STUDENT TEACHERS' INVOLVEMENT IN INTERNAL QUALITY ASSURANCE PROCESSES: A MODEL DEVELOPMENT FOR TEACHER COLLEGES IN TANZANIA

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Open University of Tanzania a thesis entitled *Student Teachers' Involvement in Internal Quality Assurance Processes: A Model Development for Teacher Colleges* in *Tanzania* for the fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Education of the Open University of Tanzania.

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Date

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Date

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DECLARATION

I, **Geofrey John Shahanga,** declare this thesis original work. It has not been presented to any other University or institution for an academic or similar award. Appropriate citations have been provided where other people's works have been used. In this context, therefore, I declare this work to be originally mine. It is now presented in fulfillment of the requirements for the Degree of Doctor of Philosophy (PhD**)** in Education.

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Signature

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Date

DEDICATION

This thesis is dedicated to my lovely family: my wife, Ms. Merina Thobias, and my children, Anitha, Bhoke, Wilson, Gianna, and Christina, for their love, passion, moral and material support, which enabled me to reach this far in the academic ladder. May the Lord bless them all abundantly.

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ABSTRACT

Teacher colleges are established to prepare professionals for teaching and ensure the quality of education in schools. However, the lack of a robust model for active engagement of student teachers in internal quality assurance processes affects not only the quality of teacher education in their entire college but also the ability of student teachers to perform quality assurance roles and functions in schools when employed. This study, therefore, developed a model to bridge such a practical gap. Specifically, the study assessed the need for a model of student teachers' involvement in internal quality assurance processes; designed and developed a model; determined enablers for a model; and evaluated the model's effectiveness on the quality of teacher education. The study adopted a pragmatism paradigm, a sequential explanatory mixed design. Data were collected through questionnaires, interviews, and focused group discussions from 573 respondents sampled purposively from 12 teacher colleges. The descriptive, inferential, and content analysis techniques were used for data analysis and presentation. Based on the paradigm shift and students' involvement theories, the study found a dire need to develop a model of student teachers' involvement in internal quality assurance processes. The developed model, termed 'UCHUKI', was effective as it predicted a positive and significant influence on the quality of teacher education. However, the model requires policy, institutional, technical, and structural support to enhance its acceptability, adaptability, usability, and effectiveness. From this observation, it can be concluded that the UCHUKI model developed proved to be an effective tool that enables student teachers to provide constructive feedback for quality improvement in teacher colleges. Therefore, the study suggests that the Ministry of Education, Science and Technology should adopt the model, customize it, and capacitate teacher colleges to use it for quality improvement. Further study may scale up the model for use in higher learning institutions offering teacher education programmes in Tanzania.

Keywords: Student teachers, Teacher Colleges, Paradigm Shift, Quality Assurance, UCHUKI.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADEM	Agency for the Development of Educational Management
ATEE	Association for Teacher Education in Europe
COSTECH	Tanzania Commission for Science and Technology
ENQA	European Association for Quality Assurance in Higher Education
EP4R	Education Programmes for the Results
GPE	Global Partnership for Education Fund
IUCEA	Inter-University Council for East Africa
LANES	Literacy and Numeracy Education Support
MoEC	Ministry of Education and Culture
MoEST	Ministry of Education, Science and Technology
MoEVT	Ministry of Education and Vocational Training
NACTVET	National Council for Technical and Vocational Education Training
NAOT	National Audit Office of Tanzania
NECTA	National Examination Council of Tanzania
NUSE	National Union of Students of Europe
SPSS	Statistical Package for Social Sciences
SQAD	School Quality Assurance Department
SQAF	School Quality Assurance Framework
SQAOs	School Quality Assurance Officers
SUA	Sokoine University of Agriculture
TCU	Tanzania Commission of Universities
TESP	Teacher Education Support Project
TIA	Tanzania Institute of Accountancy

UCHUKI	Uthibiti Ubora wa Chuo Kiganjani
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
URT	United Republic of Tanzania
USA	United States of America
USAID	United States of America International Development

CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Chapter Overview

The study intended to develop a model for student teachers' involvement in internal quality assurance processes in teacher colleges. It is divided into six chapters. This chapter presents the introduction, background, and justification of the study, a statement of the problem and purpose of the study, research objectives, and their questions. Besides, the chapter presents the scope and delimitation of the study significance of the study, the definition of key terms, and the organization of the thesis.

1.2 Background and Justification of the Study

The global labour market requires a competent and competitive workforce to address the emerging social, economic, and technological challenges in the 4th industrial economy (Diquito, Ariter & Bulonos, 2022; O' Lawrence, 2017). Such pressing needs for a skilled workforce necessitated the improvement of teachers' quality to enhance the required workforce for economic growth and sustainable development (Nnorom & Mezieobi, 2020; Namamba & Rao, 2017). Consequently, the European countries, through the Bologna process of 19th June 1999, suggested to harmonize their education systems to enhance the quality of higher education, which prepares teachers alongside the workforce of other cadres (Alaniska et al., 2016).

Under the Bologna process, ministers for education stressed a need for involving students as beneficiary stakeholders in quality assurance processes for safeguarding their career interests and learning needs (Fedeli, 2016). Therefore, the European

Union developed quality assurance guidelines adopted by different countries for enhancing the quality of higher education, among which is the quality of teachers (Hyperstedt, 2013; Logermann, 2014; Scott, 2018). In response to the European quality assurance guidelines, countries like Norway, German, Scotland, England, Finnland and Romania established their quality assurance agencies which incorporated students as committee members at national, institutional, faculty, department and programme level playing different roles as information provider, actor, expert and or partner the variation of students' role in quality assurance processes from one country to another (Prisacariu, 2013; Alanisaka et al, 2006).

Similarly, in the Netherlands education system, students started being involved in quality assurance processes through course evaluation, representation in managerial committees, and committee panels for students themselves (Stalmeijer et al., 2016). As a good practice and a role model, the culture of involving student in quality assurance processes spread out from Europe to the rest of the World, where in Asia, Pakistan in particular, Latin America, and the United States of America their education systems started incorporating their students in quality assurance processes from institutional to the national levels (Andleeb & Jusoh, 2020; Mavil, 2013; Berner, 2017).

In the same vein, African countries adopted the system of involving students in quality assurance processes where students were incorporated among the quality assurance stakeholders in higher education, for example, Ghana, Egypt, South Africa, and Tanzania (Essel, Boakye-Yiadom & Kyeremeh, 2018; Noha, 2013; Moyo & Boti, 2020; Amoako & Asamoah-Gyimah, 2020; SUA, 2017; ADEM,

2020). To strengthen the quality improvement initiatives, the African Union developed standards and guidelines for quality assurance processes in higher education, in which students were recognized among the key stakeholders (African Union, 2020). Similarly, through the Inter University Council for East Africa, the East African Community established principles and guidelines for quality assurance in which students were identified as essential actors in quality assurance processes (IUCEA, 2014).

Unlike in Europe, where student teachers are trained in higher training institutions only, in Tanzania, student teachers are trained in teacher colleges for an ordinary Diploma, while higher learning institutions train teachers for a bachelor's and master's degree (Namamba & Rao, 2017; Mgaiwa, 2018). Therefore, the strong emphasis of student teachers involvement in higher education quality assurance processes isolates about 23,000 student teachers enrolled annually in teacher colleges, even though their career requires them to develop quality assurance competencies for improving the quality of basic education through their direct involvement in the processes (Shahanga, Kigobe & Ogondiek, 2021; MoEST, 2025).

The minimal involvement of student teachers in internal quality assurance processes in Tanzania is closely attributed to the lack of a robust model for involving student teachers in internal quality assurance processes in teacher colleges (Shahanga, Kigobe & Ogondiek, 2023). Henceforth student teachers involvement, relies mainly on the few representatives selected for Focus Group Discussion with quality assurance officers, leaving away the rest of the student teachers with lack of quality

assurance experiences for improving the quality of their teacher education and the quality of the basic education they will be recruited for (MoEST, 2024).

The need for developing a model for student teachers' involvement in internal quality assurance processes can be traced back to 1978 when the school inspectorate department was established for inspecting schools for quality improvement (National Audit Office of Tanzania, 2008). The inspection system did not deliver the quality of education due to structural, policy, and managerial weaknesses (Kambuga & Dadi, 2015; Shahanga, Ogondiek & Mmbaga, 2021). The weaknesses include: minimal stakeholders' involvement, student teachers and tutors in particular, lack of effective feedback for quality improvement, limited follow-up mechanisms, inadequate resources, master-servant relationship between college management and college inspectors, defect-oriented and punishment-based inspection, which prevent the quality improvement desire (Shahanga, Ogondiek & Mmbaga, 2021; UNESCO, 2018; Kabati, 2017; Kambuga & Dadi, 2015; Mmbando & Hongoke, 2010).

Therefore, the weakness of the inspection system necessitated the transformation of the education monitoring system into quality assurance in 2017 (MoEST, 2017a). The new paradigm intend to improve the quality of workforce for the global Sustainable Development Goals 2030, the Africa Development Vision 2063, the South African Development Community Vision 2050, the East African Community Vision 2050 as well as the Tanzania Development Vision 2050 (United Nations, 2022; African Union, 2015; SADC, 2020; EAC, 2015; URT, 2025; MoEST, 2025; MoEST, 2017b). The good intention of the new paradigm is hampered by a lack of a robust model for involving the majority of student teachers in quality assurance

processes for quality assurance feedback in teacher education and quality assurance competencies for improving the basic education (MoEST, 2024; Shahanga, Kigobe & Ogondiek, 2021).

Consequently, the recruitment of additional teachers in schools from 196,437 in 2019 to 207,323 in 2023, alongside other interventions initiatives such as improvement of infrastructure, training of academic staff, installation of ICT, purchasing of books, and reviewing of curricula, to improve the quality of education, the quality of basic education in terms of examination perfroamnce (learners' achievement) have become less fruitful than the expected (MoEST, 2025). Worsestill, even the National Standard II Literacy and Numeracy Assessment Reports of 2023 indicated that mastery of literacy and numeracy skills is still a challenge, as some standard II pupils cannot read, write, or count properly, 21.2%, 30.7%, and 37.44% respectively (NECTA, 2024a). Similarly, Standard Seven National Examination results indicate that in 2023 only 34.35% out of 1,356,286 in who sat for English language examination and 48.83% out of 1,397,593 who sat for basic mathematics examination, scored grades A, B, and C; the rest scored grades D or E (NECTA, 2024c; NECTA, 2024d).

Moreover, the performance in basic education has little achievement which threatens the preparation of the national workforce for economic growth and sustainable development (URT, 2019). For example, most of the students in science and mathematics subjects in 2024 performed very poorly, where those who scored grades A, B, and C were 10.7%, 15.3%, 21.7 and 10.1% in Physics, Chemistry, Biology, and Basic mathematics, respectively (NECTA, 2025b). Moreover, in the Certificate

of Secondary Education Examination of 2023, the results indicate that only 24.42% out of 529,348 students scored between grades A, B, C, and D, while the majority (74.58%) failed at grade F in basic mathematics (NECTA, 2024b). Additionally, in 2024 academic performance for standard IV pupils indicate that, only 60.85% out of 1,530,911 performed between grade A, B and C; in form two national assessment, only 30.08% out of 239,707 students scored between division I, II and III, while in form IV examination results students who scored division I, II and III were 42.96%, the majority of the students scored between division zero and IV were 57.04% (NECTA, 2025a; 2025b).

Since the quality of teachers in Tanzania is closely linked with the quality of education, an effective strategy to improve the quality of education should begin with the quality of teacher education (MoEST, 2023; Mgaiwa, 2018). There is empirical evidence that some teachers fail not only to teach the subject of their specialization but also performed very poor when sat for the examinations of the subjects they teach to pupils they teach in primary schools (World Bank, 2018). Moreover, the study in secondary schools in Tanzania indicate that, most of the teachers have limited competencies in lesson planning, teaching, and lesson evaluations which signals the poor quality of teachers which can be associated with the lack of quality assurance skills among them hence little contribution in improving the quality of education they impart to their students (Senjiro & Lupeja, 2023a; Senjiro & Lupeja, 2023b). Those teachers in secondary schools are also less able to utilize the assessment feedback provided by the National Examination Council of Tanzania for quality improvement (Shahanga & Kasambala, 2024).

Basing on the paradigm shift and students involvement theories, the model for adequate involvement of student teachers in internal quality assurance processes would not only enable them to provide constructive feedback for quality improvement in their teacher colleges but also to develop quality assurance skills for improving the quality of the education they will impart in their teaching career, but lack of a robust model for adequate involvement in internal quality assurance processes affect not only the quality of teacher education but also the quality of education in basic education hence a need for this study (Shahanga, Kigobe & Ogondiek, 2021; Shahanga, Ogondiek & Mmbaga, 2021).

1.3 Statement of the Problem

The quality of teachers is the determinant of the workforce training for addressing the social and economic challenges impeding the global, regional, and national development agenda (Mgaiwa, 2018; Namamba & Rao, 2017; URT, 2021; Alahmad, Stemenkovska & Gyori, 2021). Therefore, the Tanzanian government, in collaboration with development partners under the Teacher Education Support Project, Education Programmes for the Results, and Global Partnership in Education Fund: Literacy and Numeracy Education Support, has implemented intervention projects to improve the quality of teacher education (MoEST, 2020). The intervention includes improving the teaching and learning infrastructure, reviewing teacher education curriculum, supplying teaching and learning resources, including books and ICT facilities, and capacitating tutors, management teams, and college boards on gender equity in education and instructional leadership (MoEST, 2021).

Despite such interventions, there are a notable number of indicators of low-quality teacher education as manifested in the inability of teachers in primary schools to teach even the subjects of their specialization (World Bank, 2018). Similarly, teachers in secondary schools demonstrate limited skills in lesson preparation, teaching, and assessments, which threaten the quality of workforce preparation (Senjiro & Lupeja, 2023a; Senjiro & Lupeja, 2023b; Almazroa & Alotaibi, 2023). Moreover, those teachers have limited ability to utilize the assessment feedback from the National Examination Council of Tanzania (NECTA) in improving teaching, learning, and examination performance (Shahanga & Kasambala, 2024).

The low quality of teachers can be attributed to the lack of an effective model for their involvement in internal quality assurance processes when they were still in teacher colleges (Shahanga, Ogondiek & Mmbaga, 2021). Such a situation not only prevents student teachers from developing quality assurance competencies for improving the quality of education they will impart in schools but also prevents constructive feedback to the college management for quality improvement (Shahanga, Kigobe & Ogondiek, 2021; Shahanga, Kigobe & Ogondiek, 2023). Since the enrollment projection by 2030 in Tanzania's basic education is expected to increase from the current 1.9 million to 2.4 million in pre-primary education, from 11.7 million to 14.6 million in primary education, and from 5.7 million to 7.1 million in lower secondary education, minimal involvement of student teachers in quality assurance processes in teacher colleges will affect not only the Tanzania workforce training for economic growth and sustainable development at national, regional and global levels but also perpetuate unemployability and poverty at individual levels due

to poor academic performance of students resulting from lack of quality assurance competences among teachers (MoEST, 2023; MoEST, 2025; URT, 2024).

1.4 Research objectives

The study was guided by general and specific objectives.

1.4.1 General research objective

The general objective of the study was to develop a model for student teachers' involvement in internal quality assurance processes in teacher colleges.

1.4.2 Specific Research Objectives

Specifically, the study:

i) Assessed the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges;
ii) designed and developed a model for student teachers' involvement in internal quality assurance processes in teacher colleges;
iii) determined enablers for a model of student teachers' involvement in internal quality assurance processes in teacher colleges; and
iv) evaluated the effectiveness of the developed model on enhancing the quality of teacher education.

1.5 Research questions

The study was guided by the following research questions:

i) Why is there a need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges?
ii) How was the model designed and developed for student teachers' involvement in internal quality assurance processes in teacher colleges?

iii) What are the enablers for a model of student teachers' involvement in internal quality assurance processes in teacher colleges?

iv) How effective is the model in enhancing the quality of teacher education?

1.6 Significance of the Study

The study is very significant as it has developed a model to serve as a tool that may enhance student teachers' involvement in internal quality assurance processes for improving the quality of teacher education. The study may provide constructive feedback to policymakers on the need for teacher education curriculum review to accommodate student teachers' involvement in internal quality assurance processes. Similarly, to the researchers, the study may serve as a literature base for a model of student teachers' involvement in internal quality assurance processes towards the quality of teacher education. Consistently, the college management teams and tutors may be informed on how to involve student teachers in internal quality assurance processes. Further, the study may serve as a training base for tutors, management teams, and board members in teacher colleges on students' involvement in internal quality assurance processes. Moreover, to the curriculum developers, the study may act as an input for curriculum review to incorporate quality assurance competencies in the teacher education curricula, in particular. Finally, to me, the study is very important as a fulfillment of a requirement for the award of a Doctor of Philosophy in Education and a promotion from assistant lecturer to lecturer upon graduation.

1.7 Scope and Delimitation of the Study

The study was confined to student teachers in teacher colleges, which offer diplomas in teacher education. The Universities and tertiary institutions that also train teachers for bachelor's degrees, postgraduate diplomas, master's, and doctorate degrees were not covered in this study. The reason for such biases was the paradigm shift from inspection to quality assurance systems in teacher colleges of which this study intended to develop a model as an intervention for improving the policy and practice in quality assurance. The study involved student teachers, tutors, principals, and school quality assurance officers as the important stakeholders in teacher colleges. Board members and regional education officers were not involved in this study because they do not deal directly with day-to-day operations in teacher colleges. Only 12 teacher colleges were sampled for this study to represent the rest because they all follow a similar curriculum, policy, and guidelines as provided by the Ministry of Education, Science, and Technology.

1.8 Limitations of the Study

The study was conducted in 12 teacher colleges out of 35, those colleges were regarded as a true representative of all teacher colleges. The developed model for student teachers' involvement in internal quality assurance processes did not incorporate parents, tutors, and school quality assurance officers, although they are important stakeholders in quality assurance processes. The exclusion of such stakeholders was instigated by the nature of the study to enhance student teachers' involvement. Moreover, the UCHUKI model is web-based; one should have internet connectivity to access the model. Lastly, the model provides feedback to the college

management for quality improvement, although it does not give direct feedback to student teachers who are the main actors in the model. The intended feedback for this study was quality enhancement and not verbal words. Therefore, despite such limitations, the study managed to develop a model for student teachers' involvement in internal quality assurance processes, the model enabled teacher colleges to get instant and constructive feedback for quality improvement.

1.9 The Operational Definition of Key Terms

The words and phrases frequently used in this study have been assigned their operational definition to suit the demands of the study. Other words and phrases undefined will retain their denotative meaning.

Internal School Quality Assurance: This is the process conducted by internal stakeholders within the school toward achieving and maintaining an acceptable standard of education. In this study, the internal school quality assurance process is the process of evaluating the quality of achievement in each of the prescribed six quality assurance domains.

Involvement: Involvement means being part and parcel of the process. In this study, involvement refers to the active participation of student teachers in the whole quality assurance process in teacher colleges.

Model: A description of something on how it works. In this study, the model means a system that enables student teachers to evaluate different quality assurance domains.

Pre-service teachers: Pre-service teachers refer to student teachers. These are students in teaching colleges undertaking their teaching professional course before they are employed to serve as teachers.

Student teachers: Student teachers in this study are students in teacher colleges who are trained for teaching careers. In other words, these are pre-service teachers. In this study, student teachers will have the same meaning as student teachers.

Teacher Colleges: Teacher Colleges are the training institutions that prepare certificate and diploma teachers. Certificate teachers who prepared to teach in primary schools, while diploma teachers are for primary and secondary schools.

Quality Assurance: Means the planned, systematic, and collaborative processes of promoting, supporting, and imparting agreed quality standards for all aspects of school life to ensure that the acceptable prescribed standards of education are attained and maintained.

1.10 The Organization of the Thesis

This thesis is organized into six chapters. Chapter one covers the introduction and background of the study, which traces the origin of students' involvement in quality assurance processes. The chapter also states the purpose of the study and study objectives, then the research questions and significance of the study, the Scope of the study, and the definition of key terms. Chapter two reviews the literature, starting with a theoretical literature review and then an empirical literature review based on the specific objectives of the study to identify the knowledge gap. The chapter ends with a synthesis of the chapter. Chapter three deals with research methodologies, which describe the study area, research design, research approach, target population,

study sample, and sampling procedures. The chapter also describes data collection methods, analysis plan, presentation, validity, and reliability. Chapter four analyzed, presented data. Chapter five deals with a discussion of the findings. The thesis ends in chapter six, which presents the summary, conclusion, and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

The chapter presents the theoretical review, underpinning theories, empirical literature review, and conceptual framework based on the specific objectives of the study, as well as the literature gap.

2.2 Theoretical Review

This part presents important concepts in the study and the underpinning theories guiding this study. Those concepts include teacher education in Tanzania, quality assurance, quality assurance in education, students' involvement theory, and paradigm shift theory.

2.2.1 Teacher Education in Tanzania

Teacher education programmes are intended to prepare student teachers for a professional teaching career (MoEST, 2019). Students in teacher training programmes are commonly known as student teachers because they are trained for a teaching career with certificates, diplomas, and or degree qualifications. For degree qualifications, teachers are trained in universities and technical institutions; for certificate and diploma qualifications, teachers are trained in Teacher Colleges (Namamba & Rao, 2017).

In Tanzania, teacher education can be traced back to 1902, when missionaries established a Lutheran Teacher College at Kidia in Moshi, Kilimanjaro, Tanzania. More Teacher Colleges were established by missionaries in various regions of Tanzania to serve the evangelical purposes of different religious denominations

(MoEVT, 2007). The Arusha Declaration of 1967 nationalized all religiously biased teacher colleges and schools as a means to remove religious segregation and improve workforce training to serve in the newly independent country (Sanyal, 2013). Currently, there are 35 public teacher colleges in Tanzania. The rest are owned by either religious institutions or private individuals, however, most of the teachers are trained in public teacher colleges (Komba & Mwakabenga, 2019).

2.2.2 The origin of quality assurance in education

The term 'quality' is the Latin word 'qualis', which means 'what kind of', which has received different meanings from scholars across time and disciplines (Sallis, 2020). This implies that there is no common definition of quality that surpasses all fields; each field has its conception of what quality is. According to Juran (1998), quality means 'fitness for purpose', which means, quality should meet the prescribed needs and standards of the customers at their satisfactory level. However, Crosby (1979) defines quality as conformance to standards, implying that for quality to operate smoothly, stakeholders should have established standards to enhance common understanding. Deming regards quality as a predictable degree of uniformity, where standards come before the quality processes for common (Deming, 1982).

As a process, quality assurance intends to meet customers' demands for the products produced and services provided, originated from the business sector in Europe between the 1950s and 1960s whereby, manufacturing companies were compelled by the competitive market situation to design quality assurance strategies to meet customers' needs and interest (NUSE, 2003). In education, quality was adopted in the 1980s to address the increasing concern of promoting learning outcomes towards

the labour market demand. Quality in education addresses two key aspects namely: The quality of the system of education in terms of curriculum, leadership and management, resources, policy, teachers' skills, methodologies, and the learning environment on the one hand as well as the quality of the learners after going through that system in terms of Skills (Almadani, Reid & Rodrigus, 2011).

Generally, there are notable five dimensions established by the international community concerning the quality of education, those include The learners' health and motivation to learn, the friendly and supportive teaching and learning environment, the interactive pedagogy, the relevant curriculum content as well as the practical skills of the learner after completion of studies (UNESCO, 2005). Therefore, quality in education is a function of teachers' quality in the world because it is teachers who spearhead the quality of input, process, and output of the education systems (Mgaiwa, 2018). Therefore, transforming the education system towards education through improving the quality of teacher education is the starting point (Namamba & Rao, 2017). That means there should be an intervention strategy to develop a model of student teachers' involvement in internal quality assurance processes for promoting the quality and standard of teacher training programmes (Shahanga, Kigobe & Ogondiek, 2021).

The quality assurance system in Teacher education in Tanzania began in the colonial era when schools needed to be inspected because the African teachers were not trusted by whites to teach unattended to safeguard their colonial interests through the content, methodology, and assessment methods. So, inspectors in white coats

inspected and graded schools according to the strengths and weaknesses identified to punish teachers (Dohoerty, 2012).

Moreover, even after independence, quality assurance processes in Tanzanian education continued to be under an inspection system characterized by the colonial mentality of master-servant relationships between the inspectors and the inspected (teachers) respectively (Kambuga & Dadi, 2015).

The inspection system implied that teachers in schools were passive recipients of orders and directives from school inspectors, and they were regarded as problem-causers instead of solvers (Mmbando & Hongoke, 2010). There are empirical studies of evidence that the school inspection system was ineffective in improving the quality of education for sustainable development (Kabati, 2017; Lupimo, 2014; Lyimo, 2015). This situation influenced the transformation of education monitoring from inspection to quality assurance to enhance the quality of the workforce for sustainable development (Shahanga, Ogondiek & Mmbaga, 2021).

Three different organs deal with quality assurance processes in teacher education in Tanzania based on the level of teacher education: School Quality Assurance Department (SQAD) for Teacher Colleges which prepares certificate and diploma teachers, National Council for Technical and Vocational Education (NACTVET) for technical education institutions which prepare teachers for bachelor degree and Tanzania Commissions for Universities (TCU) which prepare teachers at bachelor, postgraduate diploma, masters and doctorate (Namamba & Rao, 2017).

Regarding Teacher Colleges, the Ministry of Education, Science, and Technology formulated the quality assurance framework to guide internal and external quality

assurance processes (MoEST, 2017a). The formulated framework stipulates that the mandated personnel to conduct internal quality assurance processes in Teacher Colleges as Principals, College Boards, College Management Teams, Internal Quality Assurance Personnel, and Tutors. The mandated personnel for external quality assurance processes are the school quality assurance officers (MoEST, 2017b). Such a situation implies that student teachers as students in Teacher Colleges have little part in the mandated actors in the internal and external quality assurance processes, which deprives them of golden opportunities to ensure the quality of education they receive towards the quality of teacher education (Shahanga, Kigobe & Ogondiek, 2021).

Despite the need for improving the quality of teachers, the service delivery indicators of 2018 have revealed that only 21% of teachers in Tanzania have sufficient knowledge to teach even their subjects of specialization (UNICEF, 2018). Therefore, the a need for an intervention mechanism to address such barriers to inclusive and equitable quality education and life-long learning opportunities for all, through the pre-service teacher education programme (UNESCO, 2018).

Teachers' task to train a high-quality workforce is the profession's responsibility which entails its practitioners possessing the related knowledge, skills, attitudes, and experiences for the effective performance of their prescribed roles and responsibilities (World Bank, 2018). Therefore, teachers should be aware of issues related to quality assurance systems, develop positive attitudes towards quality assurance processes, and experience quality assurance processes through direct involvement in the process (Jingura & Kamusoko, 2019).

The European Association for Quality Assurance in Higher Education categorized quality assurance competencies as knowledge, technical, and behavioral (Alaniska et al., 2016). Therefore, students in teaching colleges, where they are nurtured for the teaching career alongside ensuring the quality of education they provide, should develop quality assurance skills for their professional development, to meet the global sustainable development goals in education (Shahanga, Kigobe & Ogondiek, 2021). As a result of the paradigm shift in the education monitoring system, from school inspection to school quality assurance in Tanzania, student teachers should develop such skills before joining the teaching career (Shahanga, Ogondiek & Mmbaga, 2021).

2.2.3 Student teachers' involvement in internal quality assurance processes

The quality assurance system in teacher education has declared student teachers, who are the beneficiary stakeholders in teacher colleges, central in the whole process of quality enhancement (MoEST, 2017a). Therefore, student teacher teachers' involvement in the quality assurance system as the totality of the processes, mechanisms, channels, and platforms enables them to play active roles towards achieving and maintaining prescribed standards of education and welfare services provided to students and staff in their institution (Saidi, 2020).

The global initiatives to involve pre-service teachers in educational quality assurance systems result from the need for a harmonization process of education pedagogy, and products to enhance the labour movement across European countries (Fedeli, 2016). The ministers for higher education from European countries were tasked to influence the process (Alaniska et al., 2016).

The decision resides in the stakeholders' view of listening to the customer's voice to meet their needs, interests, and expectations as part and parcel of total quality management theory (Logermann, 2014). By involving students in quality assurance processes, the institution receives first-hand information as feedback from recipients of the education service provided, hence a better chance of improving the teaching, learning, and welfare services (Hickman & Akdere, 2017). That means student teachers' involvement in internal quality assurance processes is a mechanism for developing quality assurance competencies for prospective teachers.

2.3 Theoretical Underpinning

A theory in research is a set of beliefs about the psychological and formal processes with which the researcher approaches the study. It describes the relationship among the key research variables and determines their relationships (Yahaya, Oyediran & John, 2019). Two theories guided this study: the Paradigm shift theory and the Students' involvement theory. The two theories complement and supplement each other in addressing the specific objectives of this study, as neither of them can adequately guide this study due to the complex nature of the study (Saleh, Zaman & Anjalin, 2016; Astin, 1984).

2.3.1 The Paradigm Shift Theory

The paradigm shift theory was founded by Thomas Kuhn (1962). The theory asserts that a paradigm shift is a fundamental change in worldview, concepts, and practices when the former paradigm does not drive toward the expected goals. That means the new paradigm is expected to be more effective compared to the previous paradigm (Gomez-Diago, 2020). The underlying assumptions of the paradigm shift theory

include: Changes are inevitable as the theory is that the world is not static, therefore, changes, whether bad or good, are required to promote the new demands and needs of the social and economic development initiatives. Thus, people should fear changes when the old practices do not align with the targeted goals.

However, a paradigm shift often comes from the new generation because the older ones normally resist changes due to the fear of the unknown. Therefore, they are conservative of ideas and practices to maintain their status quo. The existing paradigm cannot be abandoned until its replacement is found. The new paradigm needs adequate time for its goals to be achieved stage by stage (Joshua, 2014). Since the paradigm shift emerges after the nonperforming paradigm, the paradigm shift differs in process and product from the former (Anandi, Larson & Mahoney, 2020). Moreover, the theory further insists that changes come from the young, whereas elders resist change. This implies that student teachers' involvement in internal quality assurance processes in teacher colleges can effectively enhance the quality of teacher education. The theory, therefore, served as a tool for developing a model of student teachers' involvement in internal quality assurance processes as beneficiary stakeholders with quality assurance roles and responsibilities in schools.

The model developed in this study is the result of the paradigm shift of quality assurance processes from process-based (school inspection) into outcome-based (school quality assurance process), where students are central in the learning process. The strength of this theory is its ability to explain the purpose of the new paradigm and reasons for the paradigm shift, hence important in this study, as it is the outcome of the paradigm shift from inspection to quality assurance.

The significant role of this theory in this study is that, it guided the study in conducting a need assessment, model design, development and evaluation to assess if the model addresses the needs of the new paradigm to enhance quality improvement in teacher colleges as determined in the school quality assurance framework (MoEST, 2017a) and the education and training policy (MoEST, 2023). Also, the theory was necessary to ensure that the study addresses the weaknesses of the school inspection system as described by Kambuga and Dadi (2015), Shahanga, Ogondiek, and Mmbaga (2021), and the Auditor and Control General's reports of 2008 (CAG, 2008).

2.3.2 Students' Involvement Theory

The second theory that guided this study was the students' involvement theory developed by Alexander Astin (Astin, 1984). The theory claims that students' involvement is the amount of physical and psychological energy that students devote to academic experiences, with the assumption that the physical and mental energy devoted by students' involvement in academic activities develops the professional skills required for their professional career trajectory (Nkala & Ncube, 2020). The theory implies a need for a comprehensive model to enhance the adequate involvement of student teachers in the internal quality assurance processes because the extent of their involvement determines the quality of their learning outcomes.

Therefore, the theory was useful for this study in developing a model of student teachers' involvement in internal quality assurance processes. The theory was useful in determining model specifications for student teachers' involvement in internal quality assurance processes. It assumes that the greater involvement of student

teachers as customer stakeholders in internal quality assurance processes results in the greater quality improvement of teachers (Shahanga, Kigobe & Ogondiek, 2023). The strength of this theory in this study is its ability to express the important role of students in educational interventions. The theory's weakness is that it has taken students in general terms, including student teachers who have professional career tasks ahead, without special consideration. The theory guided the study in the need assessment, design, development, and evaluation of the model to ensure that student teachers get adequate opportunities to be involved in internal quality assurance processes, a friendly environment is created to enhance their involvement, and the involvement brings positive outcomes in teacher education.

Generally, it can be argued that the two theories complement and supplement each other to ensure that a comprehensive and effective model is designed, developed, and evaluated, and the facilitating conditions are enhanced for a smooth involvement of student teachers in internal quality assurance processes.

2.4 Empirical Literature Review

This section presents a review of the kinds of literature based on the key issues about the study themes.

2.4.1 Need assessment for a model of student teachers' involvement in internal quality assurance processes

The quality of teachers is determined by their professional skills to enhance students' learning in schools, therefore, they should possess such skills expected of their students (Mgaiwa, 2018; Lauwerier & Akkari, 2015). Therefore, student teachers

should develop professional skills when still in their colleges to cascade the same to their students when they join the teaching career (Zamora & Zamora, 2022). Therefore, there should be a model that enables them to develop such professional skills (Diquito, Ariter & Bulonos, 2022). The study conducted in the European Union countries revealed a need for a model to develop creativity and innovative skills through student teachers' involvement in internal quality assurance processes, which may enable them to address economic, environmental, and social impediments against sustainable development (Cachia, Ferrari, Ala-Mutka & Punie, 2010). This study means, student teachers' involvement in internal quality assurance processes is a professional need. The study is relevant to my study because it establishes the professional need for a model of student teachers' involvement in internal quality assurance processes.

The study in the Philippines identified a need for a model of student teachers in internal quality assurance processes to enhance critical thinking skills among student teachers, to enable their students to evaluate arguments and draw appropriate conclusions (Benedicto & Andrade, 2022). Such need is influenced by the need for teacher education systems to have problem solvers rather than creators (Murawski, 2014). Therefore, critical thinking to the teachers is not only required to enable teachers to tackle academic problems but also to help their students address social and economic challenges in and out of the school context (Tohir et al., 2020). This study is relevant to my study it backs up the need for model development to enhance student teachers' involvement in internal quality assurance processes for professional skills development.

