of the selected schools, a science practical was being conducted in a classroom. In another school, there was a laboratory without laboratory equipment and chemicals. These findings implied that inadequate infrastructures in Manyoni prohibit the implementation of total quality management. The results were contrary to the Total quality management theory that required quality in each aspect to promote customer satisfaction. Thus, there is a need for the government to collaborate with the community to improve school infrastructures in Manyoni to raise students' academic achievement. The inadequate commitment of teachers

Table 4.6 shows that 20.0 percent of the respondents agreed that the inadequate commitment of teachers challenged the implementation of total quality management. Lack of commitment affects academic achievement in school. Respondents showed that in Manyoni, some teachers were not committed to enhancing academic achievement among students. During the interview, respondents revealed that some teachers did not attend school at the stipulated time. The situation caused some delays in the teaching process that led some teachers not to complete the syllabus on time. Similarly, interviewee C said: "some teachers do not come to school on time and sometimes depart earlier. That is a problem because some of them did not complete the syllabus on time" (Interviewee C July 30, 2020).

Just like teachers, the researcher asked students to give challenges to the implementation of total quality management. 16.7 percent of the respondents pointed to inadequate commitment of teachers. The findings demonstrated that students also were aware of a lack of commitment in teachers' affects academic achievement. These findings agree with those of Horwitz (2000) found that quality did not be achieved by accident or management dictation as it involves an educational change in management behavior and the attitude of every staff member toward quality improvement.

Shortage of science teachers

Table 4.6, respondents explained the shortage of science teachers in Manyoni as the challenge in the implementation of total quality management by 25.5 percent. Respondents explained that in the selected schools, there were no adequate teachers for science subjects. For example, in the selected schools, one school had only two science teachers teaching from one to form four while, the other two schools had four science teachers out of eight science teachers required in school. Also, one school had six science teachers teaching from one to form four. Moreover, some schools did not have physics and chemistry teachers in the school that hinder the implementation of total quality management in school. Inadequate science teachers in Manyoni made schools have low academic achievement. Figure 4.5, 15.6 percent indicated that the shortage of science teachers was responsible for poor total quality management. These findings imply that the schools in the Manyoni district effectively implement Total quality management to enhance academic achievement. The government should employ additional science teachers towards achieving adequate capacity.

Inadequate teaching and learning resources

Findings in Table 4.6 also indicates, 9.1 percent of respondents showed that inadequate teaching and learning resources affect the implementation of total quality management in school to enhance academic achievement. The findings imply that in the Manyoni district, facilities for teaching and learning in school were inadequate. For example, in one of the selected schools, there was a laboratory room without laboratory instruments and also, were still in construction except in one school which had a complete laboratory. Likewise, the selected schools did not have school libraries except for one school. These findings are consistent with Qaiser (2015) that conducted a study in Pakistan and found that insufficient resources in schools were the obstacle in the implementation of TQM in public secondary schools. Thus, parents, the community, and the government should work under collaboration to eliminate the barriers to the implementation of total quality management to promote academic achievement in Manyoni.

Similarly, students are required to mention challenges facing school heads in the implementation of total quality management in enhancing students' academic achievement in public secondary schools in the Manyoni district. The researcher involved ninety-six (96) respondents from four public secondary schools. Respondents identified poor community support, inadequate infrastructures, the lack of commitment of teachers, and shortage of science teachers as indicated in figure 4.5