Further, the study in Sri Lanka insisted that communication and collaboration are very important skills to teachers, which enable their students to develop essential competencies for intra- and inter-personal communication, the ability to listen, collaborate, and act accordingly in teams of successful teaching (Lightfoot, 2020). In Valencia, Spain, technology was a means to enhance communication and collaborative skills in their students (Carrio-Pastor & Skorczynka, 2015). The study means, student teachers should develop such skills to acquire communication and collaboration abilities. That implies that there is a need for a model to develop such skills in student teachers, hence, the study is relevant to my study.

Modern teachers in India are supposed to use information and communication technology for enhancing effective teaching and learning (Ratheeswari, 2018). The need for teachers to have information and media technology skills is the result of the paradigm shift from the traditional teaching of chalk and chalkboards into interactive-ICT-integrated learning as established by a study in Malaysia (Ghavifekr & Posdy, 2015). This means, the model for student teachers' involvement in internal quality assurance processes should be digitalized to enable student teachers to develop digital literacy for their professional career.

The uncertainty of the labour market requires teachers to be flexible and adaptive to different school situations, hence preparing a flexible and adaptable workforce that fits and copes with the global labour market (Collie & Martin, 2016). The study in Manila, Philippines, established that some teachers are promoted to be school managers, and their managerial and leadership roles in the different working environments require them to address several challenges affecting human capital

development. In this case, flexibility and adaptability skills are essential for them to be inculcated in their students (Atena, 2018). This means there is a need for a model of student teachers' involvement in internal quality assurance processes to enable them to develop flexibility and adaptability skills.

Teachers are supposed to be initiative and self-directive in executing both curricular and non-curricular tasks, in which case, such skills are very crucial to the teachers (Brandt, 2020). The study in Dutch secondary schools found that it is important for teachers to be initiative and self-directed instead of being monitored on what and how they fulfill their school duties (Louws et al., 2017). Such self-directed and initiative teachers, during the COVID-19 pandemic, were able to handle the teaching and learning processes and were ready to initiate lesson planning, execution, and assessment at their own pace (Utomo, Kurniawan & Ria, 2021). The study suggests a model of student teachers' involvement in internal quality assurance processes to develop initiative and a self-directed spirit.

The Turkish schools were found to enroll students from different social-cultural backgrounds and hence prepared also to serve in different cultural and social contexts. This made cross-cultural competencies for teachers to be very important (Bican, 2021). In Norway, the study suggested social and cross-cultural skills acquisition by teachers to be able to accommodate social-cultural aspects in the teaching and learning processes (Engen, 2019). The result means, a need for a model of student teachers' involvement in internal quality assurance processes to develop social-cultural skills for student teachers.

The study in Akowonjo education district, Lagos state, Nigeria, established that most of the teachers in the school are less productive and are also less aware that they are accountable for their academic performance in their schools. In this situation, productivity and accountability skills for the teachers were made a necessary package for academic excellence (Bola & Fatai, 2022). Likewise, the study at Gaziantep Province in South East Turkey established that a successful teaching career requires teachers who are productive and accountable in schools to improve academic performance (Oztuzcu & Balkar, 2021).

However, the study in India found that female teachers are more productive and accountable compared to their male counterparts. Rural teachers surpass urban teachers in productivity and accountability, and Diploma teachers have higher productivity than those with bachelor's degrees (Attarwala, 2015). Therefore, the study suggests a model of student teachers' involvement in internal quality assurance processes to make them accountable and responsible in their teacher colleges and later on in their schools, hence the study is crucial to my study.

Moreover, leadership and responsibility skills to the teachers are vital to enable teachers to perform leadership and managerial roles and functions in and out of the school (Warren, 2021). Therefore, teachers should develop those skills by being and doing in their daily routines, because teachers are natural leaders by their positions, roles, and functions in school and the community at large (Afanasjeva et al., 2019). Through the model for student teachers' involvement in internal quality assurance processes is necessary to develop leadership and responsibility skills among student teachers, hence the study is useful to my study.

2.4.2 Specification for a model of student teachers' involvement in internal quality assurance processes in teacher colleges

Model development depends on the specification to address users' needs and the expected use to achieve the pre-determined goals or purpose (Verworn & Herstatt, 2002; Brazier et al., 2002; Vojislav et al., 2011). The model should specify the position and functions of different actors in the quality assurance processes (Noha, 2013). For example, the Swedish model indicates that few students can represent their entire student body in quality assurance processes if the circumstances do not allow all the students to be engaged directly. This result is important to my study on the demarcation of power, roles, and responsibilities among student teachers, tutors, and management.

Similarly, quality improvement should be the focus of the model. For example, the paper presented by the European Students' Union concerning the quest for quality for students emphasizes that the model of students' involvement in quality assurance focuses on quality improvement (Fedel, 2016). That means, the model is required to prescribe the goals and objectives of the quality assurance process. Also, the paper presented at the University of Bucharest about students' participation in quality assurance in Europe, advises the developing quality assurance model which uplifts students as partners in quality assurance processes from subcommittee, institutional review panels, department level, institutional council, agency governance and external evaluation teams (Prisacariu, 2013). This result is important in my study because it reminds me to regard student teachers as active stakeholders in quality assurance processes.

Feedback-oriented model is an important aspect of the model. For example, a study conducted in England reveals that students' involvement in the quality assurance process requires feedback, which means the model should provide, a feedback mechanism to the institution for quality improvements (Scott, 2018). This study is important to my study as a reminder to consider the feedback mechanism as an important aspect of the model developed. Quality enhancement in education entails effective feedback from different stakeholders including the recipient of such education.

Further, the model should streamline the levels of student teachers' involvement in internal quality assurance processes. For example, the study funded by the European Commission which assessed the engagement of students in internal quality assurance processes across Europe by 2006, established that students as partners and beneficiary stakeholders in education need a model for indicating various levels of involvement, ranging from participation in College Board as full board members, attending faculty meeting, and representing other students at institutional decision-making meeting as well as members of quality assurance teams (Alaniska, et al., 2016). Similarly, a literature review on quality assurance models in tertiary education across OECD countries shows that student teachers' involvement model should explore different levels of quality assurance processes either at programme or institutional levels to safeguard their social and academic needs as determined by the internal quality assurance framework (Kis, 2005). Also, the study in England added other levels such as voice groups, students' representative meetings, programme committees, board meetings, and higher education committees (Scott, 2018). The

study is relevant to my study because it guides my study on the important levels to be considered in the model of student teachers' involvement in internal quality assurance processes in teacher colleges.

Nevertheless, the model should set student teachers free from fear of threats and harm from tutors and management. The study on the perception of students, teachers, and managers on students' involvement in quality assurance processes in Higher education in England holds that; fear for students is a challenge preventing adequate engagement of students in internal quality assurance processes. Students fear to be singled out as troublemakers by tutors and management teams as well as which may affect negatively their academic and social lives (Scott, 2018). Fear was observed as well in the study conducted at Maastricht University in the Netherlands, which established that mixing students and staff in quality assurance teams creates fear among students, which reduces their freedom of expression in quality assurance processes. The study conducted at the faculty of health, medicine, and life sciences at Maastricht University in the Netherlands pointed out that, fear of students may affect their involvement in course evaluation through their panels to give them freedom from tutors' and management (Stalmeijer et al., 2016; Scott, 2018). These results are important to my study to enable the model developed to create a friendly environment for student teachers to conduct internal quality assurance processes freely.

The model should develop quality assurance skills for student teachers for their professional careers. For example, a study in Europe has established that the challenge affecting students' involvement in internal quality assurance processes is

the lack of quality assurance skills among students required to perform quality assurance processes (Alaniska et al., 2016). This implies that a model for student teachers' involvement in internal quality assurance processes should expose students to quality assurance skills to enable them to perform quality assurance roles and responsibilities diligently when they are employed and or serving as teachers. Likewise, the study conducted in two universities in South Africa reveals that students need to be kept aware of quality assurance issues and provided with a platform for them to exercise quality assurance processes. That implies that an effective model of students' involvement in internal quality assurance processes should orient students on quality assurance practices and then provide them with ample opportunity to perform quality assurance activities (Moyo, 2020). These studies provided essential inputs to my study to consider skill development when designing a model of student teachers' involvement in internal quality assurance processes.

Further, the customer-oriented model is an important feature for an effective model of student teachers' involvement in internal quality assurance processes. For example, the study on assessment practices and students' satisfaction in Pakistan revealed that students as customers, their needs and interests in education as a service should be known to the producers. That means the model of student involvement is required to treat students as customers (Andleeb, 2020). In the same way, the study conducted in South Africa on student-faculty partnerships in quality assurance established that the bottom-up approach is more effective than the top-down approach. The Top-down, from management to student teacher received more

resistance than the bottom-up. That means the need to develop an effective model of student teachers' involvement in internal quality assurance in Teacher Colleges should operate upwards in the sense that, student teachers are central in quality assurance processes as consumers of the education service. This approach reduces resistance from students who are the main focus of quality assurance processes (Botha & Steyn, 2020). The result is important in my study because it stresses treating student teachers as customers in teacher colleges. Therefore, this study provided useful insight for my study on the important features for consideration when developing a model.

Correspondingly, the multiple roles of student teachers in quality assurance processes are another feature of a model of student teachers' involvement in internal quality assurance processes. For example, the study conducted at the University of Free State in South Africa adopted the Dunne and Zanstra (2011) model to enable students' involvement in internal quality assurance processes as evaluators, collaborators, partners, and change agents in the quality assurance processes. That means the model should enable students to perform different roles, which would influence the quality improvement of the education provided than confining them to a single role and function as customers (Srydom & Loots, 2020). The study on education systems in Africa establishes that an effective model of students' involvement in quality assurance processes needs to encompass students' involvement at the course, programme, and institutional levels (Sanyal, 2017). This finding is necessary for my study to ensure that the model developed enables student

teachers to perform different roles as quality assurance stakeholders: Evaluators, assessors, feedback givers, reporters, and innovators.

Nevertheless, positive change should be the purpose of the model of student teachers' involvement in internal quality assurance processes. For example, a paper presented by the European Students' Union concerning the quest for quality for students emphasizes that model development for student teachers' involvement in internal quality assurance should focus on making positive changes in education improvement toward the desired education goals (Fedel, 2016). That means positive change in Teacher College should be the goal of the student involvement model. The paper presented at the University of Bucharest about students' participation in quality assurance in Europe advises the quality assurance model, which uplifts students-teachers partnership in internal quality assurance processes from the subcommittee, institutional review panels, department level, institutional council, agency governance, and external evaluation teams (Prisacariu, 2013). This result is important to my study because it reminded me of the purpose of the model to be positive, change-oriented.

Similarly, student teachers' satisfaction is another feature of an effective model of student teachers' involvement in internal quality assurance processes. For example, the study conducted in three public Universities in Ghana established that an effective model of students' involvement in quality assurance processes is the one that improves students' satisfaction with academic programmes, teaching and learning environment, and services provided to them (Amoako & Asamoah, 2020).

Further, a digitalized model is an important feature of a model that enhance student teachers' involvement in internal quality assurance processes. For example, the study conducted in South African universities indicated that students were able to perform quality assurance smoothly online compared to the physical modality. Students who performed internal evaluation using WhatsApp social media were many compared to those when used printed forms and face to face (Lottering, 2020). This means, an effective model of student teachers' involvement in internal quality assurance processes should be digitalized to enhance a large number of students in the process. This result is useful to my study for the digitalization model compared to the analog model, which is less useful and less effective.

Further, the holistic nature is another feature of the model of student teachers' involvement in internal quality assurance processes. Therefore, the model should accommodate various quality assurance domains for quality enhancement. For example, the study funded by the European Commission which assessed students' involvement in internal quality assurance processes across Europe by 2006, established that models for students' involvement in quality assurance processes, should enhance their participation in College Board as full board members, attending faculty meeting, and representing other students at institutional decision-making meeting as well as members of quality assurance agencies (Scott, 2018). The study implies that the model should be holistic to accommodate all aspects of quality teacher education because student teachers are involved in different aspects. This finding is useful to my study when developing a model, to consider all quality assurance domains, including academic, social, and professional.

Nonetheless, the interactive model between student teachers, tutors, and management is an important feature of the model. Therefore, for example, a study funded by the German Academic Exchange Service (DAAD) in countries of Southern Africa indicated that all 15 countries under the Southern African Development Cooperation (SADC) have different models of students' involvement in internal quality assurance processes. Whereas in Botswana, the Republic of Congo, and Mozambique students interact with management as the eyes of the institutions for quality improvement and hence direct and actively involved in the quality assurance processes within their institutions, in Malawi, Mauritius, and Lesotho, students are just recipients of quality education with minimal interaction during the process (Hoosen, Chetty & Butcher, 2018). This implies that, when the model is interactive, it works smoothly to achieve its goals, therefore, the model development should enable the exchange of information, views, and ideas among different actors.

Furthermore, the academic performance-oriented model is an important feature of the students' involvement model. For example, in East African countries, students are involved in internal quality assurance processes in different modalities as observed by Mati, Gatumu, and Chaali (2016) in West Sub County, Kenya, to enhance academic performance by improving the input, process, and teaching and learning environment. This means that academic performance improvement should be the center of student teachers' involvement models in internal quality assurance processes. However, the study in Kenya treated students in general terms, disregarding students in Teacher Colleges who are students prepared for quality assurance roles in their careers.

2.4.3 Enablers for a Model of student teachers' involvement in internal quality assurance processes in teacher colleges.

Models for enhancing student teachers' involvement in internal quality assurance processes are a result of the transformation of education monitoring from inspection to quality assurance (Shahanga, Ogondiek & Mmbaga, 2021). As a new phenomenon, it requires policy backup, institutional setup, and managerial support to enhance student teachers' involvement in internal quality assurance processes toward the quality of teacher education (Shahanga, Kigobe & Ogondiek, 2021). Starting with the establishment of a common quality assurance framework that will guide student teachers' involvement in internal quality assurance processes. The framework is necessary to address the lack of uniformity among academic institutions and countries on how to involve students (Hoosen, Chetty & Butcher, 2018; Leisyte & Kersting, 2014).

Similarly, policy reform is essential for a model of student teachers' involvement in internal quality assurance processes as a means for the usability of the model. The study about students' involvement in internal quality assurance processes as stakeholders in the policy context of the European standard guidelines for quality assurance in higher education, found that, in Dutch, the model treats students as beneficiary stakeholders, in German, students play a minimal role thus requires serious attention for improvement to accommodate students' needs and interests thus a need for intervention to ensure common practices across European countries (Leisyte & Kersting, 2014). Therefore, the findings of this study are relevant to my

study in the sense that it suggests policy reform to recognize and incorporate student teachers as actors, partners, and beneficiary stakeholders.

Moreover, curriculum review to incorporate quality assurance competencies is another enabler for the model to equip student teachers with quality assurance skills for performing their quality assurance duties diligently. For example, a study conducted by Fedeli (2016) on students' involvement in internal quality assurance processes in Romania identified different aspects of quality assurance in which students are involved. Those include Planning, implementation, monitoring, and evaluation (Fedeli, 2016). In the same vein, the study conducted in South Africa on perceptions of students on factors constraining students' involvement in quality assurance processes in two Universities in South Africa revealed that most of the students are not aware of quality assurance policy and their roles and responsibilities on quality assurance processes (Moyo & Boti, 2020). Such a situation has created a need for curriculum review to accommodate quality assurance orientation to students.

In addition, coaching and mentoring student teachers towards quality assurance processes are important enablers for student teachers' involvement in internal quality assurance processes. The study in Norway, for example, established a lack of quality assurance experiences among students and difficulty in recruiting qualified students for internal quality assurance responsibilities, creating a need for quality assurance skills development among students through coaching and mentoring (Alaniska *et al*, 2016).

On the other hand, the study in England suggests a need for training tutors on how to involve student teachers in internal quality assurance processes to avoid conflict between student teachers and their tutors, hence preventing fear of being singled out by tutors and management as troublemakers (Scott, 2018). For the case of Hong Kong, the study established that student teachers' involvement in quality assurance processes accounts for students' time and energy spent in the process based on their skills in the process, hence a need for competent tutors to accommodate them (Mok, 2007). This means that tutors competent in quality assurance processes will support student teachers' involvement in the processes successfully.

Similarly, legal backup for a model of student teachers' involvement in internal quality assurance processes is another enabler for the model. For example, the study conducted by Schleicher (2011) in China and Japan on students' involvement in internal quality assurance processes, established that involving students in quality assurance systems requires the review of regulations and legislation to legalize a model of their involvement. The typical example of this enabler is the Danish Act which prohibited students' involvement in internal quality assurance processes , hence their involvement requires policy reform (Noha, 2013). Likewise, in the United States of America, a study by Blake (1994) raised a need for legal backup to enhance students' involvement in internal quality assurance processes.

Training the management team to establish an enabling environment for a model of student teachers' involvement in internal quality assurance processes is an essential enabler for the model. For example, a study by Nyenya and Rupande (2014) in Zimbabwe, identified a need to create positive relationships between students, staff,

and management through common sharing and consensus on different issues, students' ownership of quality assurance hence development of quality culture, identification of weaknesses to be worked out by the management, students are involved in quality assurance processes during feedback only (Nyenya & Rupande, 2014). This implies that to achieve this end, policy review is a necessary condition for the model.

Budgetary support is another enabler for enhancing a model of pre-service teachers' engagement in internal quality assurance processes. The study conducted in Zimbabwe about institutional structures for student inclusivity in quality assurance promotion in higher education found the need for field trips and infrastructure to support students' participation in internal quality assurance processes. Therefore, the study suggested budgetary support because institutions themselves cannot afford the funds required to enhance students' involvement in quality assurance processes (Nkala & Ncube, 2020). This implies that student teachers' involvement in the internal quality assurance process has financial implications, hence a need for budgetary support as facilitating conditions to enhance the model.

The installation of a technological system is another enabler to enhance student teachers' involvement in internal quality assurance processes. The study conducted by Lottering in 2020 in South Africa concerning the use of social media to enhance student teachers' engagement in internal quality assurance processes found that students participate more effectively in internal quality assurance processes through online media than in physical face-to-face interactions with their tutors, where they

fear the physical contact with their tutors. The study, therefore, suggests the installation digital system model to enhance the same (Lottering, 2020).

The studies conducted in Tanzania, for example, revealed a demand for policy reform, curriculum, and quality assurance framework review to accommodate student teachers' involvement in the processes as an enabler (Shahanga, Kigobe & Ogondiek, 2021). Similarly, training students on the quality assurance procedures as the requirement of the quality assurance paradigm is required to capacitate students in performing their roles and responsibilities in internal quality assurance processes (Shahanga, Ogondiek & Mmbaga, 2021).

Therefore, it can be said that student teachers' engagement in internal quality assurance as a policy intervention toward the quality of teacher education cannot operate in a vacuum. It requires different enablers, which range from law enforcement, policy review, curriculum reforms, budgetary support, and training to college management and tutors, coaching tutors, and digital support for enhancing student teachers' involvement in internal quality assurance processes toward the quality of teacher education.

2.4.4 The role of student teachers in the quality of teacher education

The labour market requires a competent and competitive workforce, therefore, teacher colleges should prepare high-quality teachers through their direct involvement in internal quality assurance processes (Shahanga, Kigobe & Ogondiek, 2023). The study at Ibn Khaldoun University in Turkey reveals that high employability skills are needed by employers, educators, and students (Mehdaoui & Benabed, 2022). The Turkey study, which sampled a total of 2,506 student teachers,

found the influence of student teachers' engagement in education processes and the quality of their achievement in terms of skills development, which enhances their teaching profession. This means the ability to develop such skills depends much on their direct involvement (Goksun & Kurt, 2017). These results are essential in my study to consider the need for promoting learners' achievement in the model of their involvement in internal quality assurance processes.

The same has been observed through an experimental study of 71 student teachers who developed 21st-century skills through their direct involvement in science and mathematics subjects (Turhan & Demirci, 2021). Further, it can be argued that student teachers, as recipients of education, if they are supposed to develop 21st-century skills, should be adequately involved in the process of developing such skills. Therefore, the results suggest the incorporation of 21st-century skills in the model of student teachers' involvement in internal quality assurance processes. This observation makes the study relevant to my study.

Similarly, the study in India found that, student teachers' involvement in curriculum analysis when in their teacher colleges determines the quality of teacher education because the feedback they provide on the quality of the curriculum can be used by curriculum developers during review to accommodate their career needs, interests and aspirations (Mandal, 2022). This means, teacher colleges should have a means that provides opportunities for student teachers to analyse and assess the quality of their curriculum to meet their needs because they are the recipients of education with professional interests ahead of their career.

Furthermore, student teachers' involvement in internal quality assurance processes develops their leadership and managerial skills, which are essential for the teaching career (Mandal, 2022). Teachers assume leadership and managerial roles in and outside the classroom or even outside their schools; therefore, an effective teacher education should instill leadership and managerial competencies in their students before they join the teaching career. To achieve such a target, there is a need for a tool that can enable them to develop such skills.

Moreover, student teachers should be engaged in the improvement of their welfare services in teacher colleges, hence creating a supportive teaching and learning environment in teacher colleges (Mandal, 2022). Student teachers can enhance the quality of the teaching and learning environment, hence improving the quality of their welfare, safety, and health in teacher education. Therefore, there should be an effective means which enables them to provide their inputs in the quality improvement of their welfare services.

Conclusively, the extent of student teachers' engagement in improving the quality of community engagement in teacher education, determines the level of community engagement in teacher education (Kigobe & Ogondiek, 2020). Therefore, teacher colleges should utilize the presence of student teachers in their institutions to attract community members to support the quality of teacher education for professional development.

2.5 Literature Gap

While studies on students' involvement in internal quality assurance processes have become an area of interest to many scholars in different parts of the World, most of those studies have based on mere students in different discipline of study, leaving aside student teachers, who are the prospective teachers and quality assurers towards high-quality workforce training (Tican & Deniz, 2018; Zamora & Zamora, 2022; Noha, 2013; Doherty, 2012; Hickman & Akdere, 2017; Logermann, 2014; Neidermeier, 2017; Nnorom & Mezieobi, 2020). Little attention has been put on student teachers' involvement in internal quality assurance processes, as a result, there is no robust model for involving student teachers effectively in internal quality assurance processes, which has negatively impacted the quality of teacher education and jeopardized the national, regional and global sustainable development initiatives (Ngao & Xiaohong, 2020; Shahanga, Kigobe & Ogondiek, 2023).

2.6 Conceptual Framework

The conceptual framework of the study is presented in Figure 2.1.

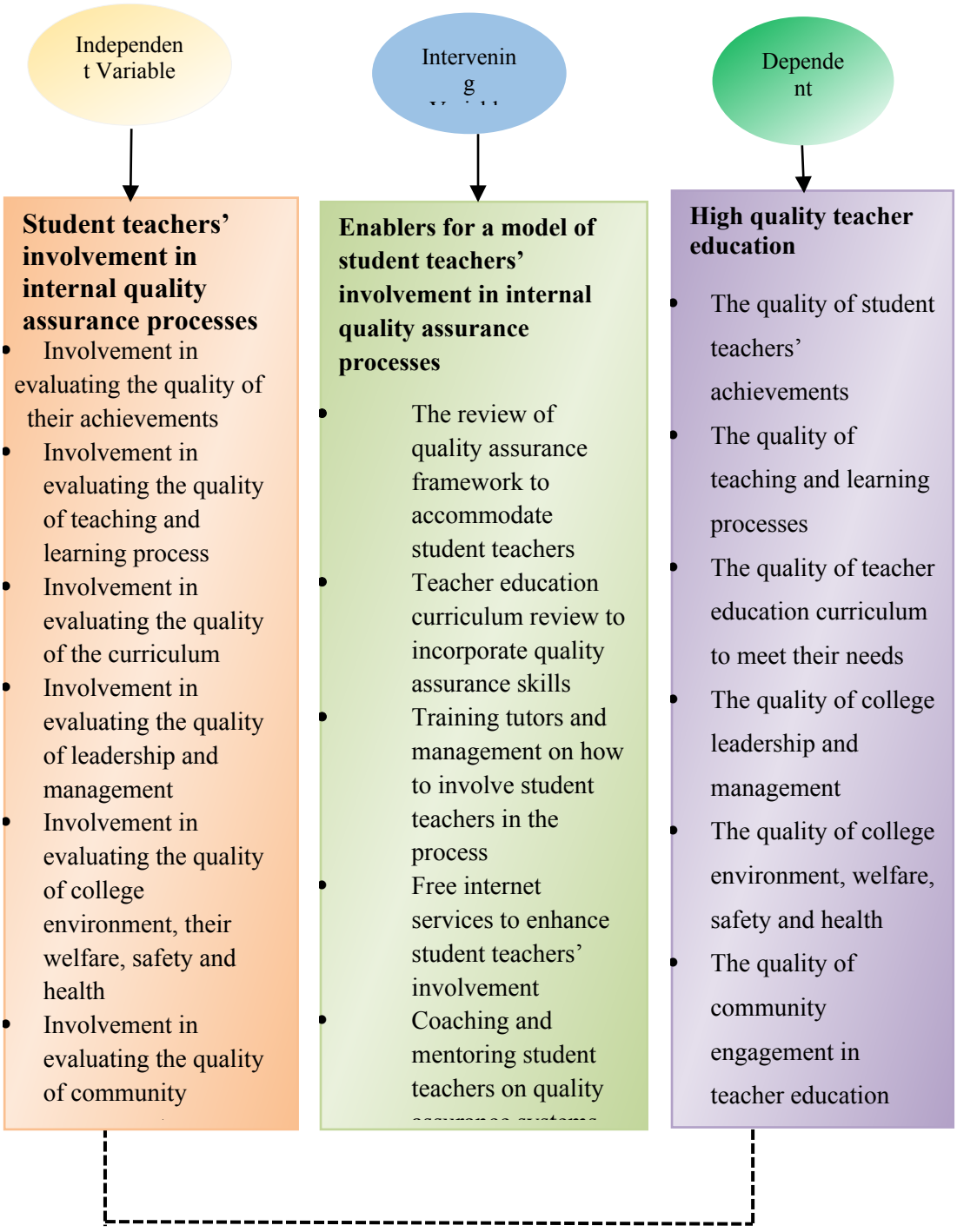


Figure 2.1: Conceptual Framework Developed from School Quality Assurance Framework (MoEST, 2017a).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

This chapter presents the research paradigm, study area, study design, targeted population, sample, and sampling procedures, data collection methods, and instruments. The chapter also discusses data quality based on data processing and analysis, reliability, validity, ethical issues, and a summary of the chapter.

3.2 Research Paradigm

The research paradigm is the philosophical view, perspectives, and beliefs guiding the study (Dawadi, Shrestha & Giri, 2021). The philosophy that guided this study was the pragmatic paradigm which holds that reality has both subjectivity and objectivity characteristics, thus to understand the phenomenon well, there is a need to apply different approaches and methods to find answers to a particular research problem instead of confining oneself into a single approach (Creswell, 2014).

The intention of the study to conduct a need assessment, desining and developing a model, determining its enablers and evaluating the effectiveness of the model, required the pragmatism paradigm, as a suitable philosophy, in opposition to positivism, constructivism, and interpretivism, which is based on a single research approach either qualitative or quantitative. The paradigm enhanced flexibility in the use of approaches and methods for the successful development of the model for student teachers' involvement in internal quality assurance processes in teacher colleges.

3.3 Research Approaches

The study adopted a mixed approach in which quantitative data were collected and analysed first, followed by qualitative data for validation purposes (Creswell & Plano Clark, 2018). The qualitative approach was dominant due to the design and development nature of the study, which needed views, perceptions, and explanations more than statistical data during need assessment, model development, determining enablers, and assessing the effectiveness of the model (Creswell & Creswell, 2018). Unlike the qualitative approach which entails, the collection and analysis of non-numerical data, and the quantitative approach which deals with statistical data, the mixed approach has been a preference approach for flexibility to avoid confining the study to either numerical or non-numerical data only which might limit the study in terms of methods, data, and findings, the mixed approach addresses the weakness of the two approaches in isolation based on their selective nature (Baker, 2016).

The quantitative data were collected through questionnaires from college management and analysed first to assess the needs for developing a model for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges. The quantitative data were validated with qualitative data from interviews with quality assurance officers and college principals, and focus group discussions with student teachers. The interviews with college principals, tutors, and school quality assurance officers, and focus group discussions with student teachers, provided qualitative data as inputs for the model improvements from prototype zero to the final version. In the evaluation of the effectiveness of the model, the

quantitative data retrieved from the developed model were validated by qualitative data from the key informants (Creswell & Creswell, 2018).

3.4 Research Design

Research design is the plan, structure, and strategy for how the research problem is investigated (Abusalem, Bertalan & Kocsi, 2019). This study adopted an explanatory sequential design to conduct a need assessment, design, develop, and evaluate the effectiveness of the model of student teachers' involvement in internal quality assurance processes in teacher colleges (Cresswell & Plano Clark, 2018). The choice of this design was instigated by its ability to utilize the mixed methods in which quantitative data were collected and analysed first, followed by qualitative data for validation purposes (Cresswell & Creswell, 2018).

3.5 Area of the study

The area of the study was 12 teacher colleges sampled through a clustering technique from the 12 regions of Tanzania. The 11 teacher colleges were government-owned, and one was privately owned Teacher College of Tanzania. Further, 11 of the colleges were from the Tanzania Mainland, while one was from Zanzibar. The area of the study was chosen through cluster sampling techniques in which each zone formed a single cluster. The 35 teacher colleges were clustered zonewise with the names of teacher colleges in small pieces of paper. A single piece was chosen and that was the college for inclusion in the study. The study needed to utilize the experiences of different teacher-educational stakeholders from all educational zones to ensure that the developed model is usable. The incorporation of public and private teaching colleges, as well as the inclusion of mainland and Zanzibar, was

necessary for effective development of the comprehensive model for student teachers' involvement in internal quality assurance proceses in teacher colleges.

3.6 Target Population

The population of this study was a total of 21,875 stakeholders in teacher education. It comprised 35 college principals, 420 management teams, 24 zonal school quality assurance officers, and 21,396 student teachers from 12 teacher colleges in Tanzania. The management teams were involved in the study through their managerial roles and functions in Teacher Colleges, hence responsible for institutionalizing and supporting quality assurance systems in their colleges. Through various decisions they make daily on college operations, they impact student teachers' lives in different aspects. In this case, they had important inputs in the model development. Student teachers were involved in this study for two main reasons: first, as the beneficiary stakeholders of quality assurance processes in Teacher Colleges, and second, as trained professionals expected to perform quality assurance functions in their teaching career after studies to enhance the quality of teacher education. In this respect, their voices were very important as a unit of analysis.

Similarly, for the case of Zonal school quality assurance officers (ZSQAOs), they are expert personnel authorized to conduct quality assurance processes in teacher colleges. Involving this group was necessary to ensure that study findings influence policy and practice towards student teachers in quality assurance skills development. Moreover, the Principals in Teacher colleges are accounting officers, with administrative, leadership, and managerial roles and functions in college operations.

These were key informants in the study because they had an authoritative influence on student teachers' involvement in internal quality assurance processes.

3.7 Sample, Sample Size, and Sampling Techniques

The actual sample for the study was 573 respondents from stakeholders related to teacher colleges which is 88 of the calculated sample of 653. Categories of respondents were purposely chosen by their role and position in quality assurance processes in Teacher Colleges. The choice was influenced by the school quality assurance framework issued by the Ministry of Education and Vocational Training in 2017 and its revised edition of 2024 to guide quality assurance practices in basic, secondary, and teacher education. A purposive sampling technique was employed to obtain management team members, school quality assurance officers and college principals, while simple random sampling technique was used to obtain student teachers from the entire population. The distribution of the sample is indicated in Table 3.2.

Table 3.1: The study sample (n=573)

S/N	Respondents	Population	Calculated Sample	Actual Sample
1	CMTs	420	205	173
2	ZSQAOs	24	23	06
3	Student teachers	21,396	393	384
4	College Principals	35	32	10
	Total	**21,875**	**653**	**573**

Source: MoEST (2021).

The study sample was 573 participants, calculated from a 21,875 study population through Yamane's (1967) formula $n = N/(1 + N (e)^2$. Where the confidence

level was 95%, the sample proportion was 0.5, and the margin of error was 0.05. n= sample size, N= target population, e = Margin of error.

College Management: Sample = 420/1+(420 x 0.0025) 420/2.05= 205

Zonal School Quality Assurance Officers: Sample is 24/1+(24 x 0.0025), 24/1.06=23

Student teachers: Sample is 21,396/1+ (21,396 x 0.0025), 21,396/54.49 = 393

College Principals: Sample is 35/1+ (35 x 0.0025), 35/1.0875) = 32

Therefore, the representative sample size of the study, as per Yamane's formula, was 653. However, the actual number of participants for the study was 573, which is 88% of respondents out of the intended sample. A total of 80 (12%) respondents did not volunteer to participate in the study.

3.8 Data Collection Methods and Instruments

This study employed three data collection methods, namely: questionnaire, interview, and Focus Group Discussions. The use of multiple methods of data collection was suitable to enable triangulation of the collected information for validation and confirmation of the results (Creswell & Plano Clark, 2018).

3.8.1 Questionnaire Method

This is a self-report data collection method that involves the supply of questions to the respondents to fill in their thoughts, feelings, attitudes, beliefs, values, and perceptions (Creswell, 2015). The method was suitable as it covers a large number of populations within a short period, is simple to administer, and covers adequate information required for different research questions. The method gave freedom to the respondent to give his/her views without the influence of his/her peers or the

presence of the researcher. They also gave time for the respondents to rethink the question asked before giving the responses.

The questionnaires were closed ended, with two parts. Part I for the introduction of the study and Part II for the questions. Part two was divided into seven sections from A to G, With a total of 18 items in which respondents were required to tick against their responses.

The method was used for college management because they were the unit of analysis; based on their number, any other method would be difficult to employ. The questionnaires were distributed to members of the college management team after the self-introduction of the researcher, the introduction of the study, a little orientation on the roles and responsibilities of the respondents in the questionnaires and a request for their concert. Some of the respondents returned their questionnaires on the same day, while others took a range of 2 to 5 days.

3.8.2 Interview Method

This is an interrogation method between the researcher and respondents, probing their views, thoughts, feelings, and perceptions concerning the specific objectives of the study (Creswell, 2015). Semi structured, face to face interviews were conducted with College Principals and School Quality Assurance Officers to triangulate the information filled in questionnaires by student teachers. The duration set was between 30 to 45 minutes for both College Principals and School Quality Assurance Officers. The suitability of the interview method was that it allowed for additional probing questions as well as for clarification of the responses. The interview guide comprised eleven questions related to the specific objectives of the study. The

interview questions allowed probing questions for clarifications. The number of probing questions varied according to the issue asked and the type of response given. Some questions had few probing questions, while others required adequate and extensive probing questions.

3.8.3 Focus Group Discussion

This is the method in which respondents in groups are given a free discussion opportunity on the given topic to express their feelings, views, and opinions guided by the researcher (Creswell, 2014). The method was used during the model development and trial-out stage. Each college formed a single Focus Group with 6-8 individuals. The duration of the discussion ranged between 45-60 minutes based on the nature of the discussions. During the model development and trial-out stage, the Focus Group Discussions were conducted with college management teams, quality assurance officers, and student teachers. The questions for discussions brought valuable inputs for model improvement from one college to another. The Focus Discussion guide had seven guiding questions that were key according to the study objectives. However, the responses given attracted some probing questions to cover the study variable under discussion.

3.9 The Development and Testing of Instruments

The development of data collection instruments involved modifying questions from the already used instruments of the nearly related studies on students' involvement in internal quality assurance processes (Noha, 2013; Stelmeijer 2016; Essel, 2018; Scott, 2018; Andleeb & Jusoh, 2020; Saidi, 2020; Strydom & Loots, 2020). Most of the questions were modified based on the specific objectives of the study after the

consultation with experts teaching quality assurance courses at the Agency for Development of Education Management (ADEM), school quality assurance officers, Teacher College management, practitioners dealing with student teachers as well as research experts, my supervisors and discussants from the Open University of Tanzania.

Then, two pilot studies were conducted to test the validity of the instruments. The pilot study resulted in modifying the study title to accommodate the study objectives and re-stating questions to address the research questions. At first, the instruments were administered to the College Management Team, and school quality assurance officers for survey and interview respectively. The results from the pilot study led to the modification of the questionnaires from YES/NO questions and open ended to a five-point Likert Scale and closed eneded and from structured to semi-structured interview guides. The Cronbach's alpha results for the reliability test of the questionnaires were 4.7, which was below the recommended 7.0 or above.

Moreover, after the modification of the instruments, the second pilot study was conducted on students pursuing a Diploma in School Quality Assurance and a Diploma in Education Management and Administration. The Cronbach's alpha results rose from 4.7 to 7.0, hence accepted, and the responses answered adequately the research questions guiding the study.

3.10 Variables and measures

The study comprised independent, intervening, and dependent variables and their respective measures. The independent variable was student teachers' involvement in internal quality assurance processes which was measured through the six quality

assurance domains as described in the school quality assurance framework (MoEST, 2017a). Those include: Student teachers' involvement in evaluating the quality of their achievement, student teachers' involvement in evaluating the quality of teaching for learning, and assessment, student teachers' involvement in evaluating the quality of curriculum in meeting their needs, student teachers involvement in evaluating the quality of leadership and management of learning, people and resources, student teachers' involvement in evaluating the quality of college environment, welfare, health and safety and student teachers' involvement in evaluating the quality of community engagement. The intervening variable was an enabler for a model of student teachers' involvement in internal quality assurance processes. The measures were: The review of the quality assurance framework to accommodate student teachers, teacher education curriculum review to incorporate quality assurance skills, training tutors and management on how to involve student teachers in the process, budgetary support to enhance student teachers' involvement, coaching and mentoring student teachers on quality assurance procedures and technological support to enhance student teachers' involvement in internal quality assurance processes.

The dependent variable was indicators of quality teacher education. It was measured through: The quality of student teachers' achievements; The quality of teaching and learning processes; the quality of teacher education curriculum to meet their needs; the quality of college leadership and management; the quality of college environment, welfare, safety, and health, the quality of community engagement in teacher. The variables and their respective measures were adopted from the school quality assurance framework (MoEST, 2017a; Jingura & Kamusoko, 2019; Mandal, 2022).

3.11 Data Analysis and Presentation Plan

The quantitative data collected using questionnaires were subjected to the Statistical Package for Social Sciences (SPSS) version 28 to generate mean, standard deviation, frequency, percentage, and a generated a linear regression model, then analyzed using descriptive and inferential statistics, while qualitative data collected through interviews were transcribed from voice note to verbatim quotes, arranged in themes. The focus group discussion data were paraphrased and arranged into themes. The quantitative results were presented using mean, standard deviation, P-value, t-statistics, frequency, and percentages. Moreover, the qualitative data were presented in thematic paraphrases and verbatim quotes to validate the quantitative results. The results were discussed based on previous studies, underpinning theories, and national and global policies related to quality education before drawing conclusions and recommendations.

3.12 Validity and Reliability of the Instruments

Validity and reliability in research aim to control the research quality. In this study, internal, external, and content validity and reliability were assured in different means.

3.12.1 Validity of the Study

Validity means the extent to which the research project is useful and relevant. The study's validity needs to produce accurate instruments, data, and findings (Creswell, 2014). In this study, two techniques were employed to ensure the validity. For internal validity, two pilot studies were conducted to pre-test the instruments. The

pilot study results enabled the adjustment of the instruments. The external validity, which assures the study findings are generalizable to the wider population, made the study population include respondents from different cadres, educational backgrounds, and geographical zones. Moreover, experts in quality assurance practices from Agency for the Development of Education Management and quality assurance officers were consulted as experts to validate the instruments before the data collection processas.

3.12.2 Reliability of the Study

A research project, being an academic work, needs to be not only valid but also reliable for data collection and generalization of the findings. Reliability ought to indicate that methods or techniques of data collection are consistent and replicable which means anyone who can use the same method or technique (identical measurement) can yield results that are more or less the same (Creswell & Plano Clark, 2018) Thus interview, questionnaire, and focus group discussions methods were identified as the consistent methods which would yield the same findings if someone would wish to study the same topic in a given time.

The purposeful sampling for the study population and the use of the triangulation method for data collection complemented and supplemented questionnaires, interviews, and focus group discussions, hence ensuring the replicability of the study findings so that whoever uses any method of them for the same population would acquire the same findings. The Cronbach alpha test was also conducted for the internal consistence of the measurements. The results indicate that, the cronbach's

alpha coefficient was 0.7, which lies between 0. 7 and 0.8 hence considered as good and an acceptable for internal consistency (Nawi et al., 2020).

3.13 Ethical Consideration

Ethical consideration in research means adherence to the rules, regulations, and standards that prevent different forms of social, political, economic, psychological, and physical harm to the respondents, researchers, teachers' colleges, and the general public (Creswell, 2015). The research ethics guidelines of the Open University of Tanzania and the national research ethics were adhered to. That involved avoiding questions that identify respondents, seeking research clearance from educational authorities responsible for Teacher Colleges, asking for respondents' consent to participate in the study, informing respondents on the study purpose treating respondents' particulars anonymously, and using the collected data and findings for academic purposes only.

Moreover, before starting the data collection exercise, the research clearance from the Open University of Tanzania was presented to the Ministry of Education, Science, and Technology in which the Commissioner for Education from the Ministry of Education signed an introduction letter for the researcher to the Teacher Colleges and Zonal Quality Assurance Offices. The introduction letter from the commissioner was presented to the college principals and school quality assurance officers for arrangements concerning the day, time, and venue. Before the arranged day, the respondents were supplied with their respective tools for effective preparation and requested their concert to participate in the study of their free will.

CHAPTER FOUR

RESULTS OF THE STUDY

4.1 Chapter Overview

This chapter presents the results of the study based on the demographic information of the respondents and the specific objectives. The specific objectives of the study were: Assessing the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges; designing and developing a model for student teachers' involvement in internal quality assurance processes in teacher colleges; determining the enablers for a model of student teachers' involvement in internal quality assurance processes in teacher colleges, and evaluating the effectiveness of the developed model on the quality of teacher education.

4.2 Demographic information of the respondents

The demographical information captured for this study includes the position, education level, sex, and age of the respondents as indicated in Table 4.1. Below

Table 4.1: Demographic information of the respondents

Variable	Category	Frequency (N=573)	Percent (%)
Sex	Male	297	52
	Female	276	48
Age	21-25 Years	283	49
	26-30 Years	125	22
	31-35 Years	62	11
	36-40 Years	52	9
	41-45 Years	21	4
	46-50 Years	23	4
	Above 50 Years	07	1
Educational Level	Diploma	384	67
	Bachelor Degree	33	6
	Postgraduate Diploma	12	2
	Masters	142	23.7
	PhD	02	0.3
Position	College Principals	10	2
	College Management Team	173	30
	Quality Assurance Officers	06	01
	Student Teachers	384	67

Table 4.1 summarizes the demographic information of the respondents based on sex, age, education level, and position. The results are discussed below.

4.2.1 Position of the Respondents

The results presented in Table 4.1 indicate that the study involved four categories of respondents. Those were: college principals, college management teams, quality assurance officers, and student teachers. The college principals were 10 (2%), zonal quality assurance officers 06 (1%), college management teams 173 (30%), and student teachers 384 (67%). The equal number between the management team and student teachers ensured the balance of the two major sides of the quality assurance system in teacher education.

The composition of the respondents with different positions and statuses in teacher colleges enriched the study with divergent views and opinions from their lived

experience and real practice. Such a composition also enabled triangulation of the results for checks and balances to avoid biased findings, conclusions, generalizations, and recommendations. Therefore, the composition of the respondents ensured the development of a comprehensive model of student teachers' involvement in internal quality assurance processes for improving the quality of teacher education.

4.2.2 Education level of the respondents

The study solicited information about the education level of the respondents. The respondent's level of education ranged from an ordinary Diploma to Doctorate as follows: Diploma level 384 (67%), Bachelor Degree 33 (6%), Postgraduate Diploma 12 (2%), Master Degree 142 (23.7%), and Doctorate Degree 2 (0.3%). The differences in the level of education enabled the collection of different views and opinions concerning students' involvement in internal quality assurance processes in Teacher Colleges. Such a situation brought input from various perspectives to the study, therefore developing a comprehensive and effective model of student teachers' involvement in internal quality assurance.

4.2.3 Gender of the Respondents

The study sought information about the gender of the respondents. The distribution of the respondents by gender indicated that males were 297 (52%) and females 276 (48%). The results suggest that the majority of the respondents were male, compared to their female counterparts. Even though the number of males was higher than that of females, the study managed to adhere to gender inclusion by considering their views and opinions when developing a model for student teachers' involvement in internal quality assurance processes in teacher colleges.

4.2.4 Age of the respondents

The study solicited information about the age of the respondents. The age groups: Between 21 to 25 years were 383 (49%), 26 to 30 were 125 (22%), 31 to 35 were 62 (11%), 36 to 40 were 52 (9%), 41 to 45 were 21 (4%), 46 to 50 were 23 (4%), above 50, were none 7 (1%). The majority of the respondents fall between 21 and 25 years, which is the youth category, most of whom are student teachers. The implication of this age group was significant because they are the main agents of change, therefore, their inclusion would ensure that the developed model reflects the quality changes expected in the new paradigm. The distribution of the respondents' ages in the rest of the respondents apart from student teachers was highly dispersed. The age distribution indicates that the study adequately considered all age groups, youth, adolescents, young adults, adults, and those aged near retirement age.

4.3 Assessing the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges

The objective sought to assess the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges. The study intended to establish whether there is a need for developing a model for student teachers' involvement in internal quality assurance processes in teacher colleges. The possible factors were arbitrarily established from the reviewed literature on quality assurance models in educational systems from Europe, Asia, America, and the rest of the African educational system. Therefore, members of the college management team were asked to tick against the given items that reflect their need for the model

according to their context. The result is presented in frequency and percentage in Table 4.2.

Table 4.2: Assessing the need for a model of student teachers' involvement in internal quality assurance proceses in Tanzania Teacher Colleges

Variables	Frequency	Percent
The need for quality teachers to improve the quality of fee-free basic education	132	76.3
The need to safeguard student teachers' needs and interests	169	97.7
The paradigm shift from teacher to student-centred learning	157	90.8
The need for quality improvement feedback from beneficiary stakeholders	139	80.3
The need for 21st-century skills among student teachers	143	82.6
The need for employability skills among student teachers	161	93.1
The need for quality assurance competencies among student teachers	155	89.6
Total	**173**	**100.0**

Source: Field data (February-July 2022).

4.3.1 The need for quality teachers to improve the quality fee free basic education

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 132 (76.3%) out of 173, considered the need for quality teachers to improve the quality of fee-free basic education as a factor for developing a model for student teachers' involvement in internal quality assurance processes. It was

observed further that quality improvement in fee-free basic education requires teachers to have quality assurance skills.

Moreover, to triangulate the information provided by the college management team with other stakeholders in teacher education, an interview question was posed to college principals and school quality assurance officers: If teacher colleges equip student teachers with quality assurance skills for improving the quality of basic education? Their responses were: ‘The quality of fee-free basic education is unpredictable, hence teacher colleges should enhance quality assurance skills to student teachers' (School quality assurance officer, June 2022). A college principal added that ‘ Quality assurance skills are not yet incorporated in teacher education curriculum, it’s a gap to be bridged’ (Principal, College F; June 2022).

Further analysis of the results indicates that the college management views are in line with their principals and school quality assurance officers, that there is a need to develop a model of student teachers’ involvement in internal quality assurance processes to prepare quality teachers for improving the quality of fee-free basic education.

4.3.2 The need to safeguard student teachers’ career needs and interests

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 169 (97.7%) out of 173, viewed safeguarding student teachers’ career needs and interests as a factor for developing a model for student teachers’ involvement in internal quality assurance processes. The critical observation of this result indicates that the model for student teachers’ involvement in internal quality assurance processes is desired to serve as a tool for protecting and defending their

career needs and interests. To validate the information supplied by the college management teams, an interview question was posed to college principals and school quality assurance officers if Should teacher colleges involve student teachers in internal quality assurance processes to safeguard their career needs? Their responses were: ‘Yes, student teachers have their social and academic needs, therefore a need for a model of their involvement to uphold their needs and interests' (School quality assurance officer, 1 June 2023). A college principal added that, ‘Teaching is a lifelong career, and it is shaped in colleges; therefore, if student teachers are adequately involved, they promote the achievement of their career, Therefore, a model is highly needed to achieve these (Principal, College F; June 2023).

The analysis of the results reveals that the college management views are in line with their principals and school quality assurance officers, that there is a need to safeguard the career needs and interests of student teachers by developing a model of their involvement in internal quality assurance processes.

4.3.3 The paradigm shift from inspection to quality assurance in teacher colleges

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 157 (90.8%) out of 173, regarded a paradigm shift from inspection to quality assurance in education monitoring systems as a factor for the need for the model for student teachers’ involvement in internal quality assurance processes. Paraphrasing their responses, they said that the new paradigm has placed student teachers in a central position of internal quality assurance processes, in which case, they have to be adequately involved in the process.

To a better understanding of this aspect, an interview question was posed to college principals and school quality assurance officers: if the new paradigm in education monitoring require student teachers' involvement in internal quality assurance processes? Their responses were: ‘The new paradigm of education monitoring is learner-centered, therefore, student teachers should be adequately engaged in the process for quality improvement (School quality assurance officer, June 2023). A college principal commented that, ‘Unlikely the college inspection paradigm, the quality assurance processes work better if stakeholders are involved; student teachers are key stakeholders in this process, hence being involved (Principal, College F; June, 2023).

The close eye on the result analysis indicates that the college management views are in line with their principals and school quality assurance officers. There is a need to develop a model of student teachers’ involvement in internal quality assurance processes to promote the quality of workforce training for sustainable development.

4.3.4 The need for quality improvement feedback from student teachers

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 139 (80.3%), out of 173, considered student teachers’ feedback for quality improvement as an instigating factor for a need for a model for student teachers’ involvement in internal quality assurance processes. For triangulating the information provided by college management teams, an interview question was posed to college principals and school quality assurance officers if teacher colleges require direct feedback from student teachers for quality improvement. Their responses were: ‘Student teachers as customers in teacher colleges should have a say

on strategies for quality improvement in teacher colleges through their direct involvement in the process (School Quality Assurance Officer, June 2023). A college principal added that, 'Since the improvement of teacher education incorporates student teachers' needs, their feedback is very important to identify their actual needs' (Principal, College F; June 2023).

Further observation of the results indicates that the college principals, school quality assurance officers, and management teams have the same view that feedback from student teachers is essential for quality improvement in teacher colleges, therefore, there is a need for a model which enhances the adequate involvement of student teachers, in the process.

4.3.5 The need for 21st-century skills among student teachers

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 143 (82.6%) out of 173, regarded the demand for the 21st century among student teachers as a backup for developing a model of student teachers' involvement in internal quality assurance to enhance such 21st-century skills. Triangulating such results, an interview question was posed to college principals and school quality assurance officers: If student teachers' involvement in internal quality assurance processes develops their 21st century skills? Their responses were: 'The 21st-century skills are essential for student teachers to develop when still in teacher college. Therefore a need to be given an opportunity for direct engagement in the process (School quality assurance officer, June, 2023). A college principal added that, 'Educational institutions should impart 21st-century skills to their students;

therefore, involving student teachers may enhance the interactions for such skills' (Principal, College F; June 2023).

Further analysis of the results shows that the college management team, college principals, and school quality assurance officers have the same view that the need for 21st-century skills among student teachers influences the need for developing a model of their involvement in internal quality assurance processes.

4.3.6 The need for employability skills among student teachers

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 161 (93.1%) out of 173, raised a need for employability skills development among student teachers for their teaching career as a factor for developing a model of their involvement in internal quality assurance processes. Therefore, a model of their involvement in internal quality assurance processes is sought as a means to impart the necessary skills for their teaching career. Triangulating such results, an interview question was posed to college principals and school quality assurance officers: If student teachers' involvement in internal quality assurance processes enhance their employability skills? Their responses were: 'Student teachers will seek employment opportunities after their graduation, involving them in internal quality assurance processes to develop positive attitudes in the process and the teaching as well' (School quality assurance officer, June 2023). A College principal argued that, 'Student teachers are prepared for the teaching career; therefore, involving them in internal quality assurance processes makes them fit and effective teachers' (Principal, College F; June 2023).

Further analysis indicates that employability skills for student teachers are a critical issue that triggers the minds of college management teams, principals, and school quality assurance officers to enhance them.

4.3.7 The need for quality assurance competencies among student teachers

The descriptive results presented in Table 4.2 indicate that the majority of the respondents, 155 (89.6%) out of 173 members of the college management, regarded the need for quality assurance competencies among student teachers as the factor for developing a model of their involvement in internal quality assurance processes. Triangulating such results, an interview question was posed to college principals and school quality assurance officers: If student teachers need quality assurance competencies for their career? Their responses were: Quality assurance officers are appointed from among the in-service teachers. Therefore, involving them in internal quality assurance processes in preparation for quality assurance duties (School quality assurance officer, June 2023). The College principal added that, 'Ensuring the quality of education is part and parcel of teachers' responsibilities; therefore, developing such competencies is very necessary for student teachers' (Principal, College F; June 2023).

The critical analysis of the results reveals that college management, principals, and school quality assurance officers regard a model of student teachers' involvement in internal quality assurance processes as a practical opportunity for developing quality assurance skills. Generally, the needs assessment for developing a model to enhance student teachers' involvement in internal quality assurance processes concurs with the paradigm shift theory and students' involvement theory, which guided the study.

4.4 Designing and developing a model for student teachers' involvement in internal quality assurance processes in teacher colleges.

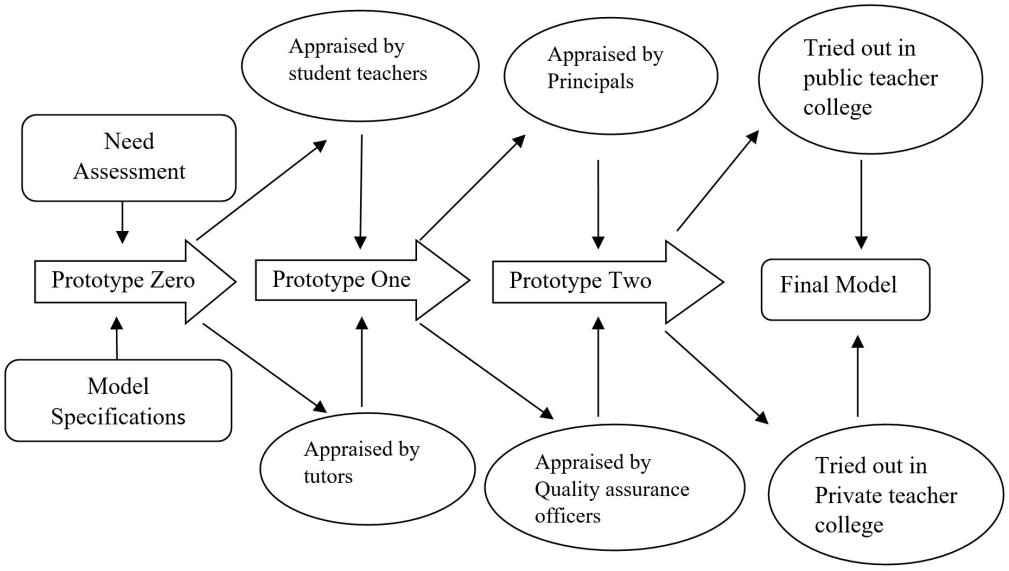
The objective of the study is to design and develop a model for student teachers' involvement in internal quality assurance processes in teacher colleges. The model designing and development process was based on the Heuristic principle that, in designing an intervention programme X for the purpose or function Y in context Z, then you are best advised to give that intervention the characteristics A, B, and C to do that via procedure K, L and M because of argument P, Q, and R' (Van den Akker 1999; Van den Akker et al., 2007). The principle implies that the intervention in this study should have a clear purpose to serve or functions to perform, which in this case is to enhance student teachers' involvement in internal quality assurance processes through developing a robust model. Then the model was required to have peculiar characteristics and adhere to the systematic procedures as detailed below.

The model was designed based on three specifications: The first was application systems in which the model is browser-based. Model accessibility is remote access to be accessed online only; and model operating systems, in which the model operates in various operating systems, including Windows, Linux, and Android. The model has functional requirements and non-functional requirements. The naming of the model was based on its purpose, characteristics, and functions. It was abbreviated in the Swahili language as 'UCHUKI', which stands for '**U**thibiti Ubora wa **Chu**o **Ki**ganjani'; the name can have a literal translation as a digital tool for college quality assurance. The functional requirements of the UCHUKI system include student teachers conducting internal evaluations of their respective teacher colleges in all six quality assurance domains and sending their inputs to the database. Then, the

authorized staff (quality assurance personnel) logs in using special credentials, for example, the username **Shahanga** and password **Sha1234,** to view the data and the analysis output of the evaluation and recommendations for quality improvement. The non-functional requirements in the UCHUKI system include the availability of the system, where the system is available 24/7 through the address https://uchuki.caris.co.tz. The nonfunctional module is scalable, where the system can expand at any time when needs arise. Also, another nonfunctional requirement is the consistency of the UCHUKI system, where the analysis provided by the system is correct and trustworthy. Figure 1 below shows the high-level design of the UCHUKI system. Furthermore, the UCHUKI system uses SSL and SQL injections for security, The UCHUKI is developed by using the following languages: HTML, JavaScript, Bootstrap, PHP, and MySQL for the database. The system is deployed in a secure server available 24/7

Figure 4.1: High-level design of the UCHUKI system

The model development underwent iterative phases of prototype, from prototype zero to three (final), each accommodating improvement opinions from the responsible parties. The prototyping processes are presented in Figure 2.



Model development stages modified from Mafuniko (2006).

Figure 4.2: Model prototyping phases

4.4.1 Prototype Zero

The prototype zero of the model was developed from the needs assessment generated from the literature review and a survey conducted among student teachers, tutors, college principals, and quality assurance officers. Prototype zero of the model was in the English language, and it was named the KIOSHA model, taking the initial names of the authors. **KI** for Kigobe (Janeth), **O** for Ogondiek (Mary), and **SHA** for Shahanga (Geofrey), two supervisors and their students, respectively. The prototype was presented to student teachers and tutors for comments. The model required student teachers to access it through the computer. The shortage of computers prevented most student teachers from accessing the model. Therefore, student

teachers suggested the option of using cellular phones instead of computers. Also, the use of the English language hindered some of the student teachers from suggesting strategies for quality improvement. Moreover, views were solicited from tutors about prototype zero of the model. The tutors advised that student teachers should not evaluate tutors; instead, they should evaluate the teaching and learning processes to avoid personal attacks and conflicts between tutors and student teachers. The incorporation of views from student teachers and tutors improved prototype zero into prototype one.

4.4.2 Prototype One

Prototype one was presented to college principals and quality assurance officers. The differences between prototype zero and prototype one were: the use of the Kiswahili language instead of English, the use of cellular phones for accessing the model instead of computers, and the evaluation of teaching and learning processes instead of relying on tutors. The college principals suggested that student teachers should suggest strategies for quality improvement in each domain after conducting their evaluation. Moreover, quality assurance officers requested that the names of student teachers be kept anonymous for their security. The management team and quality assurance officers suggested that the model be named by its function instead of by the authors' names. The views of the management teams and quality assurance officers were incorporated into the model and modified into prototype two.

4.4.3 Prototype Two

Prototype two changed the name from 'KIOSHA' to 'UCHUKI', which stands for 'Uthibiti Ubora wa Chuo Kiganjani', which means digital internal quality assurance

system. Prototype two was tried out at a teacher's college and a school quality assurance office. The college management introduced the researcher to student teachers. Student teachers received an orientation about the model, their roles, and their importance in internal quality assurance processes. Then, they were requested to receive the model address. After receiving the address, they were instructed to log in to their respective module, choose their respective college, and conduct an evaluation in six quality assurance domains. Then submitted their evaluation. Then, the college management was instructed on how to log in to access the student teachers' evaluations and the analysis of the evaluation results. They logged in and viewed the evaluation results, analysis results, and suggestions for improvement from each quality assurance domain. The college management suggested the inclusion of climate change, gender, digital, inclusivity, and governance issues in quality assurance evaluation aspects.

Thereafter, the model was presented to a zonal school quality assurance office, which deals with quality assurance processes for teacher colleges. The panel of quality assurance officers was introduced to the model. They accessed the student teachers module. In this model, they went through the model parameters, and then the law data was filled in by student teachers. After that, they were guided to log in to the quality assurance officers module, where they viewed the quality assurance analysis report and strategies suggested by student teachers for quality improvement. The quality assurance officers requested additional digital pedagogy, gender, and special needs for inclusive education. They also suggested an additional of one more module, to allow them as external quality assurance officers to access student

teachers' evaluations for follow-up. Their request could alter the scope of the study, which is internal quality assurance processes, therefore, they were informed of the risk of giving them such access to the model.

4.4.4 Final Model

The final model resulted from the improvement of the prototype two model. The issues related to climate change were incorporated. The gender issues were also added to ensure that the college management received valuable feedback on gender issues. The model also takes into account digital applications for teaching-learning and other activities in the college. The issue of inclusivity was considered to ensure that learners with disabilities have a friendly learning environment in teacher colleges. The issue of governance in teacher colleges involves transparency, the rule of law, and the power of student teachers' representatives in college affairs. The final model is ready for use, accessible through https://uchuki.caris.co.tz.

4.5 Model Trial-out in Teacher Colleges

The model trial-out was conducted in public, private, and Zanzibar teacher colleges. The UCHUKI model was demonstrated to the principals of public teacher colleges. The principal introduced the researcher to the college management, tutors and student teachers. Then student teachers were given an orientation on quality assurance procedures, and their role and significance in internal quality assurance processes. Then the UCHUKI model was intrieduced to student teachers and instructed how to use UCHUKI model in conducting internal evaluation.

The observation in public teacher colleges indicated that most of them have alimited free internet service which hampered student teachers to access the UCHUKI model.

Therefore, the researcher had to hotspot them. Student teachers had limited knowledge on quality assurance issues because it is not part of their curriculum content, so they needed much orientation for awareness creation.

Similarly, the management had little awareness of how and why to involve student teachers in internal quality assurance processes because the former school quality assurance framework of 2017 did not indicate the levels and modalities of their involvement. Even the reviewed framework of 2024 indicates only that quality assurance officers, when visiting teacher colleges, can conduct Focus Group Discussion or class discussion with student teachers, but how to use the inputs from such discussions is not explained.

Moreover, when the management team when exposed to the quality assurance feedback from student teachers, there was a mixed reaction. Some took them as constructive inputs for quality improvement, while others regarded student teachers as troublemakers or ungrateful. Finally, most of the college management argued that, in the management training they have received about quality assurance, they were not capacitated about student teachers' involvement in internal quality assurance processes. In Private teacher colleges, student teachers were able to conduct internal quality evaluation after being orientated about the importance and procedures of quality assurance in teacher education and the functionality of the UCHUKI model. However, the management and tutors claimed that they were less considered in the training pertaining to the paradigm shift from inspection to quality assurance. Lastly, the issues raised by student teachers concerning the quality of their teacher college were taken by the management as inputs for quality improvement. For the case of

Zanzibr, the Model was not taken to student teachers because the management claimed that, they are still in inspection system not yet shifted to quality assurance system. Also, the teacher education system in Tanzania was said not to be a union matter.

The model had six quality assurance domains of which student teachers were required to rate and give their suggestions for quality improvement in each domain. They had five options to tick against the number of the respective boxes between 1 and 5. Whereby: 1 stood for Very Weak, with a range of points between 1.0 and 1.5; 2 for Weak with a range of points between 1.6 to 2.5; 3 for Satisfactory with a range of points between 2.6 and 3.5; 4 for Good with a range of points between 3.6 and 4.5; and 5 for Very Good with a range of pints between 4.6-5.0. The analysis of the model trial-out results for each quality assurance domain is presented below:

Table 2.3: Model trial out results on the quality of teacher colleges

Quality assurance domains	Mean	Remark
The quality of learners' achievement	4.5	Good
The quality of teaching for good learning and assessment	4.1	Good
The quality of the curriculum in meeting learners' needs	4.4	Good
The quality of leadership and management	3.7	Good
The quality of the college environment, welfare, health, and safety	4.0	Good
The quality of community engagement in teacher colleges	4.1	Good

Source: Student teachers' evaluation results retrieved from https://uchuki.caris.co.tz

4.5.1 The quality of student teachers' achievement

The trial-out results presented in Table 4.3 reveal that the model has enabled student teachers to evaluate the quality of their learning achievement in their respective teacher colleges. Moreover, the results indicate that most of the student teachers view the quality of their achievement in teacher colleges as good, with a 4.5 mean out of 5.0. However, they had the following suggestions for quality improvement of their learning achievement: The incorporation of entrepreneurship skills for self-employment in teacher education, provision of extra academic work to improve their academic performance, and the provisional of employment opportunities in teacher colleges, they requested consideration of financial loans to support their academic and social life, establishing voluntary teaching programs in schools, the provisional of drilling tests and examinations to accustom them to examination techniques, workshops and seminars on crosscutting issues, the establishment of crosscutting issues clubs to enhance life skills to student teachers. Further, they suggested an extension of the bloc teaching practice and the creation of innovation and entrepreneurship in teacher education for self-employment.

Moreover, when these suggestions were presented to the college management for validation, the management accepted them as useful and constructive feedback for quality improvement. The college principals promised to take immediate action to rectify the situation in those issues within their mandate. Others required policy review and or budgetary support. Therefore, it can be argued that the UCHUKI model is a useful tool for quality assurance feedback for improving learners' achievements.

4.5.2 The quality of teaching for effective learning and assessment

The trial-out results presented in Table 4.3 reveal that the model has enabled student teachers to evaluate the quality of teaching for effective learning and assessment in their respective teacher colleges. Moreover, the results indicate that most of the student teachers view the quality of teaching for effective learning and assessment in teacher colleges as good, with a 4.1 mean out of 5.0. However, they thought of more improvement through the following strategies: The use of techno-pedagogy, updating the library with essential academic resources, the use of participatory teaching methods instead of teacher-centredness, the use of interactive teaching and learning aids, practical teaching sessions for computer literacy, improvement of assessment and evaluation processes, creation of study groups, supply of enough tutors in each subject and adhering to the teaching and learning timetable.

Moreover, the suggestions were presented to the college management for validation, and the management regarded these views as useful and constructive feedback for quality improvement. The college principals agreed to take immediate action to rectify the situation in those issues within their mandate. Others required policy review and or budgetary support. Therefore, it can be concluded that the model trial-out was successful as it has brought important feedback for improving the quality of teacher education. In this way, the model results reflect the claims of the paradigm shift theory and student involvement theory.

4.5.3 The quality of teacher education curriculum

The trial-out results presented in Table 4.3 reveal that the model has enabled student teachers to evaluate the quality of teacher education curriculum in meeting their needs. Moreover, the results indicate that most of the student teachers view the quality of the teacher education curriculum in meeting their learning needs as good, with 4.4 points out of 5.0. However, they had the following suggestions for improving the quality of the curriculum in meeting their learning needs: The curriculum should address the labor market needs, the additional books, especially for science and computer-related subjects, curriculum materials should be available for student teachers, the curriculum should be reviewed to prepare student teachers for self-employment, the review of the subject content to address the skill gaps, the bloc teaching practice should be extended to six months, the provision of free internet service to enhance the access of learning resources.

Moreover, when the suggestions were presented to the college management for endorsement, they were regarded as useful and effective feedback for quality improvement. The college principals expressed their desire to take immediate measures for quality improvement in matters within their mandate. Others required policy review and or budgetary support. Therefore, it can be concluded that the model trial-out was successful as it has brought important feedback for improving the quality of teacher education. In this way, the model results reflect the claims of the paradigm shift theory and student involvement theory.

4.5.4 The quality of college leadership and management

The trial-out results presented in Table 4.3 reveal that the model has enabled student teachers to evaluate the quality of college leadership and management. Moreover, the results indicate that most of the student teachers view the quality of their college leadership and management as good, with 3.7 points out of 5.0. However, they had the following suggestions for improving the quality of leadership and management: Adhering to the laws and regulations, best student teachers' awards for motivation, rights, and fairness, free and fair elections in student teachers' organizations, monthly college baraza, leadership seminars for student teachers elect, effective monitoring and evaluation of student teachers' government activities, addressing concerns raised by student teachers, eradication of corruption, leadership ethics and standards committee, transparency and responsibility among student teachers, adhering to the college schedule of activities.