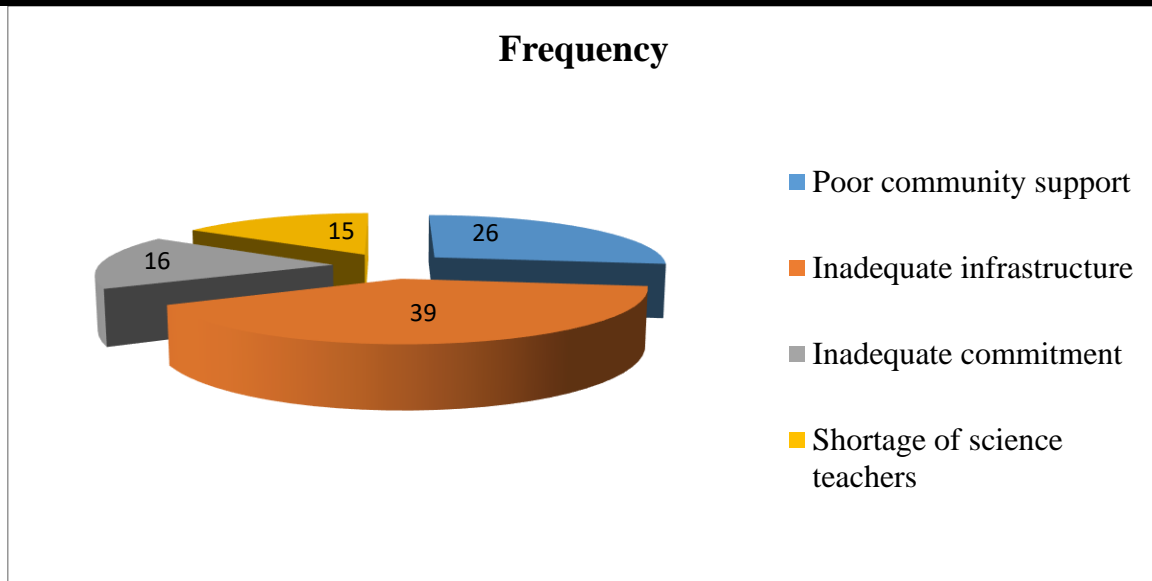


Fig.4.5: Students Responses on Challenges faced School Heads on Implementation of TQM n=96

Source: Field study, 2020

Lack of Community Participation

Figure 4.5 indicates that 27.1 percent of respondents agreed that there is low cooperation between community and school. Based on the findings, in the Manyoni district, community participation in education was minimal. To achieve the desired goal in students' academic achievement, the community corporate in social responsibility is highly required to improve the school services. These findings are consistent with those of Gwenya and Pretorius (2014) found that a lack of community participation is a barrier to the implementation of total quality management. For example, in the selected school, one school received support from CRDB bank to improve the education of students. The organization provided computers in school to facilitate educational technology. Therefore community participation plays a significant in the improvement of school infrastructures to motivate students learning.

9.3 Countermeasures against the challenges in the implementation of TQM in Public Secondary schools in Tanzania

The researcher in this objective intended to examine the possible measures for the challenges faced by school heads in practicing total quality management in public secondary schools in the Manyoni district. The researcher involved the participants from teachers, school heads, and students.

The researcher asked teachers to explain their opinions on what should be done in school to implement total quality management for improving students' academic achievement. The respondents described leadership commitment, community support, provision of facilities provision of science teachers, and providing motivations to teachers as indicated in figure 4.6

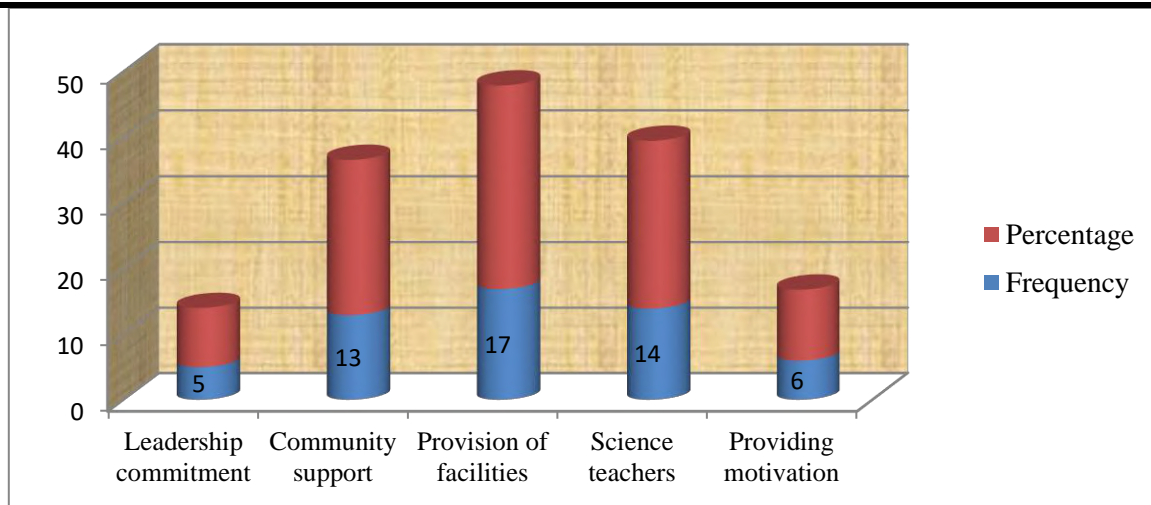


Fig.4.6: Teachers Responses on Measures for the Challenges of TQM (n=55)