Moreover, when the suggestions were communicated to the college management for validation, they were taken positively as first-hand feedback from beneficiary stakeholders for quality improvement. The college principals had the opinion that they should discuss with management and make serious initiatives for quality improvement in different aspects. Therefore, it can be concluded that the model trial-out was successful as it has brought important feedback for improving the quality of teacher education. In this way, the model results reflect the claims of the paradigm shift theory and student involvement theory.

4.5.5 The quality of the college environment and its impact on welfare, health, and safety

The trial-out results presented in Table 4.3 reveal that the model has enabled student teachers to evaluate the quality of the college environment and its impact on welfare, health, and safety. Moreover, the results indicate further that most of the student teachers view the quality of their college environment and its impact on welfare, health, and safety as good, with a 4.0 mean out of 5.0. However, they suggested the following measures for improving the quality of the college environment, welfare, health, and safety: The installation of security lights around the college, planting more trees and flowers, building spacious classrooms and dormitories, provision of cleanliness and laundry materials, fencing the college compounds to improve security, creating supportive infrastructure for learners with disabilities, improvement of water services, the establishment of environmental conservation clubs, the establishment of gender inclusion policies and gender desk, improvement of the food quality for student teachers' nutrition and health, health service facilities in teacher colleges, the provision of guidance and counseling services, control of corporal punishments and promoting freedom of expression.

Moreover, the suggestions were shared with the college management for validation and regarded as useful and constructive feedback for quality improvement. The management agreed that they would reflect the reality in their teacher colleges. The college principals promised to take immediate action to rectify the situation regarding those issues within their mandate. Others required policy review and or budgetary support. Therefore, it can be concluded that the model trial-out was successful as it has brought important feedback for improving the quality of teacher

education. In this way, the model results reflect the claims of the paradigm shift theory and student involvement theory.

4.5.6 The quality of community engagement in teacher education

The trial-out results presented in Table 4.3 reveal that the model has enabled student teachers to evaluate the quality of community engagement in teacher education. Moreover, the results indicate further that most of the student teachers view the quality of community engagement in teacher education as good, with a 4.1 mean out of 5.0. However, they had the following suggestions for improving the quality of community engagement in teacher education: Establishment of community service programmes to improve college-community relationships, inviting community members to college programmes, conducting parents meetings in teacher colleges, establishing friendly relationships among student teachers and community members, inviting parents in the college graduation ceremony, creating a friendly relationship between student teachers and their tutors and the establishment of sports bonanza for college and community.

Moreover, when the suggestions were presented to the college management for validation, they were regarded as useful and constructive feedback for quality improvement. The management agreed that they would reflect the reality in their teacher colleges. The college principals promised to take immediate action to rectify the situation regarding those issues within their mandate. Others required policy review and or budgetary support. Therefore, it can be concluded that the model trial-out was successful as it has brought important feedback for improving the quality of

teacher education. In this way, the model results reflect the claims of the paradigm shift theory and student involvement theory.

Generally, the model trial-out in teacher colleges was successful because student teachers managed to evaluate the quality of their teacher colleges in all six domains of quality assurance. Similarly, student teachers managed to provide constructive feedback to the college management for quality improvement. The effectiveness of the model in enhancing student teachers' involvement in internal quality assurance processes is in line with the paradigm shift theory, which requires students as beneficiaries of education to provide feedback for quality improvement. The model makes the paradigm meaningful and successful because student teachers have been made central in quality assurance processes and are given active roles, positions, and functions. Similarly, the model supports students' involvement theory because it has provided a wide chance for student teachers to be engaged in evaluating all six domains of quality teacher college and provide constructive feedback to the management for quality improvement.

4.6 Enablers for a model of student teachers' involvement in internal quality assurance processes in Teacher Colleges

The college management teams provided their views about the facilitating conditions to enable the adaptability, acceptability, usability, and effectiveness of the model of student teachers' involvement in internal quality assurance processes. The results are presented in Table 4.3

Table 4.4: Enablers for enhancing a model of student teachers' involvement in internal quality assurance processes in teacher colleges (N 173).

Enablers for a model of student teachers' involvement in internal quality assurance	Agree		Disagree	
	Freq	%	Freq	%
Quality assurance framework review to accommodate student teachers in the process	150	87	23	13
Teacher education curriculum review to incorporate quality assurance competencies	139	80	34	20
Training management and tutors on student teachers' involvement in internal quality assurance processes	149	86	24	14
Installation of free internet services to support student teachers' model of involvement	157	91	16	9
Coaching and mentoring student teachers on quality assurance processes	147	85	26	15

Source: Field data (February 2024).

4.6.1 Quality assurance framework review to accommodate student teachers in the process

The descriptive results presented in Table 4.3 indicate that the majority of the respondents, 150 (87%) out of 173, put their ticks against moderately agree, agree, and strongly agree, hence regarded as a positive response in support of the view compared to those who ticked against disagree and strongly disagree. Their responses have raised the need to review the school quality assurance framework to accommodate student teachers in internal quality assurance processes in teacher colleges. They said the existing school quality assurance framework has given little chance to student teachers in the internal quality assurance processes, which limits their participation in the process.

Triangulating such results, an interview question was posed to school quality assurance officers and college principals: If the available school quality assurance

framework accommodate student teachers in the processes?' Their responses were: 'The available framework does not stipulate the role and function of student teachers in the quality assurance processes, however, we do select a few representatives for Focus Group Discussions' (School quality assurance officer, 1; June 2023). The college principal commented that, 'The quality assurance framework we have is general for basic and teacher colleges, therefore, the role of student teachers is minimized to the level of mere students' (Principal, College F; June 2023).

The verbatim quotes from college principals and school quality assurance officers suggest the incorporation of student teachers in the school quality assurance framework. Their views are in line with the descriptive results from the college management team.

4.6.2 Teacher education curriculum review to incorporate quality assurance competencies

The descriptive results presented in Table 4.3 reveal that the majority of the respondents, 139 (80%) out of 173, put their ticks against moderately agree, agree, and strongly agree, hence regarded as positive responses in support of the view compared to those who ticked against disagree and strongly disagree. Their responses propose curriculum review as an enabler for enhancing student teachers' involvement in internal quality assurance processes.

Triangulating such results, an interview question was posed to school quality assurance officers and college principals: If the available teacher education curriculum develops quality assurance competencies to student teachers? Their responses were: Quality assurance in education is a new phenomenon, it is not yet

covered in the teacher education curriculum, because even we officials normally attend short course training after being appointed (School quality assurance officer, 1; June 2023). The college Principal added that 'We have not yet developed quality assurance modules, therefore, it is not part and parcel of the teacher education curriculum as of now' (Principal, College F; June 2023).

The verbatim quotes above from college principals and school quality assurance officers suggest that, the available teacher education curriculum does not equip student teachers with essential quality assurance skills, hence a need for a review to accommodate quality assurance competencies expected of student teachers.

4.6.3 Training management and tutors on student teachers' involvement in internal quality assurance processes

The descriptive results presented in Table 4.3 indicate that the majority of the respondents, 149 (86%) out of 173, put their ticks against moderately agree, agree, and strongly agree, hence regarded as a positive response in support of the view compared to those who ticked against disagree and strongly disagree. Their responses call for training for management and tutors on how to involve their student teachers in the internal quality assurance processes in teacher colleges.

Triangulating such results, an interview question was posed to school quality assurance officers and college principals: If the college management and tutors are competent to involve student teachers in internal quality assurance processes? Their responses were: 'The competence level on student teachers involvement is very low, therefore training is very important to create a common understanding among practitioners. This will prevent misunderstanding and enhance the quality goals

(School quality assurance officer, 1 June 2023). The College principal added that 'The management teams had received training on quality assurance processes, but for student teachers' involvement in the process, we need a refresher course' (Principal, College F; June 2023).

The verbatim quotes from college principals and school quality assurance officers suggest training of college management and tutors on how to involve student teachers in internal quality assurance processes. Views are almost the same as those of management teams about the need for training. necessary as an enabler for the model of student teachers' involvement in internal quality assurance processes in teacher colleges.

4.6.4 Installation of free Internet services to support student teachers' model of involvement

The descriptive results presented in Table 4.3 show that the majority of the respondents, 157 (91%) out of 173, put their ticks against moderately agree, agree, and strongly agree, hence regarded as positive responses in support of the view compared to those who ticked against disagree and strongly disagree. Their responses suggest a free internet service for student teachers to enable them to access the online internal quality assurance system.

Triangulating such results, an interview question was posed to school quality assurance officers and college principals: If teacher colleges provide free internet services to student teachers? Their responses were: 'Although internet service is an essential learning resource for student teachers, most of the teacher colleges do not have such service' (School quality assurance officer, 1; June 2023). The College

principal added that ‘The teacher education support project provided internet facilities in a few teacher colleges, the rest do not have such a service and hence cannot support student teachers’ (Principal, College F; June 2023).

The verbatim quotes from college principals, and school quality assurance officers just like the descriptive results from college management raise the need for the installation of free internet services in teacher colleges to support the model of their involvement in internal quality assurance processes.

4.6.5 Coaching and mentoring student teachers on quality assurance processes

The descriptive results presented in Table 4.3, show that most of the respondents 147 (85%) out of 173, put their ticks against moderately agree, agree and strongly agree hence regarded as positive responses in support of the view compared to those who ticked against disagree and strongly disagree. Their responses reveal the need for coaching and mentoring student teachers on quality assurance processes. Triangulating such results, an interview question was posed to school quality assurance officers and college principals: If student teachers perform internal quality assurance function diligently? Their responses were: The school quality assurance framework provides student teachers with Focus Group and Class Discussions those opportunities do not enable them to understand about quality assurance issues’ (School quality assurance officer, 1; June 2023). The College Principal added that ‘Student teachers have never been exposed to internal quality assurance processes therefore, they need to be oriented and guided by experienced personnel’ (Principal, College F; June, 2023).

The verbatim quotes from college principals and school quality assurance officers suggest coaching and mentoring student teachers on performing internal quality assurance roles and functions. The same has been observed by a college management team, which had the opinion that student teachers should be coached and mentored on quality assurance purposes and procedures. Generally, the enablers for the model of student teachers' involvement in internal quality assurance processes support both theories that guided the study. Designing and prototyping are supported by the two theories that guided the study. Those enablers intend to influence student teachers' involvement in internal quality assurance processes, hence verifying the student involvement theory in which student teachers will have a policy, institutional, and structural support. Similarly, these enablers will ensure the goals and objectives of the paradigm shift from inspection to quality assurance, which is based on quality improvement. Therefore, the results are congruent with the two theories.

4.7 The effectiveness of the UCHUKI model on the quality of teacher education

The objective sought to evaluate the effectiveness of the UCHUKI model on the quality of teacher education. The quality of teacher education was measured through six indicators established in the school quality assurance framework which formulated six alternative hypotheses that, H_1 The UCHUKI model significantly influences the quality of student teachers' achievements; H_2 The UCHUKI model significantly influences the quality of teaching and learning processes; H_3 The UCHUKI model significantly influences the quality of teacher education curriculum; H_4 The UCHUKI model significantly influences the quality of college leadership and management; H_5 The UCHUKI model significantly influences the

quality of college environment, welfare, safety and health; and H_6 The UCHUKI model significantly influences the quality of community engagement in teacher educationde.

To test such hypotheses, a linear regression equation model was developed that $STIQA = \beta_0 + \beta_1 QSTA + \beta_2 QTLP + \beta_3 QTEC + \beta_4 QCLM + \beta_5 QCEW + \beta_6 QCTE + \acute{\varepsilon}$. *Whereby* STIQA stood for student-teacher involvement in internal quality assurance processes; QSTA for the quality of student-teacher achievement; QTLP for the quality of teaching-learning processes; QTEC for the quality of teacher education curriculum; QCLM for the quality of college leadership and management; QCEW for the quality of college environment, welfare, health, and safety; and QCET for the quality of community engagement in teacher education. The econometric analysis tests were conducted, including the model of fit, multicollinearity, autocorrelation, descriptive statistics, and linear regression analysis.

4.7.1 Model testing results

The study assessed the model's fitness for the study. The results are presented in Table 4.5

Table 4.5: Model testing results

Model	R	R Square	Adjusted R Square	F. Statistics	Sig
1	.867[a]	.751	.742	83.622	.000[b]

The model of this study is statistically significant because the prob of the F-statistic is .000, which is less than 5% and hence acceptable.

The coefficient of correlation (R) is .869 (86.7%), which implies that 86.7% of the study determinants were used in this study, and only 13.3% were not used, which is also acceptable.

Moreover, the coefficient of determination (R-square) was .751 (75.1%) and the adjusted R-square was .742 (74.2%), which signifies that the model was fit for the study.

4.7.2 Multicollinearity test

The multicollinearity test was conducted on the six independent variables to establish whether there was an existence of intercorrelation among those variables or not. The results of the multicollinearity test are presented in Table 4.5.

Table 4.6: Multicollinearity test results

Independent variables	Collinearity Statistics	
	Tolerance	VIF
The quality of student teachers' achievements	.179	5.574
The quality of teaching and learning processes	.232	4.308
The quality of teacher education curriculum	.493	2.026
The quality of college leadership and management	.227	4.402
The quality of the college environment, welfare, safety, and health	.306	3.266
The quality of community engagement in teacher education	.954	1.048

a. Dependent Variable: Student teachers' involvement in internal quality assurance processes

The multicollinearity test results presented in Table 4.6, indicate that the tolerance value ranges from 0.179 to 0.954 since such a value is greater than 0.10, and the variance inflation factor (VIF) ranges between 1.0 to 5.57, hence less than 10, the

results suggest that all the six independent variables in this study were free from multicollinearity, that means the independent variables were reliable and valid.

4.7.3 Autocorrelation test results

The Durbin-Watson test was conducted to test whether there was autocorrelation between independent variables. The result in Table 5, shows; that the Durbin-Watson result was 1.742, which is between 1.5 and 2.5 hence an indication of a lack of autocorrelation between independent variables.

4.7.4 Descriptive statistics

The descriptive analysis was conducted to find the mean and standard deviation in all variables of the study. The results are presented in Table 4.6

Table 4.7: Descriptive analysis results

Variables	N	Min	Max	Mean	Std. Deviation
Student teachers' involvement in internal quality assurance processes	173	1	5	3.90	.822
The quality of student teachers' achievements	173	1	5	3.75	.910
The quality of teaching and learning processes	173	1	5	3.84	.854
The quality of teacher education curriculum	173	1	5	3.65	.926
The quality of college leadership and management	173	1	5	3.63	.983
The quality of the college environment, welfare, safety, and health	173	1	5	3.68	.982
The quality of community engagement in teacher education	173	1	5	2.62	1.091

Source: Field Data (February 2022).

The descriptive statistics results in Table 4.6, indicate that: Student teachers' involvement in internal quality assurance processes had a mean of 3.90 and standard deviation of .822; the quality of student teachers' achievements had a mean of 3.75 and standard deviation of .910; the quality of teaching and learning processes had a mean of 3.84 and a standard deviation of .854; the quality of teacher education curriculum had a mean of 3.65 and standard deviation of .926; the quality of college leadership and management had a mean of 3.63 and standard deviation of .983; the quality of the college environment, welfare, safety, and health had a mean of 3.68 and standard deviation of .982 and the quality of community engagement in teacher education had a mean of 2.62 and a standard deviation of 1.091. Generally, all the variables had a positive mean above the average mean of 3.0, except the quality of community engagement in teacher education, which has a mean of 2.62, which is below the average mean of 3.0.

Table 4.8: Regression results

	Dependent Variable: STIQA			
Independent Variables	**Unstandardized Coeff**	**t-stats**	**P-value**	**Hypothesis**
Constant	.587	3.540	001	
QSTA	.028	.342	.733	Rejected
QTLP	.485	6.272	.000	Accepted
QTEC	.220	4.497	.000	Accepted
QCLM	.225	3.318	001	Accepted
QCEW	-.032	-.549	.584	Rejected
QCET	-.060	-2.023	.045	Accepted

Key: STIQA: student-teacher involvement in Internal Quality Assurance Processes; QSTA: Quality of student-teacher achievement; QTLP: Quality of teaching-learning processes; QTEC: Quality of teacher education curriculum;
QCLM: Quality of College Leadership and Management; QCEW: Quality of College Environment, welfare, health, and safety; QCET: Quality of Community engagement in teacher education.

STIQA = .587 + .028QSTA + .485QTLP + .220QTEC + .225QCLM - .032QCEW - .060QCET +

4.8. Hypotheses Testing Results

The section presents the results for the hypotheses test

4.8.1 Hypothesis (H_1): The UCHUKI model significantly influences the quality of student teachers' achievements.

The study hypothesized the influence of the UCHUKI model on the quality of student teachers' achievements. The result, as presented in Table 4.9, reveals that the UCHUKI model has a positive but insignificant influence on the quality of student teachers' achievements (β=0.028, p-value=0.773), hence the alternative hypothesis is rejected. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the improvement of the quality of learners' achievement value by 2%, which is an insignificant influence on the quality of learners' achievements.

4.8.2 Hypothesis (H_2): The UCHUKI model significantly influences the quality of teaching for good learning and assessment in teacher colleges

The study hypothesized the influence of the UCHUKI model on the quality of teaching for good learning and assessment. The result, as presented in Table 4.9, reveals that the UCHUKI model has a positive and significant influence on the quality of teaching for good learning and assessment in teacher colleges (β=0.485, p-value=0.000), hence the alternative hypothesis is accepted. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the quality of teaching for good learning and assessment by 48%.

4.8.3 Hypothesis (H_3): The UCHUKI model significantly influences the quality of teacher education curricula to meet their needs

The study hypothesized the influence of the UCHUKI model on the quality of teacher education curricula to meet their needs. The result presented in Table 4.9 reveals that the UCHUKI model has a positive and significant influence on the quality of teacher education curriculum at (β=0.220, p-value=0.000), hence an alternative hypothesis is accepted.

Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the improvement of the quality of teacher education to meet their needs by 22%.

4.8.4 Hypothesis (H_4): The UCHUKI model significantly influences the quality of college leadership and management.

The study hypothesized the influence of the UCHUKI model on the quality of college leadership and management. The result presented in Table 4.9 reveals that the UCHUKI model has a positive and significant influence on the quality of leadership and management in teacher colleges (β=0.225, p-value=0.001); hence, an alternative hypothesis is accepted. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the improvement of the quality of college leadership and management by 22%.

4.8.5 Hypothesis (H_5): The UCHUKI model significantly influences the quality of the college environment, welfare, safety, and health

The study hypothesized the influence of the UCHUKI model on the quality of the college environment, welfare, safety, and health. The result presented in Table 4.9 reveals that the UCHUKI model has a negative and insignificant influence on the quality of the college environment, welfare, safety, and health (β=-0.032, p-value=0.584), hence, the alternative hypothesis was rejected. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the decrease of quality of the college environment, welfare, health and safety by 3%.

4.8.6 Hypothesis (H_6): The UCHUKI model significantly influences the quality of community engagement in teacher education.

The study hypothesized the influence of the UCHUKI model on the quality of community engagement in teacher education. The result presented in Table 4.9 reveals that the UCHUKI model has a negative but significant influence on the quality of community engagement in teacher education (β=-0.060, p-value=0.045), hence an alternative hypothesis is accepted. Further observation indicates that a unit increase of student teachers involvement in the internal quality assurance processes through the UCHUKI model influences the decrease in the quality of community engagement in teacher education by 6%.

Generally, the positive and significant influence of student teachers' involvement in internal quality assurance processes on the quality of teacher education is backed up by a paradigm shift theory and students' involvement theory. The two theories

assume that the transformation of the education monitoring system from inspection to quality assurance entails the active roles of student teachers in improving the quality of teacher education, because student teachers are the beneficiary stakeholders in the quality assurance process due to their future career tasks in schools.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Chapter Overview

This chapter presents the discussions of the findings, based on the study's specific objectives. The objectives of the study were: Assessing the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges; designing and prototyping a model for student teachers' involvement in internal quality assurance processes in teacher colleges; determining the enablers for a model of student teachers' involvement in internal quality assurance processes in teacher colleges, and evaluated the effectiveness of the developed model on enhancing the quality of teacher education.

5.2 Demographic characteristics of the respondents

The discussion on the demographic information involved the position, education level, gender and the age of the study respondents.

5.2.1 Position of the Respondents

The respondents' positions presented in Table 4.1 indicate that the study involved four categories of respondents: college principals, college management teams, quality assurance officers, and student teachers. Based on the school quality assurance framework and the school quality assurance manual, quality assurance stakeholders in teacher colleges are the principals, quality assurance officers, and management teams (MoEST, 2017a; MoEST, 2017b). If these are the actors of the quality assurance processes in teacher colleges, it was necessary to incorporate all of them in this study to ensure that the developed internal quality assurance model accommodates the views and experiences of essential stakeholders for the

adaptability, usability, and effectiveness of the model. Moreover, the school quality assurance framework of 2017 indicates the role of student teachers in quality assurance as the focus of the quality assurance process without assigned quality assurance roles as established by Shahanga, Kigobe, and Ogondiek (2021). If student teachers are the beneficiaries of the quality assurance processes and if they are the potential users of the internal quality assurance models, it was necessary, therefore, to involve them in the study for the sake of quality enhancement as observed in Shahanga, Mbarga, and Ogondiek (2021) and Shahanga, Kigobe, and Ogondiek (2023).

5.2.2 Education level of the respondents

The study found that the respondents' level of education ranged from an ordinary Diploma, Bachelor's degree, Postgraduate Diploma, Master's degree, and Doctorate Degree. Based on the education sector performance report of 2019, teacher colleges have an academic staff of different education levels, teaching student teachers at different education levels (URT, 2019). If stakeholders available in teacher colleges have different education levels, it implies their diversities in knowledge, skills, and experiences, which would enrich the development of an internal quality assurance framework for enhancing the quality of teacher education.

5.2.3 Gender of the Respondents

The results indicate that the study involved both male and female respondents in supplying the information required. The Sustainable Development Goals 2030 advocate for equitable quality education and learning opportunities for both males and females to promote inclusive economic growth and sustainable development

(United Nations, 2022). Therefore, involving respondents of both sexes was necessary to ensure that the development of the internal quality assurance framework accommodates the gender needs of different learners. Addressing gender needs in education is a national, regional, and global policy as advocated in the National Development Vision 2050, East African Development Vision 2050; South African Development Community 2050; Africa Development Agenda 2063, and Global Development Agenda 2030 respectively to reduce gender inequalities and promote inclusive economic growth and social economic development (URT, 2024; EAC, 2015; SADC, 2020; African Union, 2015 and United Nations, 2022).

5.2.4 Age of the respondents

The study involved respondents of different age groups between 21 and 50 years. The majority of the respondents ranged between 21 and 25 years, which is the youth category, most of whom are student teachers. The implication of this age group was significant because they are the main agents of change, therefore, their inclusion would ensure that the developed model reflects the quality changes expected in the new paradigm. The distribution of the respondents' ages in the rest of the respondents apart from student teachers was highly dispersed. The age distribution indicates that the study adequately considered all age groups, including youth, adolescents, young adults, adults, and those aged near retirement.

The use of the most youth in the study reflects the demands of the paradigm shift theory that, changes should come from the younger generation because the aged are mostly conservatives (Gomez-Diago, 2020). Since student teachers' involvement in internal quality assurance processes intends to reinforce positive changes in

education, the results concur with the paradigm shift theory due to the use of the young generation compared to the rest of the age group in the study population (Anandi, Larson & Mahoney, 2020).

If student teachers are the youth of middle age and they are not adequately involved in internal quality assurance processes, it is likely that their career needs and interests were not adequately addressed, hence they could not achieve them, which could affect their teaching career aspirations. Including different age groups concurs with the Tanzania Development Vision 2025 which aspires for a well-educated nation to reach an upper-middle income and industrialized economy (URT, 2024). Also, it's the global goal to ensure equitable quality education and learning opportunities for all, hence the need to incorporate quality assurance views from stakeholders of different age groups (United Nations, 2022).

5.3 Assessing the need for a model of student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges

The study established a need for developing a model for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges. The possible factors for developing a model for student teachers' involvement in internal quality assurance processes were arbitrarily established from the reviewed literature on quality assurance models in educational systems from Europe, Asia, America, and Africa. Therefore, members of the college management team were asked to tick against the given items that reflect their need for the model according to their context.

5.3.1 The need for quality teachers to improve the quality of free basic education

The majority of the respondents, 76.3%, considered a need for quality teachers to address the challenges of fee-free basic education as a factor for developing such a model for student teachers' involvement in internal quality assurance processes. The idea was supported by college principals and school quality assurance officers that there should be a model of involving student teachers in internal quality assurance processes to capacitate them for addressing the challenges facing fee-free basic education. The result is in line with previous studies in Tanzania, which call for improving the quality of teachers to address the pedagogical, leadership, and institutional challenges facing the provision of fee-free basic education (Haki Elimu, 2017).

Therefore, a model for the direct involvement of student teachers in internal quality assurance processes is a policy issue to prepare competent teachers for improving the quality of fee free basic education in Tanzania (MoEVT, 2014; MoEST, 2023). The model is not only a tool to support the national initiatives and commitments towards vision 2050 but also a response to a regional and global needs of quality workforce for sustainable development (United Nations, 2022; African Union, 2015; SADC, 2020; EAC, 2015; URT, 2024).

5.3.2 The Need to safeguard student teachers' career needs and interests

Most of the respondents, 97.7%, viewed safeguarding student teachers' career needs and interests as a factor for developing a model for student teachers' involvement in internal quality assurance processes. The further analysis of the results reveals that

the college management views are in line with their principals and school quality assurance officers, that there is a need to safeguard the career needs and interests of student teachers by developing a model of their involvement in internal quality assurance processes.

If student teachers have their own career needs and interests, they should have a formal platform to safeguard them as a sustainable means through the model of direct involvement in internal quality assurance processes. The results concur with the study about the practice in South Africa, where students are adequately involved in the evaluation process as active participants, evaluators, partners, and change agents. Through such wide participation in the quality assurance processes at different levels, they safeguard their career goals and interests (Strydom & Loots, 2020). The results suggest that, if there is a model for mere students' involvement in the whole quality assurance process to safeguard their career needs and interests, student teachers should be more involved because they are prepared for a professional career. Therefore, a need for a model to enhance their student teachers' involvement in the internal quality assurance process.

5.3.3 The paradigm shift from inspection to quality assurance in teacher colleges

A large number of the respondents, 90.8%, considered a paradigm shift from inspection to quality assurance in education monitoring systems as a factor for the need for the model for student teachers' involvement in internal quality assurance processes. Paraphrasing their responses, they said that the new paradigm has placed student teachers in a central position of internal quality assurance processes, in which

case, they have to be adequately involved in the process. The close eye on the result analysis indicates that the college management views are in line with their principals and school quality assurance officers. There is a need to develop a model of student teachers' involvement in internal quality assurance processes to promote the quality of workforce training for sustainable development.

The result is in line with the study in Ghana academic institutions, where the new paradigm requires students' involvement in internal quality assurance processes, therefore, the Public Universities are involved in evaluating the quality of academics, environments, and services, which improves their satisfaction level (Amoako & Asamoah, 2020). The results suggest that, if the new paradigm is learner-centred, and if there are models for normal students to be involved in the internal quality assurance processes, student teachers require a comprehensive model for adequate involvement because they are prospective teachers to enhance the learner-centered approach after schooling, the practice should begin with them in colleges.

5.3.4 The need for quality improvement feedback from student teachers

The majority of the respondents, 80.3%, considered the need for student teachers' feedback for quality improvement as an instigating factor for a model of student teachers' involvement in internal quality assurance processes. Further observation of the results indicates that the college principals, school quality assurance officers, and management teams have the same view that feedback from student teachers is essential for quality improvement in teacher colleges, therefore, there is a need for a model that enhances the adequate involvement of student teachers in the process. This result is supported by the practice in Zimbabwe, where students provide their

inputs as essential feedback for improving the quality of their college (Ncube, 2020). The importance of feedback for quality improvement has also been emphasized by Shahanga and Kasambala (2024). Therefore, if mere students are allowed to share their views on strategies for quality improvement, the student teachers as education professionals in training require more chances to propose solutions to different quality impediments, thus a need for model development for the same.

5.3.5 The need for 21st-century skills among student teachers

Most respondents, 82.6%, rated the demand for the 21st century among student teachers as a factor for developing a model of student teachers' involvement in internal quality assurance to enhance such 21st-century skills. Further analysis of the results shows that the college management team, college principals, and school quality assurance officers have the same view that the need for 21st-century skills among student teachers influences the need for developing a model of their involvement in internal quality assurance processes.

The results on the need for 21st-century skills among student teachers concur with the previous study by Shahanga, Kigobe, and Ogondiek (2023), which established that direct involvement of student teachers in internal quality assurance processes predicted the development of creativity and innovation skills; communication and collaboration skills; critical thinking and problem-solving skills; social and digital literacy as well as leadership and responsibility skills alongside other 21st century skills. The results suggest, therefore, that if in-service teachers lack essential 21st-century pedagogical skills due to the lack of a model of involvement in internal quality assurance processes, it is high time now to develop such a model for

enhancing such skills (Alzahrani & Nor, 2022; Komba & Shukia, 2023; Hon et al., 2021; Singh et al., 2020; Senjiro & Lupeja, 2023b; Senjiro & Lupeja, 2023a).

5.3.6 The need for employability skills among student teachers

The majority of the respondents, 93.1%, raised a need for employability skills development among student teachers for their teaching career as a factor for developing a model of their involvement in internal quality assurance processes. Further analysis indicates that employability skills among students and student teachers in this case are a critical issue that triggers the minds of college management teams, principals, school quality assurance officers, and education systems in general to enhance them. The same has been observed by Shahanga and Kasambala (2023) about the lack of employability skills among graduates, hence a need to enhance them by practically engaging students in practical work.

The result concurs with previous studies conducted in Tanzania which established that in-service teachers have negative attitudes toward school inspection as a means of education monitoring for quality improvement, which affects even their teaching and the outcome of education (Kambuga & Dadi, 2015; Whitby, 2010; Lupimo, 2014; Lyimo, 2014). Even after the paradigm shift from inspection to quality assurance, the achievement was not fruitful (Shahanga, Ogondiek & Mmbaga, 2021). Teachers' practice in the classroom plays a great role in enhancing the employability skills of the learners (Ogondiek, 2024). This creates a need for involving student teachers in internal quality assurance processes when still in teaching colleges, as capacity building to enhance employability skills for them and their prospective students.

5.3.7 The need for quality assurance competencies among student teachers

Many respondents, 89.6%, ticked the need for quality assurance competencies among student teachers as the factor for developing a model of their involvement in internal quality assurance processes. The critical analysis of the results reveals that college management, principals, and school quality assurance officers regard a model of student teachers' involvement in internal quality assurance processes as a practical opportunity for developing quality assurance skills. The results are in line with previous studies that established the need for quality assurance skills among student teachers (UNESCO, 2018). In Tanzania, quality assurance competencies are a policy requirement as teachers perform internal or external quality assurance functions in and out of their schools, respectively (MoEST, 2017a; MoEST, 2017b; ADEM, 2020).

Student teachers' views on the need for the model development to enhance their involvement in internal quality assurance processes were positive, as the lack of a model for their involvement jeopardizes their career needs and interests as primary beneficiaries of the quality assurance process hence a need for a model. The views concur with previous studies in Ghana where students were dissatisfied with their level of involvement hence a need for a specific model of their involvement (Essel, Boakye-Yiadom & Kyeremeh, 2018). The study in England also supports for a model development to enhance students involvement in internal quality assurance processes (Scott, 2018).

It can be argued confidently that, if there are models to enhance mere students' involvement in internal quality assurance processes, student teachers with

professional quality assurance responsibilities alongside teaching need a more comprehensive model to enable them to develop quality assurance competencies besides safeguarding their social and career needs and interests. Generally, the needs assessment for developing a model to enhance student teachers' involvement in internal quality assurance processes concurs with the paradigm shift theory and students' involvement theory, which guided the study. Since the quality assurance system places learners in a central position is a result of a need to develop a model for student teachers' involvement in the internal quality assurance process is supported by a paradigm shift theory. Likewise, such a dire need for a model is supported by students' involvement theory, which calls for adequate engagement of student teachers in internal quality assurance processes. In this case, therefore, the results are supported by the two theories used in this study (Shahanga, Ogondiek & Mmbaga, 2021).

Generally, the teacher education stakeholders' view about the need for a model of student teachers' involvement in internal quality assurance processes are supported by a paradigm shift theory that, a comprehensive quality assurance system shift involve all stakeholders including student teachers who are the beneficiary customers in teacher education (Anandi, Lrson & Mahoney, 2020). Similarly, the need for that model is supported by student involvement theory, which prioritize the active engagement of students to dictate, determine, and evaluate their learning and the welfare provided to them (Astin, 1984).

5.4 Model design and development for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges

The model design and development intended to address the practical gap of student teachers' involvement in internal quality assurance processes. The designing and prototyping adhered to the Heuristic principle that, in designing an intervention programme X for the purpose or function Y in context Z, then you are best advised to give that intervention the characteristics A, B, and C to do that via procedure K, L and M because of argument P, Q, and R' (Van den Akker 1999; Van den Akker et al., 2007).

The principle implies that the intervention in this study should have a clear purpose to serve or functions to perform, which in this case is to enhance student teachers' involvement in internal quality assurance processes through developing a robust model. Suppose the model adheres to the Van den Akker principle of intervention study. In that case, the model is an effective intervention to enhance student teachers' involvement in internal quality assurance for quality enhancement in education as advocated in the global sustainable development goals 4; *promoting equitable quality education and lifelong learning opportunities for all* (United Nations, 2022) and the Tanzania national development vision in education *achieving a well-educated people* required to transform the country into the upper-middle industrialized economy (URT, 2024).

If quality education is a national and global agenda to achieve a skilled workforce for sustainable development, designing and developing a model for involving student teachers in internal quality assurance processes was supposed to adhere to the

heuristic intervention principles (Van den Akker, 1999). The validation of the model by different actors in teacher education throughout the model design and development with student teachers, tutors, college management, principals and quality assurance officers means that, the model is acceptable as a tool for constructive feedback to enhance quality improvement in teacher education (Van den Akker et al., 2007; MoEST, 2024). The use of scientific procedures from need assessment, determination of model specification, designing, development, and evaluation means, the model can be used by practitioners of different levels of expertise in quality assurance for quality enhancement in teacher education (Archer, 2019; Attou et al., 2022; Biecek, 2019).

Generally, the model design and development are intended to enhance student teachers' involvement in internal quality assurance processes as the beneficiary stakeholders in teacher colleges, which concurs with the student involvement theory, which requires the active engagement of students in their learning processes (Astin, 1984). Moreover, the model intends to improve the quality of education as supported by the paradigm shift theory, which regards youth as agents of change, so their involvement in the internal quality assurance process will improve the teaching, learning, assessment, welfare, leadership, and academic achievement (Gomez-Diago, 2020).

5.5 Enablers for a model of student teachers' involvement in internal quality assurance processes in Teacher Colleges

The model trial out in teacher colleges raised different concerns as enablers for adaptability, acceptability, usability, and effectiveness to enhance the quality of teacher education, as discussed in this section.

5.5.1 Quality assurance framework review to accommodate student teachers in the process

The majority of the respondents, 150 (87%) proposed reviewing the school quality assurance framework to accommodate student teachers in internal quality assurance processes in teacher colleges. It was urged that the existing school quality assurance framework has given little chance to student teachers in the internal quality assurance processes which limited their participation in the process. This need concurs with the previous study in the United States of America, which established the same need for reviewing the framework to accommodate students and describe their roles and positions in the quality process (Ryan, 2015).

Since the quality assurance framework is a guide for quality assurance processes, and if student teachers are prepared to teach alongside ensuring the quality of education, the quality assurance framework should recognize student teachers as important stakeholders for providing quality assurance feedback for quality improvement (MoEST, 2017a). The quality assurance framework which does not provide an adequate opportunity for student teachers involvement in quality assurance processes should be reviewed to accommodate student eachers in the processes, because their participation in focus group discussion with quality assurance officers selects just a

few number of students, leaving the inputs from the majority away from the process MoEST, 2024).

5.5.2 Teacher education curriculum review to incorporate quality assurance competencies

Most of the respondents, 139 (80%), suggested the curriculum review as an enabler for enhancing student teachers' involvement in internal quality assurance processes. The result is supported by a previous study conducted at the Faculty of Health, Medicine, and Life Sciences at Maastricht University, Netherlands, where students required training on quality assurance processes to improve their involvement in the process (Stalmeijer et al., 2016). The study in South Africa indicated a need for curriculum review to incorporate quality assurance competencies in the curriculum to address the challenges related to lack of quality assurance competencies among students, lack of awareness about quality assurance policies, and lack of awareness of students' roles in quality assurance processes hence improve students' involvement in the process (Van Zyl, Burger & Carstens, 2020; Moyo & Boti, 2020). If improving the quality of education is the sole responsibility of teachers, and if the curriculum for teacher education does not inculcate quality assurance competencies to them, such curriculum need to be reviewed to incorporate quality assurance knowledge, skills and values which will enable student teachers to develop quality assurance competencies for their teaching career (MoEST, 2023).

5.5.3 Training management and tutors on student teachers' involvement in internal quality assurance processes

The need for training for management teams and their tutors on students ' involvement in internal quality assurance processes was established by the majority of the respondents 149 (86%). The result concurs with a previous study by Saidi (2020) which was presented at in South African quality assurance conference and supported the need for training management to support student involvement in internal quality assurance processes.

If involving student teachers in internal quality assurance processes entails resources in terms of time, finance and people, the management which manage such resources and feedback should be capacitated on student teachers involvement to devote such resources and utilize quality assurance feedback for quality imprvements as the education and training policy requires (MoEST, 2023).

5.5.4 Installation of free Internet services to support student teachers' model of involvement

A large number of the respondents 157 (90%) suggested the installation of free internet service for student teachers to enable them to access the model of their involvement in internal quality assurance processes. The result concurs with a previous study conducted in South Africa, where free internet service enabled students to perform internal quality assurance functions effectively using social media, and WhatsApp platforms (Lottering, 2020).

If most of the teacher colleges do not have free internet services, while the model of student teachers' involvement in internal quality assurance processes requires such a

model, it is imperative, therefore, to ensure the provision of free internet services for student teachers as an enabler for the model. Without such service, most of the student teachers in teacher colleges will not be able to perform internal quality assurance functions.

5.5.5 Coaching and mentoring student teachers on quality assurance processes

The need for coaching and mentoring student teachers on quality assurance processes was established by a large number of the respondents, 147 (84%). The results concur with a previous study at the Universities in South Africa, which established that students do not have enough skills and experience to perform quality assurance roles and functions, therefore, they need coaching and mentoring from the experts (Moyo, 2020). Similarly, the study conducted in higher learning institutions in Zimbabwe revealed that, although student desire to be involved in internal quality assurance processes, they are less aware of their roles and responsibilities in the process, hence a need for guidance from their teachers (Ncube, 2020). The results suggest that, while student teachers see the need to be members of internal quality assurance teams, college principals are school quality assurance officers who do not know that need.

Generally, the enablers for the model of student teachers' involvement in internal quality assurance processes are supported by the paradigm shift theory to bring positive changes in teachers colleges through the use of the youth, student teachers in this case (Gomez-Diago, 2020), and student involvement theoru which require an adequate engagement of students to achieve their learning needs and learning goals (Astin, 1984).

5.6 The effectiveness of the UCHUKI model on the quality of teacher education

The study evaluated the effectiveness of the UCHUKI model on the quality of teacher education. Six hypotheses were tested which were: H_1 The UCHUKI model significantly influences the quality of student teachers' achievements; H_2 The UCHUKI model significantly influences the quality of teaching and learning processes; H_3 The UCHUKI model significantly influences the quality of teacher education curriculum; H_4 The UCHUKI model significantly influences the quality of college leadership and management; H_5 The UCHUKI model significantly influences the quality of college environment, welfare, safety and health; and H_6 The UCHUKI model significantly influences the quality of community engagement in teacher education.

5.6.1 Model testing results

The study assessed the model's fitness for the study. The model of this study is statistically significant because the prob of the F-statistic is .000, which is less than 5% and hence acceptable. The coefficient of correlation (R) is .869 (86.7%), which implies that 86.7% of the study determinants were used in this study, and only 13.3% were not used, which is also acceptable. Moreover, the coefficient of determination (R-square) is .751 (75.1%) and the adjusted R-square is .742 (74.2%), which signifies that the model was fit for the study (Keer, Lohiya & Chouhan, 2023).

The result means, the statistical model developed for testing the effectiveness of the student teachers' involvement in internal quality assurance processs was significant, valid and reliable hence a scientific intervention for quality enhancement in education. If that is the case, the study is a policy tool to achieve the policy goal of

improving the quality of education for attaining the national development vision (MoEST, 2023; URT, 2024).

5.6.2 Multicollinearity test

The multicollinearity test was conducted on the six independent variables to establish whether there was an intercorrelation among those variables. The results of the multicollinearity test. The multicollinearity test results presented in Table 4.6, indicate that the tolerance value ranges from 0.179 to 9.54 since such a value is greater than 0.10, and the variance inflation factor ranges between 1.0 to 5.57, hence less than 10, the results suggest that all the six independent variables in this study are free from multicollinearity (Shrestha, 2020). The result means the six variables, which also serve as quality indicators in teacher education, were relevant and effective in assessing the quality of teacher education; none of them should be dropped or left unassessed (MoEST, 2024).

5.6.3 Autocorrelation test results

The Durbin-Watson test was conducted to test whether there was autocorrelation between independent variables. The result indicated that the Durbin-Watson result was 1.742, which is between 1.5 and 2.5, hence an indication of a lack of autocorrelation between independent variables (Kalina, 2013). The results also mean, the variables chosen to measure the quality of teacher education do not have similarity, which could affect one another. If that is the case, quality assurance indicators in teacher education each have their significance in quality enhancement; therefore, quality improvement strategies should be comprehensive and holistic.

5.6.4 Descriptive statistics

The descriptive analysis was conducted to find the mean and standard deviation in all variables of the study. The descriptive statistics results in Table 4.6, indicate that: Student teachers' involvement in internal quality assurance processes had a mean of 3.90 and standard deviation of .822; the quality of student teachers' achievements had a mean of 3.75 and standard deviation of .910; the quality of teaching and learning processes had a mean of 3.84 and a standard deviation of .854; the quality of teacher education curriculum had a mean of 3.65 and standard deviation of .926; the quality of college leadership and management had a mean of 3.63 and standard deviation of .983; the quality of the college environment, welfare, safety, and health had a mean of 3.68 and standard deviation of .982 and the quality of community engagement in teacher education had a mean of 2.62 and a standard deviation of 1.091. Generally, all the variables had a positive mean above the average mean of 3.0, except the quality of community engagement in teacher education, which has a mean of 2.62 (Ibanez-Lopez et al., 2024).

The less consideration of student teachers on the community engagement in teacher education makes teacher colleges isolated from their surrounding community because most of the teacher colleges receive student teachers from distant places. This is an indicator of detachment of the community from teacher education, leaving the whole burden to the government and the college management. Therefore, community engagement in teacher education should be strengthened to achieve high-quality teacher education for the national workforce, as emphasized in the education and training policy 2014, the revised edition of 2023 in particular (MoEST, 2023).

5.6.4.1 Hypothesis (H_1): The UCHUKI model significantly influences the quality of student teachers' achievements.

The study hypothesized the influence of the UCHUKI model on the quality of student teachers' achievements. The result reveals that student teachers' involvement in internal quality assurance processes through the UCHUKI model has a positive but insignificant influence on the quality of student teachers' achievements (β=0.028, p-value=0.773). Further observation indicates that a unit increase in student teachers in the UCHUKI model positively influences the improvement of the quality of learners' achievements value by 2%, hence, an alternative hypothesis was rejected. The result deviates from the policy expectation that student teachers' involvement in internal quality assurance processes should influence their learning achievements (MoEST, 2023).

Such a result deviates from the previous studies in Egypt, which predicted the significant influence of learning achievement as learners are involved in quality assurance processes (Noha, 2013). Although the result indicates an insignificant influence of the UCHUKI model on student teachers' learning achievement, the model enabled student teachers to provide constructive feedback for quality improvement. Among them was a need for entrepreneurship skills to enhance their self-employability due to the unemployment crisis in the teaching cadre. If they develop entrepreneurial skills and manage to create self-employment, it will boost their social and economic achievement. Self-employment is the policy issue emphasized for economic growth and sustainable development in Tanzania (MoEST, 2023; URT, 2024).

5.6.4.2 Hypothesis (H_2): The UCHUKI model significantly influences the quality of teaching for good learning and assessment in teacher colleges

The study hypothesized the influence of the UCHUKI model on the quality of teaching for good learning and assessment. The result reveals that the UCHUKI model has a positive and significant influence on the quality of teaching for good learning and assessment in teacher colleges (β=0.485, p-value=0.000), hence an alternative hypothesis is accepted. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the quality of teaching for good learning and assessment by 48%. This result is in line with the study in India, which found that teaching and learning processes indicate the quality of teacher education (Mandal, 2022).

If student teachers used the UCHUKI model to evaluate the quality of teaching and learning, and suggested the adoption of teach-no-pedagogy as a means to enhance the quality of teaching and learning, the use of participatory methods and practical teaching, the model is an effective tool to improve the quality of teaching. The technological pedagogical skills have been identified as a critical issue among teachers, hence a need for an intervention strategy (Mtebe & Raphael, 2018). If the education policy stresses the improvement of teaching and learning processes and if UCHUKI enables student teachers to evaluate the quality of teaching and learning processes, then, UCHUKI model is an effective tool to enhance the policy goal in education (MoEST, 2023).

5.6.4.3 Hypothesis (H_3): The UCHUKI model significantly influences the quality of teacher education curriculum.

The study hypothesized the influence of the UCHUKI model on the quality of teacher education curriculum. The result reveals that the UCHUKI model has a positive and significant influence on the quality of teacher education curriculum at (β=0.220, p-value=0.000), hence an alternative hypothesis is accepted. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the improvement of the quality of teacher education to meet their needs by 22%.

If student teachers used the UCHUKI model to evaluate the quality of the teacher education curriculum, and suggested the incorporation of entrepreneurship and financial literacy in the teacher education programme, the supply of teacher education resources, such as science books and apparatus, and the extension of the block teaching practice to enhance pedagogical skills, the model is effective to promote the quality of teacher education which is a cornerstone for the Tanzania development vision 2050 (URT, 2024).

5.6.4.4 Hypothesis (H_4): The UCHUKI model significantly influences the quality of college leadership and management.

The study hypothesized the influence of the UCHUKI model on the quality of college leadership and management. The result indicates that the UCHUKI model has a positive and significant influence on the quality of leadership and management in teacher colleges (β=0.225, p-value=0.001); hence, an alternative hypothesis is accepted. Similarly, further observation indicates that a unit increase of student

teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the improvement of the quality of college leadership and management by 22%.

If student teachers used the UCHUKI model to evaluate the quality of leadership and management in their college and suggested for free and fair election in students' organization, transparency and responsibility in college management as well as leadership ethics and fairness, such leadership and management challenges if addressed, the leadership and management in teacher colleges will be improved to enhance the quality of teacher education. This result is supported by a study in India, which found that leadership and management are indicators of quality teacher education (Mandal, 2022). What is new in this study is that this has developed a model that predicts a positive and significant influence of student teachers' involvement in internal quality assurance processes on the quality of college leadership and management. In contrast, the study in India did not develop a tool to enhance student teachers' involvement in improving the quality of leadership and management in teacher colleges.

5.6.4.5 Hypothesis (H_5): The UCHUKI model significantly influences the quality of the college environment, welfare, safety, and health

The study hypothesized the influence of the UCHUKI model on the quality of the college environment, welfare, safety, and health. The results show that student teachers' involvement in internal quality assurance processes has a positive but insignificant influence on the quality of the college environment, welfare, safety, and health (β=-0.032, p-value=0.584), hence, the alternative hypothesis was rejected.

Similarly, further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the UCHUKI model influences the decrease of quality of the college environment, safety, and health by 3%. This result deviates from the study in India, which found that welfare services and a supportive environment are indicators of quality teacher education (Mandal, 2022).

Although the hypothesis was rejected, student teachers managed to use the UCHUKI model to evaluate the quality of their teacher education environment, health, safety, and welfare. They suggested security lights, planting more trees, improvement of supportive infrastructure for learners with disabilities, establishment of gender inclusion policies to address gender based violence, improve food quality, and strengthen guidance and counseling services. All of these concerns are very important to improve the quality of teacher education, hence, the UCHUKI is mostly important to improve the quality of their welfare (MoEST, 2023; MoEST, 2024).

5.6.4.6 Hypothesis (H_6): The UCHUKI model significantly influences the quality of community engagement in teacher education.

The study hypothesized the influence of the UCHUKI model on the quality of community engagement in teacher education. The result reveals that the UCHUKI model has a negative but significant influence on the quality of community engagement in teacher education (β=-0.060, p-value=0.045); hence, an alternative hypothesis is accepted. Further observation indicates that a unit increase of student teachers' involvement in the internal quality assurance processes through the

UCHUKI model influences the decrease in the quality of community engagement in teacher education by 6%.

If student teachers used the UCHUKI model to evaluate the quality of community engagement in teacher education and suggested for strengthening the meetings between parents and college management, engagement of college community on community service activities in their surrounding community and a positive relationship between college community and the their surrounding community, if those issues are put into practice, the quality of community engagement in teacher education will be strengthened to achieve the quality of teacher education.

This result is in line with the study in India, which indicated the positive effect of community engagement in teacher education as an indicator of quality teacher education (Mandal, 2022). It is also in line with the education and training policy of Tanzania, which calls for community engagement in education because education is a public service that entails community support for quality improvement (MoEST, 2023). The important role of parents as part of the community in improving the quality of education cannot be overemphasized (Kigobe & Ogondiek, 2020).

Generally, the UCHUKI model has proven to be an effective model in enhancing the quality of teacher education in different aspects. The model is in line with the paradigm shift theory, the theory which calls for changes from the previous practice (inspection system), which isolated student teachers from active engagement in teacher education quality enhancement processes (Anandi, Larson & Mahoney, 2020). Similarly, the UCHUKI model effectiveness is manifested through the student involvement theory, which calls for active engagement of students to

improve their learning (Astin, 1984), and it has proven to provide a specific and effective platform that enables the college management to get constructive feedback for quality enhancement. Moreover, the UCHUKI model is an effective tool to promote the quality of education for employability skills (MoEST, 2023) and the Tanzania National Development Vision 2050, which aspires for an inclusive and prosperous economy through a competitive and competent workforce (URT, 2024).

CHAPTER SIX

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The study intended to develop a model for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges. It began by conducting a needs assessment for a model of student teachers' involvement in internal quality assurance processes. Then it designed and developed a model for student teachers' involvement in internal quality assurance processes in teacher colleges, determined the enablers for a model of student teachers' involvement in internal quality assurance processes in teacher colleges, and evaluated the effectiveness of the UCHUKI model on the quality of teacher education. This chapter presents a summary, conclusion, and recommendations of the study based on the specific objectives of the study:

6.2 Summary of the study

The study developed a model for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges. It involved a total of 573 respondents sampled randomly from 12 teacher colleges in Tanzania. The respondents involved college principals, school quality assurance officers, college management teams, and student teachers. The study used three tools for data collection, which were questionnaires, interviews, and focus group discussions. The summary of the results for each specific objective is presented below:

6.2.1 Assessing the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges

The objective assessed the need for a model of student teachers' involvement in internal quality assurance processes in teacher colleges. A total of seven needs were established as the forces for model development. Those include The need for quality education to promote workforce for sustainable development, the need to safeguard student teachers' needs and interests, the paradigm shift from teacher to student-centered learning, the need for quality improvement feedback from beneficiary stakeholders, the need for 21st-century skills among student teachers, the need for employability skills among student teachers and the need for quality assurance competencies among student teachers. From this objective, it can be argued that there was a dire need for a model of student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges to ensure the provision of constructive feedback for quality improvement from student teachers.

6.2.2 Designing and developing a model for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges.

The objective was to design and develop a model for student teachers' involvement in internal quality assurance processes. The model specifications include application systems that are browser-based. Accessibility is online, and the operating system for the model is all operating systems, including Windows, Linux, and Android. The model has functional requirements and non-functional requirements. The functional requirements in the UCHUKI system include student teachers conducting internal evaluations of their respective teacher colleges in all six quality assurance domains

described in the school quality assurance framework and sending their inputs to the database. Then, the authorized staff (quality assurance personnel) logs in to view the analysis and recommendations for quality improvement.

The non-functional requirements in the UCHUKI system include the availability of the system, where the system is available 24/7 through the address https://uchuki.caris.co.tz. The non-functional is scalable, the system can expand when needs arise. Also, another nonfunctional requirement is the consistency of the UCHUKI system, where the analysis provided by the system is correct and trustworthy. Figure 1 below shows the high-level design of the UCHUKI system. Furthermore, the UCHUKI system uses SSL and SQL injections for security. The UCHUKI is developed using HTML, JavaScript, Bootstrap, PHP, and MySQL for the database. The system is deployed in a secure server, and the server is available 24/7. The model was prototyped, from prototype zero to three, and the given recommendations were incorporated for improvement. The model was then tried out in teacher colleges and quality assurance offices, where they endorsed it as a useful tool for improving the quality of teacher education in Tanzania.

6.2.3 Determining enablers for a model of student teachers' involvement in internal quality assurance processes in Teacher Colleges.

The study determined enablers for the model's acceptability, adaptability, usability, and effectiveness in teacher colleges. Such enablers include: reviewing the school quality assurance framework to accommodate student teachers in the processes, because currently, the framework does not indicate the role and functions of student teachers in the quality assurance process. The review of the teacher education

curriculum to incorporate quality assurance competencies, as currently, quality assurance is currently not part of the teacher education curriculum. Quality assurance in education is a new phenomenon, it is not yet covered in the teacher education curriculum. Similarly, the training management and tutors on student teachers' involvement in internal quality assurance processes were suggested as an enabler for the model to create a common understanding and positive attitudes towards student teachers' participation in internal quality assurance processes. Since the model requires internet connectivity, free internet service is an enabler to support the model of student teachers' involvement in internal quality assurance processes. Finally, the need to coach and mentor student teachers on internal quality assurance processes was necessary to ensure that student teachers can competently and professionally conduct internal quality assurance functions.

6.2.4 Evaluating the effectiveness of the model on the quality of teacher education.

The objective evaluated the effectiveness of the model on the quality of teacher education. The Pearson correlation and linear regression model were used to assess such influence. The results indicate that the UCHUKI model has a positive but insignificant influence on the quality of student teachers' achievements at the 5% level (r=0.774, p-value=0.773), hence the hypothesis was rejected. Also, student teachers' involvement in internal quality assurance processes has a positive association and significant influence on the quality of teaching and learning processes in teacher colleges at the 5% level (r=0.778, p-value=0.000), hence a hypothesis was accepted. It further reveals that student teachers' involvement in

internal quality assurance processes has a positive association and significant influence on the quality of teacher education curriculum at the 5% level (r=0.693, p-value=0.000), hence the hypothesis is accepted.

Similarly, the result indicates that student teachers' involvement in internal quality assurance processes has a positive association and significant influence on the quality of leadership and management in teacher colleges at the 5% level (r=0.700, p-value=0.001), hence the hypothesis is accepted. Moreover, the results reveal that student teachers' involvement in internal quality assurance processes has a positive association but insignificant influence on the quality of college environment, welfare, safety, and health at the 5% level (r=0.643, p-value=0.584), hence, the hypothesis was rejected. Finally, the result indicates that student teachers' involvement in internal quality assurance processes has a positive association and significant influence on the quality of community engagement in teacher education at the 5% level (r=0.066, p-value=0.045), hence, the hypothesis was accepted.

Generally, student teachers' involvement in internal quality assurance processes has a positive association and significant influence on the quality of teacher education, as student teachers' involvement in internal quality assurance processes positively and significantly influences the quality of teacher education in four (70%) out of the six indicators of quality teacher college. Despite the ststistical evidence on the insignificance and negative aasociation of the two indicators, student teachers manged to evaluate the quality of teacher education in those aspects and provide constructive feedback and valid suggestions for quality improvement.

6.3 Conclusion of the study

The general conclusion of the study is that the paradigm shift from inspection to quality assurance in teacher education gave student teachers a little opportunity of being involved in internal quality assurance processes due to lack of a robust model of involving them adequatly. Student teachers, college management, principals, quality assurance officers and tutors sought that, it is hightime to involve student teachers in internal quality assurance processes for improving the quality of teacher education and equiping them with quality assurance competencies for ther professional career. The developed model termed 'UCHUKI' predicted positively and significantly the four the quality of teacher education. However, the acceptability, adoptability, usability and effectiveness of the UCHUKI model in teacher colleges requires policy, institutional and managerial support. The specific conclusions for each objective are presented below:

6.3.1 The need assessment for a model of student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges

The objective assessed the need for developing a model of student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges. The identified needs were: The need for quality teachers to improve the quality of fee free basic education, the need to safeguard student teachers' needs and interests, the paradigm shift from teacher to student-centred learning, the need for quality improvement feedback from beneficiary stakeholders, the need for 21st-century skills among student teachers, the need for employability skills among student teachers and the need for quality assurance competencies among student teachers

Basing on the paradigm shift theory and student involvement theory, the result of this objective concludes that there was a dire need for developing a model of student teachers' involvement in internal quality assurance processes to improve the quality of teacher education.

6.3.2 Model designing and development for student teachers' involvement in internal quality assurance processes in Tanzania teacher colleges.

The objective was to designed and develop a model from prototype zero to prototype three, and the given recommendations were incorporated for model improvement. The model was then tried out in teacher colleges. It enabled several student teachers to be involved in internal quality assurance processes. Teacher college management and quality assurance officers appreciated the model as a useful quality assurance tool. They said the model will enhance student teachers' involvement in internal quality assurance processes. Based on the paradigm shift theory and student involvement theory, the result of this objective concludes that the model should be adopted in all teacher colleges for quality enhancement of teacher education.

6.3.3 Enablers for a model of Student Teachers' involvement in internal quality assurance processes in Teacher Colleges

The study determined the enablers for the model's acceptability, adaptability, usability, and effectiveness towards student teachers' involvement in internal quality assurance processes in teacher colleges. The school quality assurance framework should be reviewed to accommodate student teachers in the processes is an urgent need to incorporate quality assurance competencies. Also, curriculum developers should incorporate quality assurance competencies in teacher education curricula to

enable them to develop knowledge, skills, and attitudes for effective quality assurance processes. Similarly, teacher colleges should be equipped with free internet service to enable the model to operate effectively. Moreover, the management and tutors should be trained on how to involve student support student teachers in internal quality assurance processes. Finally, student teachers should be coached and mentored on internal quality assurance processes. Based on a paradigm shift theory and student involvement theory, teacher colleges should create an enabling environment for a model of student teachers' involvement in internal quality assurance processes.

6.3.4 The effectiveness of the UCHUKI model on the quality of teacher education

The objective evaluated the effectiveness of the UCHUKI model on the quality of teacher education. The linear regression model was gnerated to test the six alternative hypotehses on the effectivenes of the UCHUKI model on the quality of teacher education. The results indicate that there is a positive and significant influence of the UCHUKI model on the quality of teacher education basing on the four indicators out of six (67%), the indicators includes: the quality of teaching and learning processes; the quality of teacher education curriculum, the quality of leadership and management, and the quality of community engagement in teacher education.

However, there is a positive but insignificance influence of student teachers' involvement in internal quality assurance processes on the quality of student teachers' achievement; and a negative but significance influence on the quality of college environment, welfare, safety, and health.

From this observation, it can be concluded that there is a positive relationship and significant influence on student teachers' involvement in internal quality assurance processes and the quality of teacher education. Based on the paradigm shift theory and student teachers' involvement theory, the results in this objective conclude that the more, student teachers are involved in the quality assurance processes, the more the quality of teacher education will be improved.

6.4 Recommendation

From the findings of this study, recommendations are made for action as well as for further studies.

6.4.1 Recommendations for Action

To enhance student teachers' involvement in internal quality assurance processes in teacher colleges, the following actions should be taken by the responsible institutions:

- **To the Open University of Tanzania**

  The university management should present the UCHUKI model to the Ministry of Education for assessment and endorsement as a quality assurance tool for teacher colleges in Tanzania.

- **The Ministry of Education, Science, and Technology in Tanzania**:

  As a policy marker for education provision in Tanzania, it should review the school quality assurance framework as a policy document to give student teachers due consideration as beneficiary stakeholders opportunities for adequate involvement in internal quality assurance processes. Currently,

student teachers lack their quality assurance platform apart from participation in Focused and Class discussions with the visiting quality assurance officers, which is ineffective because teacher colleges are visited once a year or two.

- **The Ministry of Education and Vocational Training in Zanzibar**

  It should institute internal and external quality assurance systems in teacher colleges to improve the quality of teachers' preparation. Currently, the education system in Zanzibar is still under an inspection system, and teacher colleges are rarely inspected.

- **The Department of Teacher Education in Zanzibar (DTE)**

  As a training entity in Zanzibar, DTE should organize quality assurance training for the college management team. That will equip college management with quality assurance skills for cascading to student teachers. Currently, teacher college management has not been capacitated on quality assurance skills for the same.

- **The Presidents' Office: Regional Administration and Local Government:**

  As teacher employers in the country, it should organize in-service training for the employed teachers concerning quality assurance practices to equip teachers with quality assurance skills purposely to improve the quality of education they provide; Currently, most of the teachers have limited quality assurance skills;

- **The Tanzania Institute of Education (T.I.E):**

  As an institution mandated to design and develop a teacher education curriculum, it should consider quality assurance as an important skill in the

curriculum content to improve the quality of teacher education. Currently, quality assurance competencies are not incorporated into teacher education curricula.

- **The Agency for the Development of Education Management (ADEM):**

  The success of student teachers' involvement in internal quality assurance processes depends on the competence of the tutors and management teams, therefore, ADEM as a training agency in education management and quality assurance should conduct effective training for the tutors and management teams of teacher colleges on how to involve student teachers in the process and on how to utilize the feedback provided by student teachers;

- **The School Quality Assurance Officers**:

  The school quality assurance department, as external evaluators for teacher colleges, should ensure that student teachers are adequately involved in internal quality assurance processes for dual benefits, safeguarding their needs and interests as well as developing quality assurance skills. Currently, external evaluators give student teachers a limited chance of involvement in internal quality assurance processes;

- **The Teacher College Boards**:

  As the overseer and chief advisor in teacher colleges, I should advise the Ministry of Education on the proper ways of involving student teachers in internal quality assurance processes. The boards also, should also oversee the student teachers' involvement in the quality assurance processes and receive the reports for intervention;

- **The College Management Team**:

  The Management team, as the steering wheel for daily operations in Teacher Colleges, should develop positive attitudes toward student teachers' involvement in internal quality assurance processes to support the process by creating an enabling environment. The team should also work on the recommendations given by student teachers in the course of internal quality assurance processes.

- **Student Teachers**:

  Student teachers should understand that the goal of quality assurance practices is not for fault findings to the tutors and management team but the improvement of teacher education quality. Therefore, when they are involved in the process, they should avoid self-interest and revenge attitudes, hence support their colleagues towards quality improvement alongside developing quality assurance skills required in their teaching career.

6.4.2 Recommendations for further studies

The current study has developed a model for student teachers' involvement in internal quality assurance processes in teacher colleges. The model was developed and tried in teacher colleges that offer diplomas in teacher education. Higher learning institutions were not involved in this study, even though they also offer teacher education programmes. Further study may scale up the model for acceptability, adaptability, and use in higher learning institutions offering teacher education programmes in Tanzania.

REFERENCES

Abusalem, O., Bertalan, N & Kocsi, B. (2019). Implementing Quantitative Techniques to Improve Decision Making in Construction Projects: A Case Study. *An International Journal for Engineering and Information Sciences*. 14 (3). 223-234.

ADEM (2021). *Training Manual for School Internal Quality Assurance Practices*. Bagamoyo: Agency for the Development of Educational Management.

Afanasyjeva, O., Vozgova, Z., Fedotova, M & Smirnova, M. (2019). Leadership Competencies of the Teacher as a Factor in the Development of Professional Skills. *Education Journal*. 40 (39). 15-25.

African Union (2015). *Agenda 2063: The Africa We Want*. Addis Ababa: African Union

African Union (2020). *African Standards and Guidelines for Quality Assurance in Higher Education*. Addis Ababa: African Union.

Alahmad, A., Stamenkovska, T. & Gyori, J. (2021). Preparing Pre-Service Teachers for 21st Century Skills Education: Teacher Education Model. GILE *Journal of Skills Development* 1 (1). 67-86.

Alaniska, H., Codina, E.A, Bohrer, J., Dearlove, R., Eriksson, S., Hellen, E & Wiberg, L.K. (2016). *Students' Involvement in the Process of Quality Assurance Agencies.* Workshop Report No.4. Helsinki: European Association for Quality Assurance in Higher Education.

Almadani, K. Reid, N & Rodrigues, S. (2011). Quality Assurance: A Pressing Problem for Education in the 21st Century. *Problems of Education in the 21st Century*, 32 (9). 9-22.

Almazroa, H, & Alotaibi, W. (2023). Teaching 21st Century Skills: Understanding the Depth and Width of the Challenges to Shape Proactive Teacher Education Programmes. *Sustainability Journal*. 15. 1-25.

Altrichter, H & Kemethofer, D. (2014). *Impact of School Inspection on Teaching and Learning in Primary and Secondary Education in Austria*: Technical Report, Johannes Kepler University of Linz.

Alzahrani, M.A & Nor, F.M. (2022). Professional Development and EFL Teachers' Practices in Activating Learners' Acquisition of 21st Century Skills. In *Problems of Education in the 21st Century.* 80 (5). 652-678.

Amoako, T. (2020). Indicators of Students' Satisfaction with Quality Education Services in Some Selected Universities in Ghana. *South African Journal of Higher Education.* 34 (5) 61-71.

Anandi, G, Larson, E, & Mahoney, J. (2020). Thomas Kuhn on Paradigms. *Journal of Production and Operations Management*. 29 (7). 1650-1657.

Andleeb, S. & Ahmad, J. (2020). Institutional Internal Quality Assurance Assessment Practices and Students' Satisfaction. *Journal of Public Value and Administrative Insight* 3 (3) 118-144.

Archer, E. (2019). Design Research: Developing Effective Feedback Interventions for School-based Monitoring. Transformation Research Methods in the Social Sciences: *Case Studies from South Africa*. 317-336.

Astin, A.W. (1984). Student Involvement: A Development Theory for Higher Education. *Journal of College Student Development*. 40. 518-529.

Atena, R. (2019). Flexibility and Adaptability of Secondary School Managers to 21st Century Skills. *International Journal of Sciences*: *Basic and Applied Research*. 40 (2). 169-185.

Attarwala, P. (2015). A Study of Teachers' Accountability on Teachers' Professionalism of Primary Schools of Kadi. *Educational Journal of Research in Humanities and Social Sciences.* 3 (8). 47-50.

Attou, A., B., Ciddi, M., L & Unal, M. (2022). *Proceedings of the International Conference on Studies in Education and Social Sciences*. Antalya, Turkey 659-674.

Awinia, C. (2019). Free Basic Education and Gender Disparities in Tanzania: An Empirical Assessment of Challenges and Policy Options. *Huria Journal.* 26 (2). 1-22.

Baker, P.S. (2016). Making Paradigms Meaningful in Mixed Methods. *Research Journal.* 10 (4). 319-334. Sage Publishers.

Benedicto, P.N.F & Andrade, R.R. (2022). Problem-Based Learning Strategies and Critical Thinking Skills among Pre-service Teachers. *International Journal of Science Technology, Engineering and Mathematics*, 2(2). 1-28.

Berner, A. (2017). *Would School Inspections Work in the United States?* Johns Hopkins School of Education: Institute of Education Planning.