Source: Field study, 2020

Figure 4.6 showed respondents 9.1 percent responded leadership commitment encountered challenges for the implementation of total quality management to improve academic achievement. Leadership behavior has a strong influence on the other commitment in school organizations. Concerning the findings, (Bunglowala and Asthana, 2016) found that leadership commitment, evaluation, and motivation through the implementation of total quality management in teaching and learning procedures improve the quality of teaching and learning. A leader who is responsible promotes the commitment of teachers and students in school. Hence each of the stakeholders play a part ensures that school achievement. In the Manyoni district, some respondents reported that school heads were not committed to activities moved as planned. Similarly, during the interview an interviewee G presented; "low academic achievement is causing by the failure of the school head to supervise teachers to work effectively. We saw teachers on the way to school at a very late time and asked ourselves at what time they teach their lessons" (Interviewee G August 3, 2020: 4:05 pm).

The findings imposed that some school heads in the selected school were not committed to their activity. Therefore school heads should play their part to ensure the commitment of teachers and students in school in the teaching and learning process to improve academic achievement.

Community support

Also, respondents viewed community support agent in the implementation of total quality management to improve students' academic achievement. 23.6 percent of the

respondents in figure 4.6 pointed out that community participation was crucial in the practices of TQM in Manyoni. Parents' participant in school matters is useful in improving infrastructure and reducing barriers for students learning in school. Parents' participation in a public secondary school in Manyoni contrary to the principle of participation. Community participation was low, which led to poor performance in school. For example, in the selected schools, some staff houses made of mud that could not motivate teachers to settle in. Also, despite the challenges facing girl students walking a long distance to the school community and parents did not see the importance of building dormitories for girls. (Hawi and Alzyadat, 2019) in Jordan found that for achieving institution excellence participating has a strong influence on students' satisfaction. Therefore, education should provide to communities of Manyoni to support education services to improve academic achievement. Just like teachers, in table 4.7 also, 18.8 percent of students explained community support as a factor in the implementation of total quality management to improve academic achievement in Manyoni.

Provision of facilities

Findings in figure 4.6 demonstrated, 30.9 percent of respondents argued that providing teaching and learning facilities in school could help in the implementation of total quality management in school. In Manyoni, it was evident that to have inadequate teaching and learning facilities like laboratories, libraries as well as laboratory instruments. Inadequate of these facilities for teaching and learning implemented total quality management difficulty

for improving students' academic achievement. In Kenya, the study conducted by (Ater 2013) found that challenges that hinder Total quality management practices in secondary schools included inadequate resources. Thus, there is a need to ensure adequate teaching and learning facilities to improve performance.

Also, the researcher asked the students to explain what should be done in school to ensure the implementation of total quality management to improve students' academic achievements in Manyoni. Just like teachers, table 4.7 shows 25.0 percent argued that the provision of adequate teaching and learning facilities would be the best practices to implement total quality management in improving students' academic achievement. The findings showed that students were also aware of inadequate teaching and learning facilities in Manyoni setback the implementation of total quality management on improving academic performance. Therefore community members in Manyoni should work under collaboration with the government to ensure adequate teaching and learning facilities in schools to improve student's academic achievement.

Adequate for science teachers

Respondents from teachers in figure 4.6 show that 25.5 percent argued; the provision of adequate teachers for science subjects would help in the implementation of total quality management in the selected schools. In Manyoni, science teachers were inadequate in all of the selected secondary schools that made the schools perform poorly in science subjects. For quality products, total quality management theory required quality in every aspect. One of the interviewees said: "In Manyoni we still have inadequate science teachers in our schools. Therefore, the implementation of total quality management in this area is a challenge. However, the government efforts for eliminating the challenge is high; science teachers are inadequate country-wide."