Bican, G. (2021). Enhancing the Cross-Cultural Competence of Prospective Language Teachers. *Journal of Curriculum and Teaching*. 10 (3). 47-57.

Biecek, P. (2019). *Model Development Process*. War Saw University of Technology and the University of War Saw.

Blake, D. (1994). *Quality Assurance in Teacher Education*. A Case Study of Quality Assurance in Education. 2 (1). 26-31.

Bola, O., S & Fatai, O., B. (2022). Understanding the Levels of Productivity of Teachers Who Are Exposed to In-Service Training. *Asian Journal of Assessment in Teaching and Learning*. 12 (2). 2821-2916.

Botha, A.J.K & Steyn, A.A. (2020). Students-Faculty Partnership in Design, Evaluating a Co-Creation Practice, and Sharing of Findings within the South African Higher Education Context. *South African Journal of Higher Education*. 34 (5) 166-176.

Brandt, W.C. (2020). *Measuring Student Success Skills*: A Review of the Literature on Self-Directed Learning. Centre for Assessment.

Brazier, F.M.T., Van Langen, H.G., Treuer, J & Wijngaard, N. J.E. (2002). *Model-Based Development of Design Process Models*. Amsterdam: Department of Artificial Intelligence, Faculty of Sciences. Vrije University.

Cachia, R., Ferrari, A., Ala-Mutka, K & Punie, Y. (2010). *Creative Learning and Innovative Teaching*. Final Report on the Study of Creativity and Innovation in Education in the European Member States. European Commission: Institute for Prospective Technological Studies.

Carrio-Pastor, M.L & Skorczynka, H. (2015). *Collaborative Learning and Communication Technology in Teaching Business English*. Procedia-Social and Behavioral Sciences. *15th International Conference of the Spanish Association of Language and International Education*. 19-21 November 2014, Valencia, Spain.

Collie, R.J. & Martin, A.J. (2016). Adaptability: An Important Capacity for Effective Teachers. *Educational Practice and Theory*. 38 (1). 27-39.

Creswell, J.W & Creswell, J.D. (2018). Research Design: *Qualitative, Quantitative, and Mixed Methods Approach*. New Delhi: SAGE Publishers.

Creswell, J.W & Plano Clark, V.L. (2018). *Designing and Conducting Mixed Methods Research* (3rd Edition). London: SAGE Publishers.

Creswell, J.W. (2014). Research Design: *Qualitative, Quantitative, and Mixed Methods Approach*. New Delhi: SAGE Publishers.

Creswell, J.W. (2015). *A Concise Introduction to Mixed Methods Research*. New Delhi: SAGE Publishers.

Crosby, P.B. (1979). Quality is Free: *The Art of Making Quality Certain*. New York: McGraw.

Dawadi, S., Shrestha, S, & Giri, R.A. (2021). *Mixed Methods Research*: A Discussion on Its Types, Challenges, and Criticisms. *Journal of Practical Studies in Education.* 2 (2). 25-36.

Deming, W. E. (1982). *Quality, productivity, and competitive position*. Cambridge: Massachusetts Institute of Technology, Center for Advanced Engineering Study.

Diquito, T., Ariter, MC.J & Bulonos, N.J. (2022). A Survey of 21st Century Skills Acquisition Among Pre-Service Teachers of Teacher Education Programs. *European Journal of Open Education and E-Learning Studies*. 7 (2). 59-72.

Doherty, G. (2012). *Quality Assurance in Education*. United Kingdom: Intech University.

Dunne, L & Zandstra, R. (2011). *Students as Change Agents*: New Ways of Engaging with Learning and Teaching in Higher Education. Bristol University.

East African Community (2015). *The East African Vision* 2050. Arusha: East African Community.

Engen, B., K. (2019). Understanding Social and Cultural Aspects of Teachers' Digital Competencies. *Media Education Research Journal*. 9-18.

Essel, H.B, Boakye-Yiadom, M & Kyeremeh, F.A. (2018). Assessing Students' Experiences of Internal Quality Assurance Practices in Selected Private Higher Education Institutions. *International Journal of Science and Research.* 7 (1).

Fedeli, L. (2016). *Comparative Study on Students' Involvement in Quality Assurance Processes*. The European Students' Union.

Figueiredo, A. (2018). *Action Research and Design Research*: Research Methods II.

Ghavifekr, S & Posdy, W.A.W. (2015). Teaching and Learning with Technology. Effectiveness of ICT Integration in Schools. *International Journal of Research in Education and Science.* 1 (2). 175-191.

Goksun, D.O & Kurt, A.A. (2017). The Relationship between Pre-Service Teachers' Use of 21st Century Learner Skills and 21st Century Skills. *Journal of Education and Sciences.* 42 (190). 107-130.

Gomez-Diago, G. (2020). Paradigm Shift. *International Encyclopedia of Mass Media and Society*. SAGE Publications.

Haki Elimu (2017). *The Implementation of Fee-Free Education Policy on Basic Education in Tanzania*: A Qualitative Study. Dar es Salaam: Haki Elimu.

Hickman, L., Akdere, M. (2017). Stakeholder Theory: *Implications for Total Quality Management in Higher Education.* 4th International Conference on Learn Six Sigma for Higher Education. 25-26 May, 2017.

Hoon, T.S., Muthukrishnan, P., Choo, K.A., Kam, N.K.M. & Singh, P. (2022). Student Teachers' Motivation and Adoption of 21st Century Skills. *Computer Assisted Language Learning Electronic Journal* 23 (4). 205-218.

Hoosen, S., Chetty, Y., & Butcher, N. (2018). *State of Play: Regional Quality Assurance in Southern Africa.* German Academic Exchange Service.

Hyperstedt, F. (2013). The Swedish Framework, Students Participation in Quality Processes: *Proceedings of the 9th International CDIO Conference, Massachusetts Institute of Technology and Harvard University School of Engineering and Applied Sciences,* Cambridge, Massachusetts, June 9 – 13, 2013.

Ibáñez-López, F. J., Rubio-Aparicio, M., Pedreño-Plana, M., & Sánchez-Martín, M. (2024). A descriptive statistics and basic graphs tutorial to help you succeed in statistical analysis. Espiral. *Cuadernos del Profesorado*, 17(36), 88-99.

Influence of Human Capital Investment on Malcolm Baldridge Quality

IUCEA (2014). *Principles and Guidelines for Quality Assurance in Higher Education in East Africa*. Kampala: The Inter-University Council for East Africa.

Jingura, R. M & Kamusoko, R. (2019). A Competency Framework for Internal Quality Assurance in Higher Education. *International Journal of Management in Education*. 13 (2). 119-132.

Joshua, G.M. (2014). An Overview of Thomas Kuhn's Views on Paradigm Shift and Its Applications to Sociology. *International Journal of Technical Research and Applications.* 2 (70) 83-86.

Juran, J. & Godfrey, A.G. (1998). *Juran's Quality Handbook*. New York: McGraw-Hill.

Kabati, J. (2017). *The Effectiveness of School Inspectors in Assuring the Quality of Primary Education in Shinyanga District*. Unpublished Dissertation for Master of Education in Policy Planning and Administration. Dar Es Salaam: The Open University of Tanzania.

Kalina, J. (2013). Autocorrelation Residuala of Robust Regression. *The 7th International Days of Statistics and Economics,* Prague, Sep 19-21,2013.

Kambuga, Y. & Dadi, H. (2015). School Inspection in Tanzania as a Motor for Education Quality: Challenges and Possible Way Forward. *Review of Knowledge Economy.* 2 (1) 1-13.

Keer, M., LOhiya, H & Chouhan, S. (2023). Goodness of Fit for Linear Regression Using R Squared and Adjusted R Squared. *International Journal of Research, Publications and Reviews.* 4 (3). 2431-2439.

Kigobe, J & Ogondiek, M. (2020). Parental Reading Support Activities and Children's Reading Achievement in Tanzania. *Journal of Issues and Practice in Education*. 12 (2). 60-81.

Kim, H, & Care, E. (2020). *Capturing 21st Century Skills: Analysis of Assessment in Selected Sub-Saharan African Countries*. Dakar: UNESCO Regional Office for West Africa.

Kis, V. (2005). *Quality Assurance in Tertiary Education:* Current Practices in OECD Countries and Literature Review on Potential Effects. OECD Directorate for Education.

Kivinen, K. (2014). *The European School Inspection System*. From Inspection to Quality Assurance: Standing International Conference of Inspectorates, Secretary General of the European Schools.

Komba, A & Shukia, R. (2023). *An Analysis of the Basic Education Curriculum in Tanzania*: The Integration, Scope, and Sequence of 21st Century Skills. Rise Working Paper 23/129.

Komba, S.C & Mwakabenja, R.J. (2019). *Teachers' Professional Development in Tanzania:* Challenges and Opportunities. Morogoro: Sokoine University of Agriculture.

Lauwerier, T & Akkari, A. (2015). *Teachers and the Quality of Basic Education in Sub-Saharan Africa.* Paris: UNESCO.

Leisyte, L., Westerheijden, D., Epping, E., Faber, M., & Weert, E. (2013*). Stakeholders and Quality Assurance in Higher Education*. Centre for Higher Education and Policy Studies Paper for 26th Annual CHER Conference. Laysanne.

Lightfront, A. (2020). *Communication and Collaboration*: Two Sides of the Same Coin. Sri Lanka: British Council

Logermann, F. (2014*). Students as Stakeholders in the Policy Context of the European Standards Guidelines for Quality Assurance in Higher Institutions*: A Comparative Study of the Dutch and German Higher Education Institutions. Master's Thesis, School of Management and Governance. Universiteit Twente.

Lottering, R.A. (2020). Using Social Media to Enhance Student-Engagement and Quality. *South African Journal of Higher Education*. 35 (4). 92-102.

Louws, M., L., Merrink, J., A., Van Vee, K & Van Driel, J., H. (2017). *Teachers' Self-directed Learning and Teaching Experiences*: What, How, and Why Teachers Want to Learn. Teaching and Teacher Education. 66. 171-183.

Lupimo, F.M. (2014). *The Role of School Inspectors in Improving Academic Performance in Community Secondary Schools*. Morogoro: Mzumbe University.

Lyimo, L.P. (2015). *The Impact of School Inspection on Students' Academic Achievement*. Unpublished Dissertation for Master of Education in Policy Planning and Administration. Dar es Salaam: The Open University of Tanzania.

Mafumiko, F.S.M. (2006*). Micro-Scale Experiment as a Catalyst for Improving the Chemistry Curriculum in Tanzania*. Doctoral Thesis. Ericheda (The Netherlands) University of Twente.

Malabanan, J.C., Briones, E.O & Madrideo, J.V. (2022). Pre-Service Teachers' Readiness Online Learning and their 21ST Century Pedagogical Skills. *International Journal of Educational Management and Development Studies*. 3 (3). 65-83.

Mandal, K.R. (2022). Quality Indicators and Quality Management of Teacher Education: An Overview. *International Journal of Multidisciplinary Research*. 4 (5). 1-6.

Mati, A, Gatumu, J.C and Chaali, J.R. (2016). Students' Involvement in Decision Making and their Academic Performance in the West Sub-County of Kenya. *Universal Journal of Education Research* 4 (10). 2300-2304.

Mavil, M.A. (2013). *The Internal Quality Assurance as Instruments for the Integration and Improvement of Higher Education*: Analysis of Best Practices in the European Union and Latin America. XIV World Congress of Comparative Education Societies June 14-18, 2010, Istanbul: Turkey.

Mehdaoui, A & Benabed, A. (2022). Gauging Algerian EFL Teachers' Awareness of the 21st Century Compulsory Skills: Case of EFL Teachers at Ibn Khaldoun University of Tiaret. *Technium Societal Sciences Journal*. 33. 115-131.

Mgaiwa, S. (2018). Emerging Fundamental Issues of Teacher Education in Tanzania: A Reflection of Practices. *International Journal of Educational Process*. 7. 246-264.

Mlyuka, E, E. (2015). *The Quest for Teacher Job Satisfaction-Job Performance Relationship in Tanzania Public Primary Schools: The Case of Iringa Regio*n: A Thesis Submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy of the Open University of Tanzania

Mmbando, J.S & Hongoke, C. (2010). *Management, Inspection, and Supervision for Effective Delivery of Quality Education*. Thematic Paper for the Joint Education Sector Annual Review. Dar es Salaam, Tanzania.

MoEST (2017a). *Basic, Secondary, and Teacher Education Quality Assurance Framework*. Dar es Salaam: Ministry of Education, Science and Technology.

MoEST (2017b). *School Quality Assurance Handbook*. Dar es Salaam: Ministry of Education, Science and Technology.

MoEST (2017c). *School Quality Assurance Operational Manual*. Dar Es Salaam: Ministry of Education, Science and Technology.

MoEST (2019). *National Curriculum Framework for Basic and Teacher Education.* Dodoma: Ministry of Education, Science and Technology.

MoEST (2020). *Ministry of Education, Science and Technology Budget Speech for 2020/2021 Financial Year.* Dodoma: Ministry of Education, Science and Technology.

MoEST (2021). *Ministry of Education, Science and Technology Budget Speech for 2021/2022 Financial Year.* Dodoma: Ministry of Education, Science and Technology.

MoEST (2022). *Ministry of Education, Science and Technology Budget Speech for 2022/2023 Financial Year.* Dodoma: Ministry of Education, Science and Technology.

MoEST (2023). *Education and Training Policy. 2023 Edition.* Dodoma: Ministry of Education, Science and Technology.

MoEST (2024a). *School Quality Assurance Framework*. (Revised Edition) Dodoma: Ministry of Education, Science and Technology.

MoEST (2024b). *School Quality Assurance Guidelines*. Dodoma: Ministry of Education, Science and Technology.

MoEST (2025). *Education Sector Development Plan (2025/26 – 2029/30).* Dododma, Ministry of Education, Science and Technology.

MoEVT (2007). *Teacher Development Management and Strategy* 2007/2008-2010/2011. Dar es Salaam: Ministry of Education and Vocational Training.

MoEVT (2014). *Education and Training Policy of Tanzania*. Dar es Salaam: Ministry of Education and Vocational Training.

Mok, M.M. (2007). Quality Assurance and School Monitoring in Hong Kong. *Education Research Policy Practice*. 6. 187-204.

Moyo, C.S. (2020). Perceptions of Students on Factors that Constrain their Involvement in Quality Assurance and Promotion in Two Comprehensive Universities in South Africa. *South African Journal of Higher Education.* 34 (5) 35-46.

Mtebe, J.S & Raphael, C. (2018). Eliciting Service Teachers' Technological Pedagogical Content Knowledge for 21st Century Skills in Tanzania. *Journal of Learning for Development* 5 (3). 263-279.

Murawski, L. (2014). Critical Thinking in the Classroom and Beyond. *Journal of Learning in Higher Education*. 10 (1).

Namamba, A. & Rao, C. (2017). Preparation and Professional Development of Teacher Educators in Tanzania. Current Practices and Prospects. *Journal of Education and Practices* 8 (8).

National Audit Office of Tanzania (2008). *A Performance Audit Report on School Inspection Programme for Secondary Schools in Tanzania*: A Report of the Controller and Auditor General of the United Republic of Tanzania. Dar es Salaam: National Audit Office of Tanzania.

National Audit Office of Tanzania (2016). *A Performance Audit Report on the System for Quality Control of Education Programs in Tanzania*: A Report of the Controller and Auditor General of the United Republic of Tanzania. Dar es Salaam: National Audit Office of Tanzania.

Nawi, F.A.M., Tambi, A.M.A., Samat, M.F., Mustapha, W.M.W. (2020). A Review

Ncube, M. (2020). Quality Assurance Students Involvement Confidence: Exploring Gaps and Implications for Higher Education Institutions in Zimbabwe. *South African Journal of Higher Education.* 34 (5) 47-60.

NECTA (2024a). 2024 *Standard II Literacy and Numeracy Assessment Report*. Dar es Salaam: National Examination Council of Tanzania.

NECTA (2024b). *Candidates' Item Response Analysis Report for a Certificate of*

NECTA (2024c). *Candidates' Item Response Analysis Report for a Standard Seven Examination (PSLC 2023) in the Mathematics Subject*. Dar Es Salaam: The National Examination Council of Tanzania.

NECTA (2024d). *Candidates' Item Response Analysis Report for a Standard Seven Examination (PSLC 2023) in English Language Subject*. Dar Es Salaam: The National Examination Council of Tanzania.

NECTA (2025a). *Standard Four and Form II National Assessment Report for 2024*. Dar es Salaam: National Examination Council of Tanzania.

NECTA (2025b). *Form Four National Examination Report for 2024*. Dar es Salaam: National Examination Council of Tanzania.

Neihart, M. & Ling, L. (2017). Quality Assurance in Teacher Education in Singapore. *Journal of Teacher Education in the 21st Century*. Singapore's Evolution and Innovation. 283-300.

Ngao, A.I & Xiaohong, T. (2020). Teacher Education in Tanzania: Pre-service Teachers' Preparation for the 21st Century. *Journal of Education and Practice.* 11 (11). 61-69.

Niedermeier, F. (2017*). Designing an Effective Quality Management System in Higher Education Institutions.* German: Potsdam University.

Nkala, P & Ncube, M. (2020). Institutional Structures for Student-Inclusivity in Quality Assurance Promotion in Higher Education. The Case of One University in Zimbabwe. *South African Journal of Higher Education*. 35 (4). 92-102.

Nnorom, S.U & Mezieobi, K.C. (2020). Attaining Quality Assurance in the 21st Century through Improved Teacher Education Standards. *Education Standard* 25 (5). 60-67.

Noha, E. (2013). A Framework of Student Involvement in the Quality Assurance System at the Institutional Level. *Journal of Quality Assurance in Education.* 21 (2). 162-198.

NUSE (2003). *European Students' Handbook on Quality Assurance in Higher Education*. Brussels: European Union.

Nyenya, T & Rupande, G. (2014). *The Role of Students in Quality Assurance in ODL Institutions*: The Case of Zimbabwe Open University. *International Journal in Managerial Studies and Research.* 2 (4). 19-29.

O' Lawrence, H. (2017). The Workforce for the 21st Century. *Issues in Information Science and Technology*. 4. 67-85.

Ogondiek, M. (2024). Formative Assessment Practices and Their Effects on Employability Skills of Vocational Students in Tanzania. *Journal of Issues and Practice in Education.* 16 (Special Issues). 225-240.

Ohio Department of Education (2015). *Partnership for 21st Century Skills*. Washington, DC: Ohio Department of Education.

Ololube, N.P. (2014). School Inspection and Education Supervision: Impact on Teachers' Production and Effective Teacher Education Programmes in Nigeria. *International Journal of Scientific Research in Education*. 7 (1). 91-104.

On the Internal Consistency of a Scale: The Empirical Example of the

Oztuzcu, K., R & Balkar, B. (2021). Teachers' Accountability for Teacher Occupational Professionalism: The Effects of Accountability on Occupational Awareness with the Mediating Roles of Contribution to Organization, Emotional Labour and Personal Development. *Journal of Efficiency and Responsibility in Education and Science.* 14 (3). 167-179.

Pirzada, G, Muhammad, Y & Anis, F. (2020). Promoting 21st Century TVET Skills in Pakistan: Teachers' Perceptions. *Pakistan Social Sciences Review*. 4 (2). 986-1001. Portugal: University of Coimbra.

Principles in TVET Institutions. *Asian People Journal*, 3(1), 19-29.

Prisacariu, A. (2013). *Students' Participation in Quality Assurance*. Romania: University of Bucharest.

Ratheeswari, K. (2018). Information Communication Technology in Education. *Journal of Applied and Advanced Research*. 3 (1). 45-47.

Richey, R.C & Klein, J.D. (2010). Design and Development Research: *Methods, Strategies and Issues*. New York: Routledge.

Rosa, A.T.R & Majiarto, M. (2020). Teacher Development Potential (Creativity and Innovation) Education Management in Engineering Training, Coaching, and Writing Works through Scientific Knowledge Intensive Based on Web Research in the Industrial Revolution Society. *International Journal of Higher Education*. 9 (4). 161-168.

Rudragoudar, P. A. (2014). Impact of Total Quality Management (TQM) in Education. *An International Journal in Arts, Commerce, Education & Social Sciences.* III (1). 37-39.

Ryan, P. (2015). Quality Assurance in Higher Education: A Review of Literature. *Higher Learning Research and Communication Journal.* 5 (4).

Saidi, A. (2020). Enhancing Academic Success through the Involvement of Students in Quality Assurance and Promotion in Higher Education: A Synopsis. *South African Journal of Higher Education.* 34 (5) 1-19.

Saleh, A., Zaman, S. & Anjalin, U. (2016). Improving Total Quality Management in Education: Compatibility and Challenges. *Open Journal of Social Sciences. Scientific Research Publishing.* IV. 207-217.

Sallis, E. (2020). Total Quality Management in Education. 3rd Edition. London: Taylor and Francis.

Sanyal, B.C. (2013). *Quality Assurance of Teacher Education in Africa*. Addis Ababa: UNESCO International Institute for Capacity Building in Africa.

Schleicher, A. (2011). *Building a High-Quality Teaching Profession*: Lessons from Around the World. OECD Publishing.

Scott, E.A. (2018). *Students' Involvement in the Quality Assurance Processes in Higher Education: Perception of Students, Teachers, and Managers*: A Thesis Submitted in Partial Fulfilment of the Requirement of the Institute of Education, the University of London for the Degree of Doctor in Education: London. *Secondary Education Examination* (CSEE 2023) in the Mathematics

Senjiro, U & Lupeja, T. (2023a). The Influence of Formative Assessment Practices in Promoting 21st-Century Skills Development among Secondary School

Students in Tanzania. *International Journal of Research Studies in Education.* 12 (6). 1-6.

Senjiro, U & Lupeja, T. (2023b). The Development of 21st Century Skills to Secondary School Students in Tanzania. How Competent are the Teachers for the Task? *International Journal of Education and Social Sciences Research*. 6 (1) 107-126.

Shahanga, G & Kasambala, M. (2023). Work-integrated Learning for Employability Skills Development: Current Practices and Prospects in Tanzania Business Training Institutions. *African Journal of Accountancy and Social Science Studies.* 5 (2). 100-112.

Shahanga, G & Kasambala, M. (2024). Examiners' Feedback Reports and Their Impact on Improving Mathematics Performance in Tanzania Secondary Schools: *Journal of Issues and Practice in Education.* Vol 16 (Special Issue). 301-319.

Shahanga, G., Kigobe, J. & Ogondiek, M. (2021). Students' Involvement in Quality Assurance Processes: Current Practices in Teacher Colleges in Tanzania. *Global Journal of Educational Research and Management. 1* (3). 130-144.

Shahanga, G., Kigobe, J. & Ogondiek, M. (2023). Student Teachers' Involvement in Internal Quality Assurance Processes and Its Impact on 21st Century Skills in Tanzania Teacher Colleges: *Journal of Issues and Practice in Education*. Vol. 12(2). Page 153-166.

Shahanga, G., Ogondiek, M & Mmbaga, F. (2021). The Paradigm Shift from School Inspection to School Quality Assurance: Perceptions of the In-Service Trained

Teachers on the Achievements Made: *Asian Journal of Education and Social Studies.* 24 (4). 59-67.

Shrestha, N. (2020). Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8 (2), 39-42.

Singh, C.K.S., Ong, E.T., Mohtar, T.M.T., Singh, T.S.M., & Mostafa, N.A. (2020). Quality Teachers of the 21st Century: An Overview of Theories and Practice. *International Journal of Innovation, Creativity and Change*. 13 (1). 1481-1494.

South African Development Community (2020). *South African Development Community Vision 2050*. Gaborone: South African Development Community.

Stalmeijer, R., Whittingham, J., Grave, W & Dolmans, D. (2016). *Assessment and Evaluation in Higher Education*. Routledge Taylor & Francis.

Strydom, F, & Loots, S. (2020). The Students' Voice as Contributor to Quality Education through Institutional Design. *South African Journal of Higher Education.* 34 (5) 20-34.

SUA (2017). *Quality Assurance Policy*. Morogoro: Sokoine University of Agriculture.subject. Dar Es Salaam: The National Examination Council of Tanzania.

Tandika, P., B. (2020). Instructional Materials and the Development of Young Children's 21st Century Skills: Perspectives from Early Educators in Ukerewe, Tanzania. *Journal of Research in Childhood Education*. 36 (1). 31-45.

Tican, C & Deniz, S. (2018). Pre-Service Teachers' Opinions about the Use of 21st Century Learners and Teachers' Skills. *European Journal of Educational Research.* 8 (1). 181-197.

Tohir, M., Maswar, M., Mukhlis, M., Sardjono, W & Selviyauty, L. (2020). Prospective Teachers' Expectations of Students' Critical Thinking Process in Solving Mathematical Problems Based on Facione Stages. *Journal of Physics*: Conference Series. 1-12.

Turhan, G.M & Demirci, I.A. (2021). What are the 21st Century Skills for Pre-Service Science and Mathematics Teachers: Discussion in the Context of Defined 21st Century Skills and Education Curriculum. *Journal of Educational Issues*. 7 (1). 92-112.

UNESCO (2005). *Tools for Quality Assurance of Education for Democratic Citizenship in Schools.* UNESCO: Paris.

UNESCO (2018). *School Inspection Challenges*: Evidence from Six Countries. Paris: Global Education Monitoring Report.

UNICEF (2018). *Education Budget Brief in Tanzania*: New York: United Nations Children's Fund.

United Nations (2022). *The Sustainable Development Goals Report*: New York: United Nations.

URT (2019). *Education Sector Performance Report 2018/2019*: Tanzania Mainland. Dodoma: United Republic of Tanzania.

URT (2021). *National Five-Year Development Plan 2021/22-2025/26.* Dodoma: United Republic of Tanzania.

URT (2024). *Tanzania Development Vision 2050 Draft*: Dodoma: Planning Commission.

Utomo, C.B., Kurniawan, G.F & Ria, T.N (2021). History Teacher Initiative Improves the Quality of Digital-Based Learning in the COVID-19 Pandemic.

Proceedings of the 6th International Conference on Education and Social Sciences (ICESS 2021). *Journal of Advances in Social Sciences, Education and Humanity Research*. 578. 56-60.

Van Den Akker, J. (1999). *Principles and Methods of Developmental Research*. In Design Approaches and Tools in Education and Training. 1-14. Kluwer Academic Publishers.

Van Den Akker, J., Bannan, B., Kelly, A. E., Nie Veen, N & Plomp (2007). *Introduction to Educational Design Research*. Proceedings of the Seminar Conducted at the East China Normal University, Shanghai. November 23-26, 2027, The Netherlands Institute of Curriculum Development.

Van Den Akker, J., Grave Meijer, K., MC Kenney, S & Nie Veen, N. (2024). *Educational Design Research*. Routledge, Taylor & Francis. London and New York.

Van Zyl, H.M, Burger, Y & Carstens, L. (2020). Curriculum Design as an Enabler of Student Involvement and Success in Higher Education. *South African Journal of Higher Education*. 34 (5): 177-191.

Verworn, B & Herstatt, C. (2002). *The Innovation Process*: An Introduction to Process Models. Working Paper No. 12. Institute for Technology and Innovation: Hamburg University of Technology.

Vojislav, S., Vlajic, S., Milic, M & Ognjarovic, M. (2011). *Guidelines for Framework Development Process*. Conference: Software Engineering Conference in Russia. (CEE-SECR). 7TH Central and Eastern Europe.

Warren, L. (2021). The Importance of Teachers' Leadership Skills in the Classroom. *Education Journal* 10 (1). 8-15.

Whitby, K. (2010). *School Inspection: Recent Experiences in High-Performing Education Systems.* The United Kingdom: Literature Review. CfBT Education Trust.

World Bank (2018). What do teachers know and do, and does it matter? *Evidence from Primary Schools on African Education*. Policy Research Working Paper 7956 Background Paper to the 2018 World Development Report. Development Research Group, African.

Yahaya, M.L., Oyediran, O.S and John, I. B. (2019). Is there any Need for Theory in Research?. *International Research Journal of Engineering & Technology* (IRJET). 6 (3). 845-854.

Yamane, T. (1967). *Statistics: An Introductory Analysis*, 2nd Ed. New York.

Zamora, J.T & Zamora, J.J.M. (2022). 21st Century Teaching Skills and Teaching Standards: Competence Level of Teachers. *International Journal of Learning, Teaching and Educational Research*. 21 (5). 220-238.

APPENDICES

APPENDIX I:

Questionnaire for Management Teams in Teacher Colleges

PART I: Introduction

Dear respondent, I am Geofrey Shahanga, a PhD student from the Open University of Tanzania. I am collecting data for an academic project on *Student Teachers' Involvement in Internal Quality Assurance Processes: A Model Development for Teacher Colleges.* I request that you participate in this study by responding to the questions related to my study. The information you provide will be used for academic purposes only, and your identity will not be included throughout this work. You are warmly welcome.

PART II: General Information

(Put a Tick (√) where Appropriate)

A: Sex	**M**	**F**	**B: Age (Years)**	30-35	36-40	41-45	46-50	Above 50

C: Education Level	Bachelor Degree	Postgraduate Diploma	Masters	PhD

D: Year of Study	First Year	Second Year	Third Year

Need assessment for a model of student teachers' involvement in internal quality assurance processes in teacher colleges.						
Put a tick (√) in an appropriate box to indicate the extent of your agreement about the **KEY: 1=Strongly Disagree, 2=Disagree 3=Moderately Agree, 4=Agree, 5=Strongly Agree**		1	2	3	4	5
E1	The need for improving the quality of fee-free basic education					
E2	The need to safeguard student teachers' needs and interests					
E3	The paradigm shift from teacher to student-centred learning					

E4	The need for quality improvement feedback from beneficiary stakeholders					
E5	The need for 21st-century skills among student teachers					
E6	The need for employability skills among student teachers					
E7	The need for quality assurance competencies among student teachers					
F. Enablers for a model of student teachers' involvement in internal quality assurance processes in Teacher Colleges						
Put a tick (√) in an appropriate box to indicate the extent of your agreement. KEY: 1=Strongly Disagree, 2=Disagree,3=Moderately Agree, 4=Agree, 5=Strongly Agree		1	2	3	4	5
F1	Quality assurance framework review to accommodate student teachers in the process					
F2	Teacher education curriculum review to incorporate quality assurance competencies					
F3	Training management and tutors on student teachers' involvement in internal quality assurance processes					
F4	Installation of free internet services to support student teachers' model of involvement					
F5	Coaching and mentoring student teachers on quality assurance processes					
G. The effectiveness of UCHUKI Model on the quality of teacher education						
Put a tick (√) in an appropriate box to indicate the extent of your agreement. KEY: 1=Strongly Disagree, 2=Disagree,3=Moderately Agree, 4=Agree, 5=Strongly Agree		1	2	3	4	5
The effectiveness of the UCHUKI Model on the quality of teacher education						
G1	The quality of student teachers' achievements					
G2	The quality of teaching and learning processes					
G3	The quality of the teacher education curriculum					
G4	The quality of college leadership and management					
G5	The quality of the college environment, welfare, safety, and health					
G6	The quality of community engagement in teacher education					

Thank you for your Participation in this study

APPENDIX II

Interview Guide for Principals and School Quality Assurance Officers

A. Introduction

Dear respondent, I am Geofrey Shahanga a PhD student from the Open University of Tanzania. I am collecting data for an academic project on Student Teachers' Involvement in Internal Quality Assurance Processes: A Model Development for Tanzania Teacher Colleges. I request that you participate in this study by responding to the questions related to my study. The information you provide will be used for academic purposes only and your identity will not be included throughout this work. You are warmly welcome.

B. Demographic information:

i) Sex…ii) Education level……...iii) Work Experiences……...iv) Position……

C. Interview questions

i) Does the current quality assurance system prepare the quality workforce for promoting sustainable development?

ii) Should student teachers be involved in internal quality assurance processes?

iii) Does the new paradigm require student teachers' involvement in the internal quality assurance process in your teacher college?

iv) Do teacher colleges require feedback from student teachers?

v) Can student teachers' involvement in internal quality assurance processes develop their 21st-century skills?

vi) Can student teachers' involvement in internal quality assurance processes enhance their 21st-century skills?

vii) Do student teachers need quality assurance competencies for their careers?

viii) Does the available quality assurance framework accommodate student teachers in internal quality assurance processes?

ix) Are the tutors and college management team competent to enhance student teachers' involvement in internal quality assurance processes?

x) Do the teacher colleges provide free internet services?

xi) Can student teachers perform quality assurance functions diligently?

Thank You very much for Participating in this Study

APPENDIX III:

Focus Group Discussion Guide for Student Teachers

A. Introduction

Dear respondent, I am Geofrey Shahanga a PhD student from the Open University of Tanzania. I am collecting data for an academic project on Student Teachers' Involvement in Internal Quality Assurance Processes: A Model Development for Tanzania Teacher Colleges. I request you to participate in this study's focus group discussions by responding to the questions related to my study. The information you provide will be used for academic purposes only and your identity will not be included throughout this work. You are warmly welcome.

B. Demographic information:

i) Sex……ii) Age……....iii) Programme of Study…….……..

C. Discussion questions

i) In your experience, in teaching college, are you aware of quality assurance processes?

ii) Do you think that student teachers should be involved in the internal quality assurance processes in teacher colleges?

iii) As a student teacher, how do you participate in the internal quality assurance process in your teaching college?

iv) In your opinion, is there a model for involving you as a student teacher in internal quality assurance processes?

v) If there is no model, why there should be such a model for student teachers' involvement in internal quality assurance processes?

vi) What do you consider as the enablers for a model of student teachers' involvement in internal quality assurance processes in teacher colleges?

vii) How effective is the UCHUKI model in enhancing the quality of teacher education?

Thank You very much for Participating in this Study

APPENDIX IV:

Research Budget

S/N	BUDGET ITEM	FUND IN USD	FUND IN TSH
1	Stationery Resources and Consumable Materials	397	913,100
2	Laptop, Projector, and Camera	820	1,885,500
3	Transport to and from the field	820	1,886,000
4	Meals and Accommodation for field days	990	2,277,000
5	Research tools preparation and testing	375	862,500
6	Model development and trials	450	1,035,000
7	Model hosting	573	1,317,900
	Total Budget	**4,425**	**10,177,000**

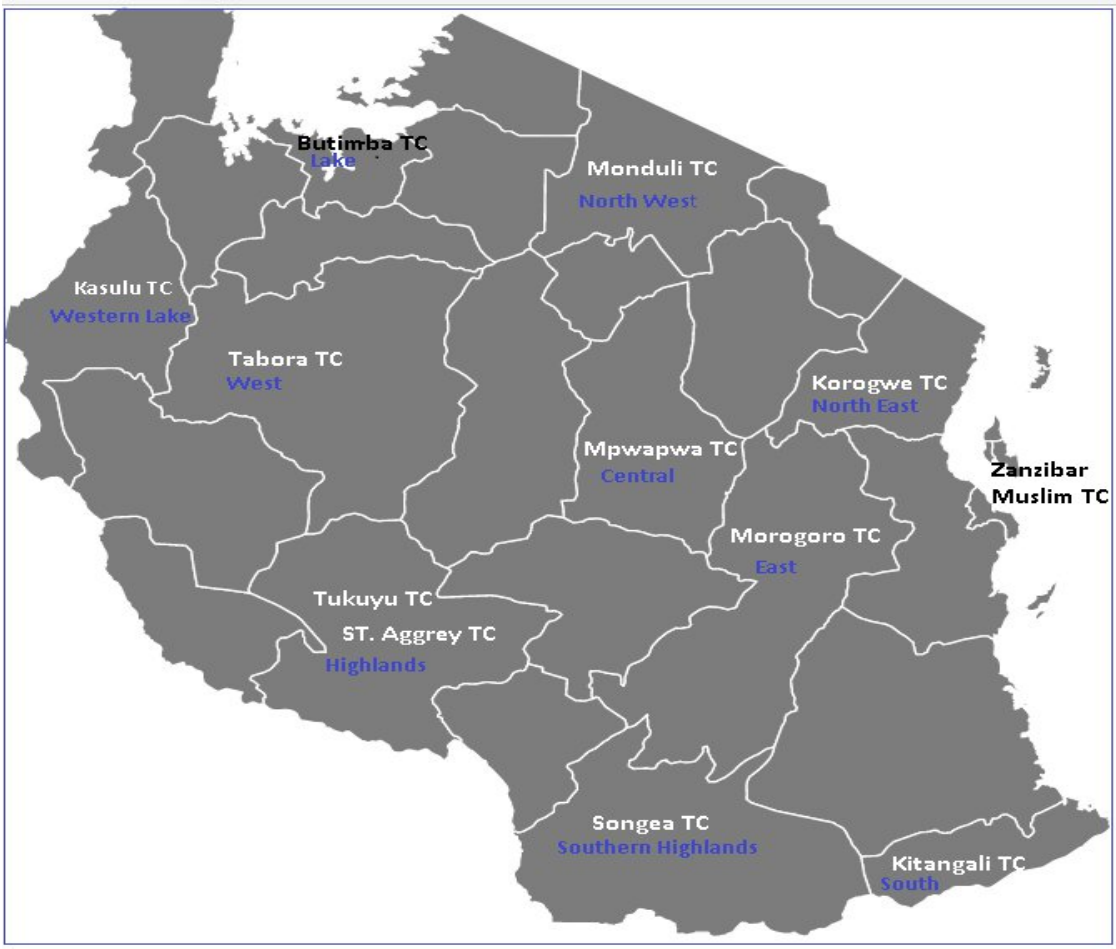
Currency conversion rate: 1 United States Dollar for 2,300 Tanzanian Shilling

APPENDIX V

Research Schedule

S/N	Duration	Activity	Expected Outcome
1	October to Dec. 2017	Writing concept note	Concept note
2	January to June 2018	Writing Chapter One	Chapter One
3	July to December 2018	Reviewing Literature	Chapter Two
4	January to June. 2019	Writing Chapter Three	Chapter Three
5	July to December 2020	1st Presentation	Improved Proposal
6	January to June 2021	Tools Preparation	Prepared Tools
7	July to December 2021	Pilot Study	Data and improved tools
8	January to June 2022	Publishing paper 1	Published Paper
9	July to December 2022	Publishing paper 2	Published Paper
10	January to June, 2023	Data Collection	Collected Data
11	July to September 2023	Data analysis	Analyzed Data
12	Sept to December 2023	OUT Conference	Presented Paper
13	January to March 2024	Publishing Paper 3	Published Paper
14	April to Dec 2024	Writing thesis	Presented Thesis
15	Jan to June 2025	Viva Presentation	Viva Defense
16	July to November	Publishing Paper 4	Published Paper
17	November to Dec. 2025	Graduation	PhD Award

Figure 3.4: Study Area by Teacher Colleges and their Educational Zone



THE OPEN UNIVERSITY OF TANZANIA
DIRECTORATE OF POSTGRADUATE STUDIES

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Our Ref: PG2017995259 3rd January 2022

Permanent Secretary,
Ministry of Education, Science and Technology,
P.O.Box 10,
DODOMA.

RE: **RESEARCH CLEARANCE FOR GEOFREY JOHN SHAHANGA**

The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania's mission is to generate and apply knowledge through research.

To facilitate and to simplify the research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania.

With this brief background, the purpose of this letter is to introduce to you Mr. SHAHANGA, Geofrey John Reg No: PG2017995259 pursuing a Doctor of Philosophy (PhD) in Education. We hereby grant this clearance to conduct research titled "Student's Involvement in Internal Quality Assurance Processes: A Model Development for Teacher Colleges in Tanzania". He will collect his data in Teacher Colleges and School Quality Assurance Offices from 4th February 2022 to 30th August 2022.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice-Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820.Lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours,
THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S.Bushesha

DIRECTOR OF POSTGRADUATE STUDIES

UNITED REPUBLIC OF TANZANIA
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24th January 2022

Model hotel at SDA E'zone 20x325 morogoro

The Vice Chancellor,
Open University of Tanzania,
P.O.Box 23409,
DAR ES SALAAM.

KNY: MTHIBITI WA
UBORA WA SHULE
KANDA YA MASHARIKI
S. L. P. 325
MOROGORO

Ag DZCSDAO
9/4/2024

RE: RESEARCH CLEARANCE

Kindly refer to the above heading.

2. Reference is made to your letter dated 23rd January 2022 requesting for research clearance.

3. The Ministry of Education, Science and Technology has received the said letter, and permission is hereby granted to Mr. SHAHANGA, Geofrey John (PhD Candidate) to conduct his research titled "Student's Involvement in Internal Quality Assurance Process: A Model Development for Teacher Colleges in Tanzania."

4. The Candidate is advised to Schedule appointment with the relevant Teacher Colleges Management a week prior to the commencement of the exercise.

5. Thank you for your cooperation.

Dr. Lyabwene M. Mtahabwa
For PERMANENT SECRETARY

Cc: Mr. SHAHANGA, Geofrey John,
Open University of Tanzania,
P.O.Box 23409,
DAR ES SALAAM.

Model Tested At Marangu T.C
24-04-2024
MKUU WA CHUO CHA UALIMU MARANGU MOSHI

Model tested at Tabora TC
MKUU WA CHUO CHA UALIMU TABORA
16/04/2024

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

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24th January 2022

The Vice Chancellor,
Open University of Tanzania,
P.O.Box 23409,
DAR ES SALAAM.

Model tested at Morogoro TC
N. Magubika
Vice Principal
09/04/2024
FOR: PRINCIPAL MOROGORO TEACHERS' COLLEGE P.O. BOX 491, MOROGORO

PATANDI TEACHERS' COLLEGE RECEIVED Date: 24/04/2024 P.O.BOX DULUTI ARUSHA

RE: RESEARCH CLEARANCE

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For PERMANENT SECRETARY

The model has been tested
PRINCIPAL BUTIMBA TEACHERS' COLLEGE P. O. Box 1411 MWANZA
29/4/2024

Cc: Mr. SHAHANGA, Geofrey John,
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P.O.Box 23409,
DAR ES SALAAM.

Model tasted at Korogwe
23/04/2024
For: PRINCIPAL

PUBLISHED PAPERS

Student Teachers' Involvement in Internal Quality Assurance Processes and its Impact on 21st Century Skills in Tanzania Teacher Colleges

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ABSTRACT

The study sought to evaluate the impact of student teachers' involvement in Teacher Colleges' quality assurance processes on 21st century skills in Tanzania. The study was guided by students' involvement theory. The main was pragmatism paradigm and students' involvement was adopted as a theoretical framework. Data were gathered through questionnaires and interviews. Results were presented in mean, standard deviation, and inferential statistic measures. The participants felt crucial for student teachers to be adequately involved in all the six quality assurance domains. This involvement positively and significantly predicted the development of the most of 21st century skills. The study concludes that urgent need to involve student teachers in internal quality assurance processes is an inevitable attempt for the development of 21st century skills required for their teaching profession. Other researchers may develop a scale to measure the 21st century skills among student teachers in Tanzanian context.

Keywords: Student teachers Involvement, Teacher Colleges, 21st Century Skill, Internal Quality Assurance, Quality Assurance Domains.

INTRODUCTION

There is a dire need for developing 21st century skills to student teachers through their direct involvement in internal quality assurance processes. This is because the global economy requires the workforce with 21st century skills to address diverse social, economic and political challenges (Singh, Mohtar, Singh & Mostafa, 2020). The skills include: team work and collaboration, critical thinking and problem solving, creativity and innovations, communication, information media and digital literacy, social and cross cutting issues, flexibility and adaptability, productivity and accountability, as well as leadership and responsibility skills (Hon, Muthukrishnan, Choo, Kam & Singh, 2022). The aforementioned skills are a catalyst for promoting the Sustainable Development Goals-2030, African Union Agenda-2063, South African Development Community Vision-2050, East African Community Vision-20250, as well as the Tanzania Development Vision-2025 (United Nations, 2016; African Union, 2015; SADC, 2020; EAC, 2015). This means that the 21st skills are required for achieving both national, regional, and global sustainable development. Therefore, teachers are required to possess the identified skills in order to be able to transform their students, because teachers teach what they know (World Bank, 2018; Cretu, 2017; MoEST, 2019).

Empirical evidence, however, indicates that many in-service teachers in Tanzania have limited 21st century skills. As a result, these teachers are less capable of planning, assessing and or developing such skills to their students (Senjiro & Lupeja, 2023a; Senjiro & Lupeja, 2023b). The assumption here is that adequate integration of these skills in pre-service teacher education programmes is mandatory (Mgaiwa, 2018; Namamba & Rao, 2017; Katilia, 2015). Since 21st century skills are practical oriented, enhancing student teachers' direct involvement in internal quality assurance is important (Logermann, 2014; Andleeb & Ahmad, 2020)). The genesis of student teachers' involvement in internal quality assurance processes can be traced back to the Bologna declaration of 1999, where Ministers for education from European countries signed an agreement geared towards improving the quality of higher education in terms of credit and labour transfer (House of Commons, 2007). Ever since then, many education institutions across the world involve their students in quality assurance processes at different levels

(Degtijarjova, Lapina & Freidenfelds, 2018; Fideli, 2016; Noha, 2013; Hickman & Akdere, 2017; Logermann, 2014; Sayal, 2013; Nyenya & Rupande, 2014). However, the involvement of student teachers in quality assurance processes, particularly in relation to the 21st century skills has scarcely been established in literature. Similarly, the lack of specific framework for student teachers' involvement in internal quality assurance processes compromise their ability to integrate the 21st century skills in their classroom teaching practices (Shahanga, Kigobe & Ogondiek, 2021; Shahanga, Ogondiek & Mmbaga, 2021). The present study, therefore, explored domains for student teachers' involvement in internal quality assurance processes towards 21st century skills. The study adopted a students' involvement theory developed by Alexander Astin (1984). The theory holds that, students' involvement is the amount of physical and psychological energy which students devote to the academic experiences. The assumption of this theory is that physical and psychological energy devoted by students' involvement in academic activities improve their learning outcomes (Nkala & Ncube, 2020). The overall relationships of these variables are illustrated in the below conceptual framework (See figure 1).

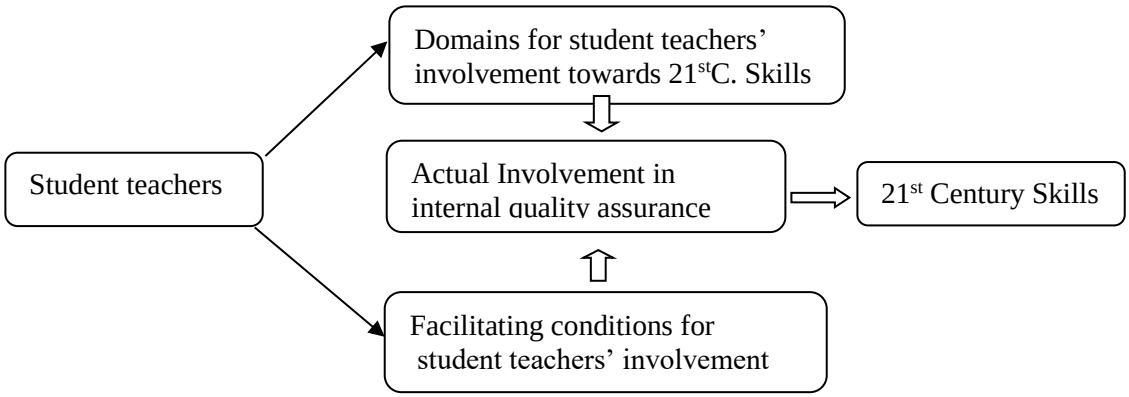

Figure 1: Conceptual Framework Developed

Methodology

The study employed a mixed-methods research in order to utilize both qualitative as dominant and quantitative methods (Creswell & Plan Clak, 2018). Around 379 respondents were selected through cluster sampling technique from 12 educational zones of Tanzania. The sample was calculated

using Yamane's (1967) formula from the estimated population of 25,417. There were 360 student teachers, seven college principals, and 12 quality assurance officers. Structured questionnaires and face-to-face interviews were used as data gathering tools. Data were then coded and subjected into statistical package for social sciences (SPSS Version 25) and analyzed using descriptive statistics, content analysis techniques and multiple regression model. The results were presented in mean, standard deviation, coefficients, and verbatim quotes.

Model Specifications

$$SQP = \beta_0 + \beta_1 TCS + \beta_2 CPS + \beta_3 CIS + \beta_4 CDS + \beta_5 SCS + \beta_6 FAS + \beta_7 LAS + \acute{\varepsilon}$$

Whereby:

SQP= Student teachers' involvement in internal quality assurance processes

TCS = Team work and collaboration skills

CPS= Critical thinking and problem-solving skills

CIS = Creativity and innovation skills

CDS= Communication and digital literacy skills

SCS= Social and cross cutting issues skills

FAS= Flexibility and adaptability skills

LAS= Leadership and accountability skills

β_0, β_1, β_2, β_3, β_4, β_5, β_6, β_7 = Coefficients of variables used in the study

$\acute{\varepsilon}$= Error term.

Results and Discussion

Domains for Student Teachers' Involvement in Internal Quality Assurance Processes towards 21st Century Skills

Student teachers through a five Likert scale questionnaire, provided their responses about the domains for their involvement in internal quality assurance processes towards 21st century skills. The results are presented in table 1.

Table 1: Descriptive Statistics

Internal quality assurance domains	Mini	Max	Mean	Std. Deviation
The quality of learners' achievement	1	5	4.82	.689
The quality of teaching for good learning and assessment	1	5	4.25	.772
The quality of the curriculum in meeting learners' needs	1	5	3.53	.754
The quality of leadership and management of people and resources	1	5	2.19	.975
The quality of environment in terms of welfare, health, and safety	1	5	4.03	.797
The quality of community engagement	1	5	2.04	.711

Source Field Data (January, 2023)

As presented in table 1, student teachers were enthusiastic to be involved in the evaluation processes of all the six quality assurance domains as described in the school quality assurance framework (MoEST, 2017). However, their responses varied across all the six quality assurance domains. The student teachers indicated the highest interests of being involved in the quality of learners' achievement (mean of 4.82), the quality of teaching for learning with (mean of 4.25), as well as the quality of learning environment (mean of 4.03). Student teachers demonstrated the lowest interest on the quality of leadership for people and resources (mean of 2.19), and community engagement (mean of 2.04). The college principals and school quality assurance officers interviewed provide these responses:

> *Student teachers will perform quality assurance functions alongside teaching. Therefore, they should be involved in all the school quality assurance domains* (Principal, College D, May, 2023).

> *As the intended beneficiaries to develop 21st century skills, student teachers require adequate opportunities for interactions among themselves and with other stakeholders. Therefore, their involvement in different quality assurance domains is beneficial* (School quality assurance officer, Zonal 1, May, 2023).

The student teachers, principals, and school quality assurance officers emphasized about the need for involving student teachers in internal quality assurance processes. These findings concur with previous studies conducted in different countries (Andleeb, 2020; Strydom & Roots, 2020; Lottering, 2020; Nkala & Ncube, 2020). However, the study by Essel and Boakye-Yiadom (2018) found that students in Ghana rarely involved in internal quality assurance processes.

The Influence of Student Teachers' Involvement in Internal Quality Assurance Processes on 21st Century Skills Development

Statistical tests were conducted in order to evaluate the influence of student teachers' involvement in internal quality assurance processes on 21st century skills development. The tests included correlation and regression analysis. The results are presented in tables 2 and 3 respectively.

The Multicollinearity Tests

The existence of inter-correlation between and among the explanatory variables, as well as between dependent and independent variables were investigated using multicollinearity test. Variance Inflation Factor (VIF) for each explanatory variable is less than ten, and tolerance (1/VIF) is above 0.1 (See Table 2). Principally, since the VIF is less than 10 and tolerance is greater than 0.1, therefore, all the explanatory variables used in this study were free from multicollinearity (Shrestha, 2020).

Table 2: Multicollinearity Table

Variables	**VIF**	**1/VIF**
Team work and collaboration skills	2.000	0.5
Critical thinking and problem-solving skills	1.981	0.5
Creativity and innovation skills	1.451	0.6
Communication and digital literacy skills	1.021	0.9
Social and cross cutting issues skills	1.046	0.9
Flexibility and adaptability skills	1.224	0.8
Leadership and accountability skills	1.63	0.6
Mean (VIF, 1/VIF)	**1.5**	**0.7**

Model of Fit Results

The results of multiple regression model used in this study was statistically significant and suitable for the study. The R-squared was 87% and adjusted R-Squared was 86.5%. This means that 86.5% of the independent variables explained the changes in dependent variable, and only 13.5% of other variables were not used. The model test results are presented in table 3.

Table 3. Regression Model Test Result

Diagnostic Test	
R-Squared	87%
Adjusted R-squared	86.5%
Reliability Test	
Cronbach's Alpha	.69

Regression Results

Student Teachers' Involvement in Internal Quality Assurance Processes and Team Work and Collaboration Skills

Findings indicate that student teachers' involvement in internal quality assurance processes significantly predicted team work and collaboration skills ($\beta = 0.082$, $p < .008$), hence the alternative hypothesis supported. The results are in line with the argument made by Singh and Nijhawan (2023) that team work and collaboration are essential skills for teachers, especially when teaching learners with diverse disabilities. Therefore, there is a need for direct involvement of student teachers in internal quality assurance processes to enable them develop ability to formulate teams and work with others towards a common goal. Currently, such practice is not available in Tanzanian pre-service teacher education.

Student Teachers' Involvement in Internal Quality Assurance Processes and Critical Thinking and Problem-Solving Skills

The study hypothesized that student teachers' involvement in internal quality assurance processes significantly predicts critical thinking and problem-solving skills. It was revealed that students' involvement in internal quality assurance processes significantly predicted critical thinking and problem-solving skills ($\beta = 0.10$, $p < .001$), hence the alternative hypothesis supported.

The results concur with a study conducted by Snyder and Snyder (2008), which established that in order to develop critical thinking and problem-solving skills, students should get opportunity to practice. Therefore, student teachers' involvement in internal quality assurance processes is required to offer them such opportunity.

Student Teachers' Involvement in Internal Quality Assurance Processes and Creativity and Innovation Skills

The study hypothesized that, student teachers' involvement in internal quality assurance processes significantly predicts creativity and innovation skills. In this study, students' involvement in internal quality assurance processes significantly predicted creativity and innovation skills ($\beta = 0.89$, $p < .000$), hence the alternative hypothesis supported. The results concur with a study conducted by Glassman and Openggart (2016) which revealed that innovation and creativity can be developed to students through working with other students. Internal quality assurance processes are necessary to enable student teachers work with their fellow students, tutors and management in addressing different challenges.

Student Teachers' Involvement in Internal Quality Assurance Processes and Communication and Digital Literacy Skills

The study hypothesized that student teachers' involvement in internal quality assurance processes significantly predicts communication and digital literacy skills. Statistical analysis indicated that students' involvement in internal quality assurance processes significantly predicted communication and digital literacy skills ($\beta = 0.024$, $p < .077$), hence an alternative hypothesis supported. The results are supported by a study conducted by Makhzoum, Berri and Ajamiz (2021), which insist on the use of digital media in communication. Therefore, internal quality assurance processes are highly needed to create opportunities for student teachers to share ideas and information about using different digital and non-digital in developing such skills.

Student Teachers' Involvement in Internal Quality Assurance Processes and Social and Cross Cutting Issues Skills

The study hypothesized that student teachers' involvement in internal quality assurance processes significantly predict social and crosscutting issues skills.

It was found that, students' involvement in internal quality assurance processes insignificantly predicted social and cross cutting issues skills ($\beta = 0.020$, $p < .319$), hence the alternative hypothesis was rejected. The findings deviate from Andrade (2020) who encouraged about the acquisition of social and cross cutting issues through different strategies. This means that student teachers do not regard social and cross-cutting issues as essential skills for their professional development.

Student Teachers' Involvement in Internal Quality Assurance Processes and Flexibility and Adaptability Skills

The study hypothesized that, student teachers' involvement in internal quality assurance processes significantly predict flexibility and adaptability skills. It was found that, students' involvement in internal quality assurance processes significantly predicted flexibility and adaptability skills ($\beta = 0.050$, $p < .032$), hence an alternative hypothesis supported. The results are supported Andres et al (2021) who emphasise teachers to be prepared in order to serve in unpredicted environment. Therefore, student teachers' involvement in internal quality assurance processes is a mechanism to make them adaptive and flexible when sharing different issues affecting the quality of their education.

Student Teachers' Involvement in Internal Quality Assurance Processes and Leadership and Accountability Skills

One of the hypotheses behind this study was that student teachers' involvement in internal quality assurance processes significantly predict leadership and accountability skills. Findings revealed that students' involvement in internal quality assurance processes insignificantly predicted leadership and accountability skills ($\beta = 0.07$, $p < .142$), hence the alternative hypothesis was rejected. The results differ from Grigoropoulos (2020) who argues that developing leadership skills is crucial to student teachers for making them more accountable and responsible in different tasks. It was evident that student teachers' involvement in internal quality assurance processes impact positively and significantly their development of 21st century skills. These findings relate to different studies (Turhan & Demirci, 2021; Hoon, Muthukrish Choo & Singh, 2022; Alzahrani & Nor, 2022).

These studies, however, seldom indicate how student teachers develop the 21st century skills.

Table 4: Regression Table

Variables	Coefficients	t-statistic	Sig	Decision
Constant	**.101**	**.804**	**.422**	
Team work and collaboration skills	. 082	. 2692	.008	Supported
Critical thinking and problem-solving skills	.100	3.258	.001	Supported
Creativity and innovation skills	.897	31.315	.000	Supported
Communication and digital literacy skills	.024	1.354	.077	Rejected
Social and cross cutting issues skills	. 020	. 999	.319	Rejected
Flexibility and adaptability skills	.050	2.151	.032	Supported
Leadership and accountability skills	.072	1.534	.142	Rejected

Thus, the multiple regression model of this study is;
SQP=0.101TCS+0.082CPS+0.100CIS+0.897CDS+0.024SCS+ 0.020FAS+0.050+0.072LAS.

Conclusion and Recommendations

The study found that developing the 21st century skills require active engagement of student teachers in order to help them grow professionally. Student teachers, college principals and school quality assurance officers desire for student teachers to be involved adequately in all the six quality assurance domains and their involvement positively and significantly may influence the development of the most of 21st century skills. Therefore, different stakeholders and institutions should enhance student teachers' involvement in internal quality assurance processes. Developing scale to measure the 21st century skills among student teachers in Tanzania is warranted

REFERENCES

African Union. (2015). *African development agenda 2063*. African Union Commission.

Andleeb, S. & Ahmad, J. (2020). Institutional internal quality assurance practices and students' satisfaction. *Journal of Public Value and Administrative Insight,3*(3). 118-144.

Andrade, M.S. (2020). Cross-cutting skills: Strategies for teaching and learning. *Higher Education Pedagogies5*(1), 165-181.

Andres, L.M., Cruz, J.B.D., Gonzaga, M.P., Rodriguz, I.S, Sanchez, J.A & Ortiz, A.F. (2021). Teachers' level of adaptability and performance: Their response to the rapidly transforming world. *International Journal of English Literature and Social Sciences,6*(3), 326-331.

Attou, A.B., Ciddi, M.L & Unal, M. (2022). Prospective social studies' teachers' perspectives of 21st century skills efficacy. *Proceeding of International Conference on Studies in Education and Social Sciences*. Nov. 10-13, 659-674.

Creswell, J.W. & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd Edition). SAGE Publishers.

Cretu, D. (2017). Fostering 21st century skills for future teachers. *The European Proceedings of Social and Behavioural Sciences. Educ World 2016, 7th International Conference.*

Degtijarjova, I., Lapina, L. & Freidenfelds, D. (2018). *Students as stakeholder:*

"Voice of customer" in higher education quality development. *Marketing and Management of Innovations, 1(2), 388-398*

Doherty, G. (2012). *Quality assurance in education*. Intech University.

East African Community. (2015). *East African Development Vision 2050*. Arusha: East African Community.

Essel, H.B., Boakye-Yiadom, M., & Kyeremeh, F.A (2018). Assessing students' experiences of internal quality assurance practices in selected private higher education institutions. *International Journal of Sciences and Research, 7*(1), 1-10

Fideli, L. (2016). *Comparative study on students' involvement in quality assurance processes*. The European Students Union.

Glassman, A. M & Opengart, R. (2016). Teaching innovation and creativity: Turning theory into practice. *Journal of International Business Education, 11*, 113-132.

Grigoropoulos, J.E. (2020). How can manifestoing leadership skills infused with ethos, empathy and compassion better prepare students to assume

leadership roles? *International Journal of Progressive Education*, *16*(1). 54-66.

Hickman, L., & Akdere, M. (2017). *Stakeholder theory: Implications for total quality management in higher education.* The 4th International Conference on Learn Six Sigma for Higher Education. 25-26 May, 2017.

House of Commons. (2007). *House of commons education and skills committee*: *The Bologna Process Fourth Report of Session 2006-07*. House of Commons.

Hoon, T.S., Muthukrishnan, P., Choo., K.A., Kam, N.K.M and Singh, P. (2022). Pre-service teachers' motivation and adoption of 21st century skills. *Computer Assisted Language Learning Electronic Journal*, *23*(4), 205-218.

Katilia, D.M. (2015). Teacher education preparation program for the 21st Century. *Journal of Education and Practice,6*(24), 57-64

Logermann, F. (2014). *Students as stakeholders in the policy context of the European standards guidelines for quality assurance in higher institutions*: *A Comparative study of the Dutch and German higher education institutions* (Master Thesis), Universiteit Twente.

Lottering, R.A. (2020). Using social media to enhance student-engagement and quality. *South African Journal of Higher Education*, *35*(4). 92-102.

Makhzoum, V., Berri, A & Ajami, Z. (2021). The role of teachers' digital communication skills in the success of distance learning in private universities. *Middle EasternJournal of Research in Education and Social Sciences*, *2*(1), 16-30.

Mgaiwa, S. (2018). Emerging fundamental issues of teacher education in Tanzania: A reflection of practices. *International Journal of Educational Process*, *7*, 246-264.

MoEST. (2017). *Basic, secondary and teacher education quality assurance framework*. Ministry of Education, Science and Technology.

MoEST. (2019). *National Framework for Basic and Teacher Education*. Ministry of Education, Science and Technology.

Namamba, A. & Rao, C. (2017). Preparation and professional development of teacher educators in Tanzania. Current practices and prospects. *Journal of Education and Practices,8*(8).

National Audit Office of Tanzania. (2016). *A performance audit report on the system for quality control of education programs in Tanzania*: A report of the controller and audit general of the United Republic of Tanzania. National Audit Office of Tanzania.

Neihart, M. & Ling, L. (2017). Quality assurance in teacher education in Singapore. *Journal of Teacher Education in the 21st Century1*(1), 283-300.

Nkala, P & Ncube, M. (2020). Institutional structures for student-inclusivity in quality assurance promotion in higher education. The case of one University in Zimbabwe. *South African Journal of Higher Education*, *35*(4),92-102.

Mnorom, S.U. and Mezieobi, K, C. (2020). Attaining quality assurance in the 21st century through improved teacher education standards. *Education Standard*, *25*(5), 60-67.

Noha, E. (2013). A framework of student involvement in the quality assurance system at institutional level. *Journal of Quality Assurance in Education, 21*(2), 162-198.

Nyenya, T. & Rupande, G. (2014). The role of students in quality assurance in ODL institutions: The case of Zimbabwe Open University. *International Journal inManagerial Studies and Research*, *2*(4), 19-29.

SADC. (2020). *South African Development Cooperation Development Vision- 2050.* Gaborone: South African Development Cooperation.

Sanyal, B.C. (2013). *Quality assurance of teacher education in Africa*. Addis Ababa: UNESCO International Institute for Capacity Building in Africa.

Senjiro, U. & Lupeja, T. (2023b). The development of 21st century skills to secondary school students in Tanzania: How competent are they for the task? *International Journal for Education and Social Science Research*, *6*(1), 107-126.

Senjiro, U. & Lupeja, T. (2023a). The influence of formative assessment practices in promoting 21st century skills development among secondary school students in Tanzania. *International Journal of Research Studies in Education*, *12*(6), 1-6.

Shahanga, G., Ogondiek, M & Kigobe, J. (2021). Students' involvement in quality assurance processes: Current practices in each college in Tanzania. *Global Journal of Educational Research and Management*, 1 (3), 130-144.

Shahanga, G., Ogondiek, M & Mmbaga, F. (2021). The paradigm shift from school inspection to school quality assurance: Perceptions of the in-service trained teachers on the achievements made: *Asian Journal of Education and Social Studies*, 24 (4), 59-67.

Shrestha, N. (2020). Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8 (2), 39-42.

Singh, C.K.S., Ong, E.T., Mohtar, T.M.T., Singh, T.S.M & Mostafa, N.A. (2020). Quality teachers of the 21st century: An overview of theories

and practice. *International Journal of Innovation, Creativity and Change*,13 (1), 1481-1494.

Singh, P. & Nijhawan, P. (2023). Teamwork and collaboration: Evidence for learning. *European Chemical Bulletin*. 11032-11036.

Snyder, L.G and Snyder, M.J. (2008). Teaching critical thinking and problem solving. *The Delta Pi Epsilon Journal*, 1(2), 90-99.

United Nations. (2016). *The Sustainable Development Goals Report*: New York: United Nations

URT. (2000). *The Tanzania Development Vision*: Dar es Salaam: Planning Commission.

World Bank Group. (2018). What do teachers know and do, does it matter? *Evidence from primary schools on African education*. Policy Research Working Paper 7956: Development Research Group, African

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd Ed). New York: Harper and Row

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The Paradigm Shift from School Inspection to School Quality Assurance: Perceptions of the In-service Trained Teachers on the Achievements Made

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Original Research Article

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ABSTRACT

Improving the quality of education is a Tanzania strategy towards preparation of innovative, creative, competent and competitive workforce required for economic transformation from low agricultural productivity to middle income and semi-industrial country by 2025. Therefore, the paradigm shifts from school inspection to school quality assurance in basic, secondary and teacher education in 2017 was an imperative intervention towards the national development vision. This study therefore, sought to evaluate the perceptions of the in-service trained teachers on the achievement of the paradigm shift from school inspection to school quality assurance in Tanzania education as empirical feedback for the government commitments and investments. Through convergent parallel mixed-methods design, data were collected through semi-structured questionnaires from 76 in-service teachers trained in School Quality Assurance, followed by interviews conducted with in-service teachers trained in Education Leadership, Management and Administration both at Diploma level, between 2019 and 2021 years. Purposive sampling technique was used to select the respondents' categories basing on their professional training in relation to education practices. The descriptive statistics and content analysis techniques were

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used to analyze, present, and discuss quantitative and qualitative data respectively. The study found that, the in-service trained teachers perceive the paradigm shift's significant achievement is institutionalizing a collaborative, transparent, holistic and friendly mechanism compared to its predecessor school inspection. However, such achievement has not impacted positively on the quality of education provided as expected due to inadequacy of resources to meet quality standards as recommended by school quality assurance officers, limited quality assurance competencies among teachers, little attention given to teachers' welfare services and lack of legal power to school quality assurance directorate to enforce their recommendation in schools. Therefore, the study recommended improving resources to meet school quality standards, developing quality assurance competencies among teachers before they graduate, exceptional attention to teachers' welfare services, and constitutionalizing the school quality assurance directorate into an autonomous entity reporting directly to the parliament. Further study can be conducted on evaluating models for developing quality assurance competencies among pre-service teachers in colleges.

Keywords: Paradigm shift; school inspection; school quality assurance; school quality assurance framework; school quality assurance directorate.

1. INTRODUCTION

The quality of education is a determinant factor for social and economic development at the individual, national and global levels [1]. Since Independence, the Tanzania government therefore, has been designing and implementing different strategies and mechanisms to ensure that the quality of education provided is improved and maintained to foster workforce training towards national development vision [2,3]. Consistently, the paradigm shift from school inspection to school quality assurance system in the monitoring of basic, primary and teacher education in Tanzania is a typical strategy and mechanism to improve the quality of education provided towards innovative, creative and competitive workforce training for social and economic development [4].