The findings alert that there is a need to train teachers in teaching colleges should be motivated in science subjects to get enough teachers to reduce the shortage of science teachers in school. One of the motivations is to hire them immediately after they completed their teaching course. Therefore the provision of adequate science teachers could make the implementation of total quality management in Manyoni to improve academic achievement.

Figure 4.6 shows that 10.9 percent of the respondent asserted that providing motivations to teachers and students could be the best way in the implementation of total quality management in improving students' academic achievement in Manyoni. Respondents showed that providing good houses and facilities in teachers' accommodation could be a better motivation for teachers to work effectively. Just like the motivation of teachers' respondents indicates students also need it for better results. Respondents pointed to the provision of dormitories in school to motivate students walking a long distance to school. Therefore school management in Manyoni should consider the requirements of students and teachers for the implementation of total quality management. In line with the findings, (Kabendera 2018) in Ngara Tanzania, recommended school management to maintain a close link with their customers such as students, parents, staff, and board of management to know their requirements and meet their expectations and satisfaction.

Moreover, the researcher asked students a similar question, and 20.8 percent of respondents said providing motivation plays a significant in the implementation of total quality management in improving students' academic achievement in school. Therefore school heads should work effectively to ensure teachers and students are motivated to enhance students' academic achievement.

Table 4.7: Students Responses on Measures on the Challenges in Implementation of TQM (n=96)

Responses	Frequency	Percentage
Improve infrastructure	22	22.9
Community support	18	18.8
Adequate facilities including funds	24	25.0
Providing motivation	20	20.8
Accountability of teachers	12	12.5
Total	96	100.0

Source: Field Study, 2020

Accountability of teachers

Table 4.7 indicates participants pointed out; the responsibility of teachers in school by 12.5 percent. Students viewed teachers' work hard as a better way in the implementation of total quality management in improving students' academic achievement. In Manyoni, some teachers were not accountable in the teaching process. Lack of accountability sets back the implementation of total quality management in improving students' academic achievements. Also, the lack of accountability goes against the principle of Total quality management that required each individual in the organization to be accountable to enhance quality. Therefore schools heads in Manyoni should have strategic ways to make teachers' accountable in school to improve students' academic achievement.

X. CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

Based on the summary of the findings, the study concluded that total quality management plays a vital role in students' academic achievement in such that it helps to eliminate truancy and dropouts; it also encourages participation in school activities among teachers, managers, school heads, students and parents. TQM helps in long-term planning, the schools to win the global competition through quality products.

Also, the study concluded that total quality management practices in public secondary schools improve students' academic achievement enhances school effectiveness, commitment in teachers and students, encourages collaboration among stakeholders, and build strong teamwork in secondary schools.

Nevertheless, school heads experienced challenges in the implementation of total quality management due to low parental participation, inadequate facilities, and lack of commitment of teachers, and a shortage of science teachers.

Lastly, on the challenges facing the school heads in implementing TQM, the study through respondents' views concluded that there is a need for the government and other stakeholders to provide adequate facilities to support school heads to implement total quality in schools, to hire adequate science teachers, to improve infrastructures and reduce barriers for students learning. Furthermore, to introduce proper strategic ways to make teachers accountable during working hours in school to elevate students' academic achievement.

10.2 Recommendations

Based on the findings, presentation, and analysis of data, the researcher recommended that: The government, through the Ministry of Education, should provide adequate science teachers, funds, teaching, and learning materials in public secondary schools in the Manyoni district to improve students' academic achievement and performance of science subjects and others.

The policymakers should include the TQM program in all secondary schools to be compulsory to enhance teaching and learning in Manyoni and Tanzania as a whole.

The school heads should formulate collective purpose, impart academic achievement values, developing school culture for good students' academic achievement and prepare a strategic plan to create conducive teaching and learning environments for students' academic achievement. Moreover, heads of school should ensure accountability and commitment of teachers and students in school to improve school performance.

Also, education should be provided to parents, teachers, and other stakeholders via seminars and workshops to work in collaboration with the government to improve the school environment and eliminate all barriers to the implementation of total quality management practices to enhance students' academic performance.

Just like parents and community should be encouraged to support educational services in school to promote academic achievement in school. The community donours should improving school infrastructures and providing facilities for teaching and learning to improve academic achievement.

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