The genesis of the school inspection system can be traced back to the Napoleon Regime in France during the 18th Century, which was intended to monitor the provision of education in terms of standards [5]. It was then adopted in the United Kingdom when her majesty inspector of school was appointed in December 1839 to ensure that the money given to the school as grants were well spent to support public education in England [6]. Therefore, the system was established to ensure that education provision as a public service complies with the prescribed rules, regulations, and programmes (Brown, MCNamara, Hara & O'Brien, 2016). School inspection system was then adopted in different countries across the world, even in the high performing education systems like Hong Kong, Singapore, New Zealand, Scotland and Netherlands, for the same purpose as those of England (Whitby, 2010) and the United States of America [7].

In Africa, school inspection began during the colonial era. In Ghana, for example, it was established in1853, after the appointment of the first inspector of schools for British West Africa Colony to ensure that the African teachers in colonial schools comply with the prescribed curriculum, rules, regulations, programmes and procedures for safeguarding the colonial interests [8].

Similarly, after Independence, the independent African governments adopted the school inspection system to adhere to the prescribed rules, regulations, and standards [9]. In independent Tanzania, for example, school inspection was formalized in 1979 when the inspectorate department was established under the Ministry of education, following the education Act number 25 of 1978 [10]. The main objectives of school inspection in Tanzania include monitoring enrollment, access, completion and equity in education; observing the work being done by students, teachers and schools, to make judgements on quality; promoting school development and improvement; collecting data, analyzing, interpreting them, giving reflection and reporting; providing feedback to the Ministry, Heads of schools, owners and other stakeholders, identifying specific needs for schools, teachers and students; monitor students' and teachers' discipline and conducting action research [11: 71]. The system involved inspectors visiting schools without prior information for evaluation purposes to ascertain

whether they comply with the education act and regulations or not and administer punishments to the culprits [12].

The school inspection system had four types of inspections which included: Full assessment that intended to evaluate the whole operation of the school from curriculum implementation, administrative function as well as school environment; follow up inspection to examine the extent to which school management has implemented the given recommendations from the previous inspection; partial inspection to evaluate specific aspects of the school operations as well as a special inspection to find the solution for a particular problem in a specific school [13].

However, the school inspection system has been criticized globally for its limitation to address quality challenges threatening the achievement of 21st-century learning needs [14]. At the local level, school inspection has been graded as ineffective to improve the quality of education, which is the driving force towards the Tanzania development vision '*transforming a country from low-agricultural productivity into a middle income and a semi-industrialized nation by 2025'* as well as the Sustainable Development Goal, Agenda 2030 which intends to improve the provision of *inclusive equitable quality education and life-long learning opportunities for all* [15,2, 5]. Such global and local needs for quality education as declared in the education and training policy of 2014 in section 3.2 that: '*education and training should adhere to quality assurance and standards acceptable that would make Tanzanians to be competent and competitive at national and international levels',* necessitated the paradigm shift from school inspection to school quality assurance in Tanzania in 2017, where the latter is expected to be collaborative, effective, evidence-based, communicative and transparent to ensure that the prescribed standards are achieved and maintained than the former [16] (MoEST, 2017).

2. QUALITY ASSURANCE SYSTEMS IN TANZANIA EDUCATION

The quality assurance systems in Tanzania education can be categorized into three types. The first is the School Quality Assurance Directorate (SQAD), a ministerial department of the Ministry of Education, Science and Technology. The SQAD is responsible for ensuring the quality of education at primary, secondary and teacher education levels. The directorate is the former school inspection department [17]. The second is the National for Technical Education (NACTE), the semi-autonomous Agency responsible for ensuring technical education quality [18]. The third is the Commissions for Universities (TCU), which coordinates university and higher learning institutions [19]. Each level of education provided in Tanzania has its quality assurance mechanism, although the Ministry of Education Science and Technology has the overall responsibility for educational quality improvement.

3. CONTEXT OF THE PROBLEM

The Tanzania government, in 2017, transformed the education monitoring system from school inspection to school quality assurance as an intervention to improve the quality of education as a determinant factor towards man power training for national development [4]. Therefore, the school inspectorate department and their officials and school inspectors assumed school quality assurance functions and responsibilities [17]. The paradigm shift intended to transform the practice and behavior of school inspection into school quality assurance towards achieving the desired quality goal in education [20]. Since 2017 when the school quality assurance system was born from school inspection in Tanzania, there was a dire lack of empirical feedback from teachers who are educational practitioners at grassroot level on the achievement made so far. Without such feedback, the national and international efforts and endeavors towards improving quality assurance systems in Tanzania education, would remain in a dilemma. Therefore, this paper has come into being to bridge such a knowledge gap.

4. FACTORS FOR THE PARADIGM SHIFT FROM SCHOOL INSPECTION TO SCHOOL QUALITY ASSURANCE

There are empirical evidence and policy statements as forces behind the paradigm shift from school inspection to school quality assurance. Beginning with the failure of school inspection as the external evaluation system hence a need for a blended education monitoring system. For example, the paper on approaches to school inspection in Northern Ireland Assembly pinpointed the need to blend school self-evaluation and external evaluation instead of

relying on the external evaluation only. This new approach blending school self-evaluation and external evaluation is a paradigm shift from school inspection, which relied only on external evaluation to school quality assurance, a blended system [21].

Secondly, the weaknesses of the school inspection system. The study on barriers to practical school inspection in Pakistan highlighted the following inadequacies: autocratic tendencies among school inspectors, bureaucracy in the system, faultfinding attitudes among inspectors and lack of follow-up after the school visits for inspection [22]. The noted weakness implies a need to transform the system to remove bureaucracy and solve the lack of follow-ups.

Consistently, in Australia, the study conducted by Altricter and Kemethofer in 2014 established that, the inspected schools improved their academic performance compared to the uninspected ones. In the same line, the report of the Controller and Audit General about school inspection in Tanzania highlighted the incapability and incapacity of the school inspectorate department to inspect many schools, citing the example that, in the 2008/2009 financial year, the schools inspected were 346 out of 3,798 which is about 9% of the schools which were supposed to be inspected in that year [15]. This implies that if the inspected schools improve their academic performance, only 346 schools could improve while the uninspected schools continued deteriorating. Due to this situation, there was a need for a paradigm shift from the school inspection system.

Similarly, a study conducted in six countries: Bangladesh, India, Cambodia, Tanzania, Uganda and South Africa on challenges facing school inspection identified: corruption, irregular practices, and lack of competencies among inspectors, as well as financial constraints [12]. Those challenges imply the system's weakness, thus needing change for improvement. In Nigeria, school inspection was ineffective due to unprofessional tendencies of inspectors who serve as masters of all subjects, punishment-oriented inspection, relying on upon setting down rules than reality and poor remuneration among inspectors [23].

In the same line, the paper presented by Hongoke and Mmbando in the 2010 Joint Education Sector Review, under the subject 'Management, Inspection and Supervision for Effective Delivery of Quality Education' condemned school inspection system for creating an antagonistic relationship between inspectors and the inspected, lack of commitment among inspectors and inspected, poor feedback systems, lack of follow-up mechanism, inadequate facilities, lack of transparency as well as lack of autonomy to the inspectorate department itself. The Controller and Audit General observed the same weaknesses in 2008, Kambuga and Dadi in 2015 as well as Mollel in 2015 hence a need for intervention strategies including structural and administrative change of the system as emphasised in the education and training policy [16].

Finally, the need for improving the quality of education to meet the learning needs of the 21st Century, which are critical thinking, creativity, communication and collaboration, have instigated the paradigm shift from school inspection to school quality assurance to ensure that education management and administration, the curriculum, methodology, assessment and teaching and learning resources address these learning needs. These skills are essential for workforce training towards Tanzania development vision 2025 and sustainable development goal, 2030 as stated in the education sector development plan 2016/2017-2020/2021 [20].

5. THEORETICAL UNDERPINNING

The paper was guided by the paradigm shift theory founded by Thomas Kuhn (1962). The theory asserts that, a paradigm shift is a fundamental change in world view, concepts and practices when the former paradigm does not achieve the expected goals [24]. The major assumptions of the paradigm shift theory include: Changes are inevitable as the world is not static, the consequences of the paradigm shift can be good or bad depending on how the new paradigm is put into use, paradigm shift often comes from the young because older people usually are conservatives of ideas and practices, the existing paradigm cannot be abandoned until its replacement is found and a new paradigm needs adequate time for its goals to be achieved [25]. The paradigm shift results from the existing weaknesses, which did not meet peoples' expectations [26]. The theory is suitable for this paper because it answers the study's critical

questions concerning what, how, why, when, and who is the paradigm shift. Therefore, data collection, analysis, presentation, and discussions are based on the paradigm shift theory.

6. METHODOLOGY

The study adopted a convergent parallel mixed-methods design which merged with the qualitative and quantitative research approaches and methods. The design enabled the triangulation of the results collected concurrently and analyzed separately using qualitative and quantitative data analysis techniques [27]. Questionnaires with open-ended and closed questions were distributed randomly to 94 out of 172 in-service teachers trained in School Quality Assurance between 2019 and 2021 in order to express their perceptions concerning the achievement of the paradigm shift from school inspection to school quality assurance in Tanzania education. 76 out of 94 respondents returned the complete filled questionnaires, while 6 filled with some questions skipped, and 2 did not fill anything at all. The return rate, therefore, was 80.1%. To triangulate the questionnaire and interview findings conducted to five in-service teachers trained in Education Leadership, Management and Administration between 2019 and 2021. Purposeful sampling was used to obtain both categories of respondents basing on their professional training and practical experiences in education. The quantitative data were analyzed through descriptive statistics, while qualitative data were subjected to verbatim and content analysis techniques. Data presentation involved table, figure, frequency, verbatim and descriptions.

7. RESULTS OF THE STUDY

A total of 76 in-service teachers trained in School Quality Assurance filled questionnaires about the achievement of the paradigm shift from school inspection to school quality assurance in education. Their responses are presented in Table 1.

As indicated in Table 1 and Fig. 1, in-service teachers trained in School Quality Assurance are knowledgeable that the shift from school inspection to school quality assurance has made a remarkable transformation in education monitoring mechanisms in terms of stakeholders' involvement, improved feedbacks, change of attitude from school inspectors to school quality assurance practitioners and transparency in the whole process of quality assurance. Triangulating these findings to in-service teachers trained in education leadership, management and administration, an interview question was posed to them about the achievement of the paradigm shift from school inspection to school quality assurance in Tanzania education. Their responses were as follows:

The teacher from school A replied that:

> 'These school quality assurance officers are friendly; they advise and share their views for improving the teaching and learning and school management and administration, unlike the former school inspectors. Nevertheless, teachers' welfare services are not part of the quality assurance framework; the concentration is on learners' achievement is disregarding their abilities.'

Table 1. Perceptions of in-service trained teachers in school quality assurance on the achievements of the paradigm shift from school inspection

Perceptions of in-service trained teachers in school quality assurance on the achievements of the paradigm shift from school inspection.	Frequency N 76.
Improved the use of quality assurance feedbacks for school improvement **(M1)**	63
Improved the learners' academic achievements **(M2)**	7
Improved teachers' awareness of their roles and responsibilities in quality assurance processes **(M3)**	18
Change of attitude from school inspectors to school quality assurance practitioners **(M4)**	66
Improved community involvement in quality assurance practices **(M5)**	72
Improved teachers' welfare services provision **(M6)**	12
Improved enforcement of the quality assurance recommendation **(M7)**	15
Improved transparency in quality assurance processes **(M8)**	69
Improved school resources for quality achievement **(M9)**	29

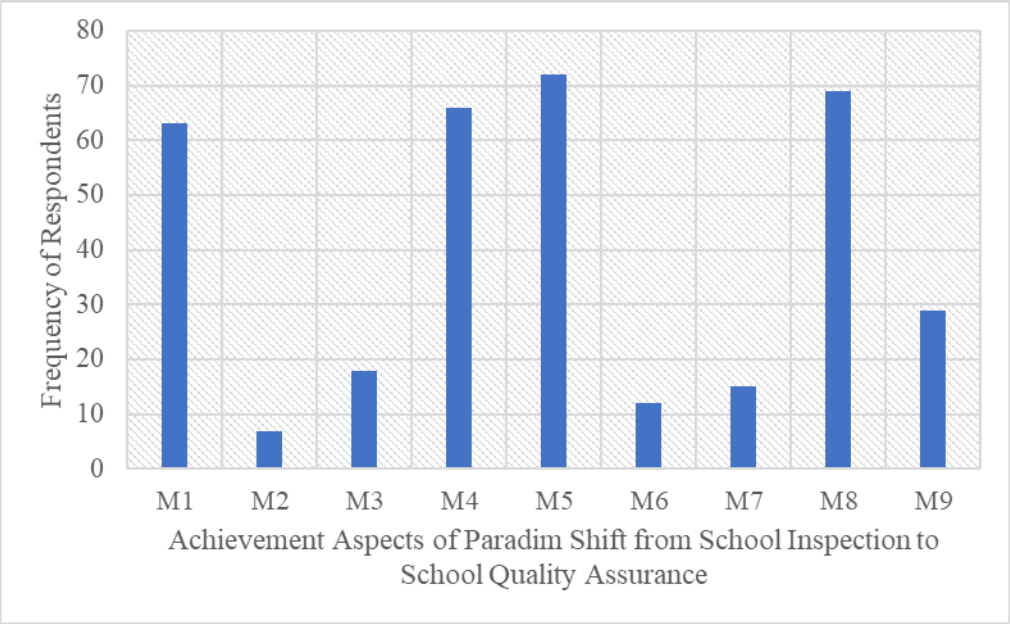

Fig. 1. Perceptions of in-service trained teachers in school quality assurance on the achievements of the paradigm shift from school inspection

The teacher from school B answered that:

> 'The school inspectors created fear as they invaded schools unnoticed, their relationship with teachers was cats and rats, but currently, things are good. However, the good recommendations they gave require adequate resources hard for school management to mobilize and themselves, they are incapable of enforcing them to the ministries dealing with education.'

The teacher from school C, argued:

> 'Although the quality education in terms of academic results have not been achieved due to increased enrollment compared to the available teachers, classrooms and books, there is an achievement in stakeholders' involvement in quality assurance practices as well as transparency in the whole processes and constructive feedback to schools. The wrong side of the paradigm shift is that apart from headteachers, other teachers are not even aware of their roles and responsibilities in the new paradigm'.

The teacher from school D, responded that:

> 'At least these quality assurance officers are aware that some situations in our schools like shortage of teachers, classrooms, books, and desks are not the fault of the school Management but the government which own these schools. In the former systems, we were penalized for the mistakes, not ours, for example, poor performance in standard seven examinations lead to the demotion of most of head teachers from their posts'

The teacher from school E, said:

> 'A paradigm shift needs time to achieve its intended goal; there are observable gradual improvement year after year since 2017 up to date. At first, we have got the new system that is a great achievement then we expect for the achievement of the new system in the near-future especially the improvement of school resources, students and teachers' welfare and academic performance in the poor performing subjects'

8. DISCUSSION OF THE FINDINGS

The views of the in-service trained teachers in School Quality Assurance are in line with the observations given by the in-service trained teachers in Education Leadership, Management and Administration that the paradigm shift from school inspection to school quality assurance have improved the character and practice of personnel dealing with education monitoring. This result is in line with the study conducted by Doherty in the United Kingdom [28], who

established that quality assurance should replace school inspectors in 'white coats' with quality assurance personnel 'problem solvers' This has been achieved in Tanzania as manifested in the change of attitude from school inspectors to school quality assurance personnel as well as improved transparency and feedback systems. However, the observable achievement has impacted little in the academic performance, a tangible indicator of the quality goal of education, which was a cry even during the school inspection system as established by the controller and audit general in 2008 and 2016 [15,2].

Moreover, the results further imply that, minor academic achievement in education is the results of paying little attention to the teachers who are the steering wheel of quality education. The emphasis on learners' achievement in the new paradigm should go hand in hand with teachers' achievement due to their mutual relationship, as Almadani, Rud and Rodrigues [14] proposed in Bangladesh. Similarly, the study results on minor achievement on learners' achievement are in line with the study conducted by Abdullahi [29] in Nigeria, who found that, the education quality achievement has not been achieved through quality assurance processes due to the poor quality of the enrolled students in schools as well as limited teachers' competencies in both, teaching and quality improvement of the education service they provide. In summary, the findings discussed above imply that, only the paradigm shift from school inspection to school quality assurance is not a panacea for quality improvement in education, unless there are other supportive policy, managerial and structural interventions to enable the new paradigm achieve its desired goals [30-34].

9. CONCLUSION AND RECOMMENDATION

The study concludes that the significant achievement of the paradigm shift from school inspection to school quality assurance in Tanzania education-monitoring system is the institutionalization of a collaborative, transparent, holistic and friendly mechanism compared to its predecessor school inspection. However, such achievement has not impacted the quality of education provided as expected due to various factors such as inadequate resources to meet quality standards as recommended by school quality assurance officers. Besides, teachers are confused about their roles and responsibilities in the new paradigm. Furthermore, teachers' welfare services receive little attention. In addition, there is a lack of institutionalized powers on school quality assurance directorate of the Ministry of Education Science and Technology to mandate various recommendations to the operators of schools, including the Ministry that is responsible for dealing with education, currently known as the Ministry of Presidents' Office - Rural Administration and Local Government.

Based on the paradigm shift theory that guided this study, three years is not enough for a new paradigm to fully achieve its goals and objectives; however, this study at the early stage of the paradigm was necessary to track the progress. Therefore, to achieve the desired outcomes in education resulting from a paradigm shift, the current study recommends the following. Firstly, providing relevant resources and facilities to meet the quality provision of education in schools. Secondly, developing foundational quality assurance competencies to teachers while still in Teacher Colleges. Thirdly, reviewing policy in order to strengthen community involvement in education practically. Fourthly, giving special attention to teachers' welfare services such as timely and fair promotion, teachers' houses, upgraded salary scale, payable leaves and a good working environment. Fifthly, constitutionalizing the school quality assurance directorate as an autonomous entity reporting directly to the parliament. Further study can be conducted on developing quality assurance models for competence development among pre-service teachers in Teacher Colleges.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. The Sustainable Development Goals Report: New York: United Nations; 2016.
2. A Performance Audit Report on the System for Quality Control of Education Programs in Tanzania: A report of the

Controller and Audit General of the United Republic of Tanzania. Dar es Salaam: National Audit Office of Tanzania (NAOT); 2016.
3. United Republic of Tanzania. The Tanzania Development Vision: Dar es Salaam: Planning Commission; 2000.
4. ADEM. Teaching Manual for Internal Quality Assurance Teams in Tanzania: Bagamoyo: The Agency for the Development of Education Management (ADEM); 2021.
5. Kabati J. The effectiveness of school inspectors in assuring the quality of primary education in Shinyanga District Council. Unpublished Dissertation for Partial Fulfilment of the Master of Education in Administration, Planning and Policy Studies. Dar es salaam: The Open University of Tanzania; 2017.
6. Gerran T. A Brief history of the genesis of the new schools' inspection system. British Journal of Educational Studies. 1998; 46(4):415-427.
7. Berner A. Would School Inspection Work in United States? John Hopkins School of Education: Institute for Education Policy; 2017.
8. Opoku-Asare NA. Quality control for effective basic education in Ghana. Journal of Science and Technology. 2006;26(3).
9. Hongoke C, Mmbando JS. Management, Inspection and Supervision of Effective Delivery of Quality Education: Thematic Paper for the Joint Education Sector Annual Review: Dar Es Salaam: Ministry of Education and Vocational Training; 2010.
10. Kambuga Y, Dadi H. School inspection in tanzania as motor for education quality: challenges and possible way forward. Review of Knowledge-Economy. 2015; 2(1):1-13.
11. MoEVT. School Inspectors' Training Manual. 3rd Edition. Dar es Salaam. Ministry of Education and Vocational Training (MoEVT); 2011.
12. UNESCO. School Inspection Challenges: Experiences from Six Countries. Paris: Global Education Monitoring Report; 2018.
13. Commonwealth Secretariat. Better Schools: Resource Materials for School Inspectors. Module Four. A Self-Study Guide for Serving Inspectors. London: Common Wealth; 1998.
14. Almadani K. Ru N, Rodrigues S. Quality assurance: A pressing problem for Education in the 21st Century. Problems of Education in the 21st Century. 2011;32(9).
15. NAOT. A performance audit report on school inspection programme for secondary schools in Tanzania: A Report of the Controller and Audit General of the United Republic of Tanzania. Dar es Salaam: National Audit Office of Tanzania (NAOT); 2008.
16. MoEVT. Education and training policy of Tanzania. Dar es Salaam: Ministry of Education and Vocational Training (MoEVT); 2014.
17. Basic, secondary and teacher education quality assurance. Framework. Dar es Salaam: Ministry of Education, Science and Technology (MoEST); 2017.
18. NACTE. Guidelines for Establishing Institutional Policies and Procedures on Quality Control and Quality Assurance. Dar es Salaam: National Council for Technical Education (NACTE); 2010.
19. Sokoine University of Agriculture. Quality Assurance Policy. Morogoro: Sokoine University of Agriculture; 2017.
20. Education Sector Development Plan 2016/2017-2020/2021. Dar es Salaam: Ministry of Education, Science and Technology (MoEST); 2018.
21. Perry C. Approaches to School Inspection: Research Paper and Information Service. Northern Ireland Assembly; 2013.
22. Ahmad I, Said H, Khan F, Yassin MA. Barriers to Effective School Inspection in Pakistan and Way Forward. World Applied Sciences Journal. 2013;24(6).
23. Ololube NP, Major NB. School Inspection and Educational Supervision: Impact on Teachers' Productivity and Effective Teacher Education Programmes in Nigeria. International Journal of Scientific Research in Education. 2014;7(1):91-104.
24. Gomez-Diago G. Paradigm Shift. The SAGE International Encyclopedia of Mass Media and Society. SAGE Publications; 2020.
25. Joshua GM. An overview of thomas kuhn's views on paradigm shift and its implication to society. International Journal of Technical Research and Applications. 2014;2(7):83-86.
26. Anandi G, Larson E, Mahoney JT. Thomas Kuhn on paradigms. Journal of Production and Operations Management. 2020;29(7): 1650-1657.

27. Creswell JW. Research design: Qualitative, quantitative and mixed methods approach. New Delhi: SAGE Publishers; 2014.
28. Doherty G. Quality Assurance in Education. United Kingdom: Licensee Intech Open; 2012.
29. Abdullahi NJK. Quality assurance and management of basic education improvement in North Central Nigeria. Proceedings in Engineering Sciences. 2020;2(3):333-344.
30. Altricher H, Kemethofer D. Impact of School Inspection on Teaching and Learning in Primary and Secondary Education in Australia: Technical Report Johannes Kepler University of Linz; 2014.
31. Baker PS. Making paradigms meaningful in mixed methods. Research Journal 2016;10(4):319-334. Sage Publishers.
32. Haki Elimu. The education we want. Dar Es Salam: Haki Elimu; 2021.
33. Mollel C. Quality of education practices in Tanzania. A case of Community Secondary Schools in Arusha District Council. Unpublished Dissertation for Partial Fulfilment of Master of Education in Administration, Planning and Policy Studies. Dar es Salaam: The Open University of Tanzania; 2015.
34. Whitby K. School inspection: Recent experiences in high performing education systems: Literature Review. United Kingdom: CfBT Education Trust; 2010.

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STUDENTS' INVOLVEMENT IN QUALITY ASSURANCE PROCESSES: CURRENT PRACTICES IN TEACHER COLLEGES IN TANZANIA

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Abstract: Students' involvement in quality assurance processes when in Teacher Colleges, determines quality assurance competences they will demonstrate in schools after graduation. This paper therefore, sought to examine current practices of students' involvement in quality assurance processes in public Teacher Colleges in Tanzania. Specifically, the study explored the existing modalities of students' involvement in quality assurance processes in Teacher Colleges and evaluated those modalities towards development of quality assurance competences among students for their teaching career. Through descriptive survey design and mixed approaches, data were collected by using semi-structured questionnaires from 85 district school quality assurance officers and 89 members of Teacher Colleges Management Teams then triangulated through interview to 12 students' representatives from public Teacher Colleges, 12 Teacher Colleges Principals and 12 zone school quality assurance officers from 12 education zones of Mainland Tanzania. The descriptive statistics and content analysis techniques were used to analyze quantitative and qualitative data respectively. The study found that, public Teacher Colleges in Tanzania involve their students in quality assurance processes to safeguard their needs and interests. However, the existing modalities of students' involvement in quality assurance processes in Teacher Colleges limit their physical and psychological energy for developing quality assurance competences for their teaching career. This observation is attributed with the shared school quality assurance framework among Teacher Colleges, Primary and Secondary Schools. From these results therefore, the study concludes that, there is a dire need of policy review to distinguish quality assurance practices in Teacher Colleges from Primary and Secondary Schools in order to spearhead the development of quality assurance competences among students in Teacher Colleges. To achieve this goal, the study recommends: Establishment of quality assurance framework specific for Teacher Colleges, incorporating quality assurance competences in teacher education curriculum and coaching & mentoring college management teams on how to involve students' involvement in quality assurance processes. Further studies can develop a model of students' involvement in Teacher Colleges' quality assurance processes.

Keywords: Students' Involvement, Teacher Colleges, Quality Assurance, Quality Assurance Framework, Students' Involvement Modalities

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INTRODUCTION

Teacher education systems in the world require effective quality assurance mechanisms which incorporate all important stakeholders to ensure that the quality of teachers trained are capable of promoting equitable, quality education and life-long learning opportunities for all, as a global agendum towards Sustainable Development Goals-2030, translated in the Tanzania Development Vision- 2025 and education and training policy of 2014 (UN, 2016; MoEVT, 2014). Improving teachers' quality bases on the truth that, quality teachers is a vehicle towards attainment of the learning needs to individual students, institution and the society at large (World Bank, 2018). Therefore, in order to meet the desired quality of teachers, quality assurance systems in Teacher Colleges have been put in place as a collaborative, holistic and transparent system of monitoring, evaluating reporting and taking deliberate action to ensure that the prescribed quality standards are achieved and maintained, to produce teachers who can teach effectively and ensure the quality of education provided in his/her institution (MoEST, 2017a).

The need to involve students in quality assurance processes for the education they receive is the global concern basing on the view that, students are beneficiary stakeholders invested their resources in education, thus imperative to speak for themselves in order to defend their needs, interests and career goal (Logermann, 2014). Similarly, students' involvement in quality assurance processes is an avenue for the management to receive important feedback from students which would improve teaching and learning processes (Barnes, Kohler-Evans & Wingfield, 2020). In this regard therefore, the school quality assurance framework which guide quality assurance in basic, secondary and teacher education in Tanzania has made teachers part and parcel of quality assurance processes. The framework describes six domains of quality education which require teachers engagement to promote: learners' achievement, the quality of teaching for good learning and assessment, the quality of curriculum in meeting learners' needs, the quality of leadership: leadership of learning, leadership of people and leadership of resources, the quality of school environment and its impact on welfare, health and safety and community engagement, all of which are focused on students thus to be involved in different levels (MoEST, 2017b: 16-27).

The school quality assurance system in Tanzania is a transformation of the school inspection system which operated in Tanzania since 1978 up to 2017 (MoEST, 2017a). The weaknesses of the school inspection system which threatened the education system to achieve its desired quality among others, include: lack of timely feedback, basing on procedural too much than the outcome, shortage of resources and limited level of stakeholders' engagement in quality assurance processes (UNESCO, 2018; Hongoke & Mmbando 2010; Harmandeep & Arjinder, 2013; Kambuga & Dadi, 2015; National Audit Office of Tanzania, 2008; 2016). The paradigm shift from school inspection to school quality assurance has created a need for teachers to serve as internal quality assurance personnel at school level thus imperative to develop specific quality

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assurance competences through direct involvement in the process when still in Teacher Colleges (MoEST, 2017a; ADEM, 2021).

Problem and its context

Since their establishment, Teacher Colleges in Tanzania were mandated to prepare professional personnel to serve in the teaching career (Mgaiwa, 2018; Neihart & Ling, 2017; Namamba & Rao, 2017). Therefore, the Teacher education curriculum in class and in block teaching practice intended to strengthen the development of competences mainly in three aspects: the teaching content, teaching methods as well as classroom management (Tanzania Institute of Education, 2019). The quality assurance in form of school inspection therefore regarded teachers in schools as passive recipient of orders and directives from school inspectors who visited schools as external evaluators to judge, grade and punish teachers basing on their performance in subject content, methods and classroom management (Hongoke &Mmbando, 2010; Kambuga & Dadi, 2015).

However, the paradigm shift from school inspection to school quality assurance in basic, secondary and teacher education in Tanzania has changed the role of teachers in education monitoring system from passive recipient of orders and directives given by external evaluators into active internal quality assurance personnel responsible to conduct school self-evaluation, cooperate with external evaluators and other stakeholders to ensure that the determined education quality and standards are achieved and maintained (MoEST, 2017; ADEM, 2021).

The added roles and responsibilities to the teachers in the new paradigm, imply that, Teacher Colleges are required to develop quality assurance competences to their students alongside subject content, teaching methods and classroom management through direct involvement in quality assurance processes before they join the teaching career. Despite such importance of students' involvement in quality assurance processes for developing quality assurance competences, most of the studies on students' involvement in quality assurance processes have put much attention on safe guarding students' needs and interest instead of students involvement in quality assurance processes for competence development particularly in Teacher Colleges (Degtjarjora, Lapina & Freidefelds, 2018; Leisyte & Kersting, 2014; Longermann, 2014; Nkala & Ncube, 2020; Noha, 2013, Nyenya & Rupande, Scott, 2018). Such situation has created a literature gap on the current modalities of students' involvement in quality assurance processes in Teacher Colleges and if those modalities enable students to develop quality assurance competences required for their teaching career.

The purpose and objectives of the study

The purpose of the study was to examine the current practices of students' involvement in quality assurance practices in Teacher Colleges. Specifically, the study intended to explore the existing modalities of students' involvement in quality assurance processes in Teacher Colleges and then evaluate those modalities if they enable students to develop quality assurance competences for their teaching career.

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Teacher Education and Training in Tanzania

Teacher education in Tanzania can be traced as far back as to1902 when missionaries established a Lutheran Teacher College at Kidia in Moshi, Kilimanjaro Tanzania. More Teacher Colleges were further established by missionaries in Tanzania to meet the needs of different religious denominations (MoEVT, 2007). After independence, all Teacher Colleges in Tanzania were confiscated by the government as part and parcel of the nationalization policy under the Arusha declaration of 1967 in order to ensure that the trained teachers meet the national quality and quantity demands (Sanyal, 2013). In post independent Tanzania, teacher education was strengthened due to their pivotal role of organizing and guiding students towards the acquisition of knowledge, skills and positive values for mindset transformation for national man power development. Up to now, there are about 100 teacher colleges in Tanzania, 35 of them owned by the government, the rest are owned by religious institutions and private individuals ((Kitilia, 2015; Komba & Mwakabenga, 2019). Moreover, teachers in Tanzania are trained at certificate, diploma and degree qualifications. For degree qualifications, teachers are trained in Universities and technical institutions while for certificate and diploma qualifications, teachers are trained in Teacher Colleges (Namamba & RAO, 2017). The education and training policy of 1995, describes the following as aims and objectives of teacher education and training in Tanzania as:

- imparting to student-teachers' theories and practices of curriculum, psychology, guidance and counseling;
- imparting to student-teachers about knowledge and skills of pedagogy, creativity and innovation;
- promoting an understanding of the foundation of the education curriculum
- equipping student-teachers with mastery of subject content and teaching methodologies in specific subjects;
- imparting knowledge, skills and techniques of conducting education research, assessment and evaluation in education;
- Equipping both pre-service and in-service teachers with organizational, leadership and management skills in education and training (MoEC, 1995:7-8).

These aims and objectives of teacher education described in the education policy of 1995 imply that, teacher education should prepare professional personnel not only in teaching content, teaching methods and class management but also in education leadership and management in schools. Strengthening the leadership and managerial roles of teachers, the new education policy of 2014 as translated in the school quality assurance framework of 2017 require teachers to serve as school quality assurance personnel alongside teaching. This means, developing quality assurance competences to the teachers is a policy issue to enable teachers perform their managerial functions in schools (MoEST, 2017a; MoEVT, 2014).

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REVIEW OF LITERATURE

Students' Involvement in Quality Assurance Processes in Developed Countries

Students' involvement in quality assurance processes is an interests of education systems in both, developed and developing countries. In developed countries, students' involvement in quality assurance practices was triggered off by the Bologna process in 1999, when European countries committed themselves to improve the quality of education through strengthening students' involvement in quality assurance processes. The discussion in the Madrid workshop held from 19th to 20th October, 2006, declared the need for improving the levels and modalities of students' involvement in quality assurance systems which would help to safeguard students' needs, interests and career goals as aspects of quality education (Raurent, 2006). Similarly, prior to the workshop conducted by the National Union of Students in Europe in 2003, students had risen the need for widening students' involvement in quality assurance processes while in colleges and universities in order to make students speak for themselves in quality assurance processes (National Union of Students in Europe, 2003).

Consistently, studies about students' involvement in quality assurance practices establish that, the level and modalities of students' involvement in quality assurance processes requires improvement at different stages of quality assurance from: planning, implementation, monitoring and evaluation at college level as partners to the college management, given a reasonable chance to exchange their views for improving the quality of education they receive, as evidenced in Romania (Fedeli, 2016). In the United States of America, the study pinpointed the benefits of involving students in quality assurance practices as improving the teaching and learning processes as well as enhancing the assessment procedures towards the labour market demand (Blake, 1994). Despite the fact that, students have beneficiary interest in quality assurance practices as noted by Alaniska *et al*, 2006), there is lack of trust between tutors and students which affect the effective collaboration of students and staff in quality assurance processes (Berner, 2017).

Similarly, in England, the study indicates that, there are different challenges which hinder students' involvement in adequate modalities of quality assurance processes. Those include: conflicting interests among students themselves, division between students and staff, fear for negative feedback from students which might stress staff and affect the relationship between students and staff (Scott, 2018). Moreover, in Nordic countries, among the impediments towards students' involvement in quality assurance processes are regulations and legislations. Other challenges include: lack of experience to the task, lack of commitment concerning time, and large number of students who cannot be accommodated easily in the quality assurance committees (Logermann, 2014; Leisyte & Kersting, 2014). The reviewed studies concerning students' involvement in quality assurance processes in developed countries indicate that, the central aim of involving students in quality assurance processes is to enable students defend their needs and interests (Degtjarjora, Lapina & Freidefelds, 2018).

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Students' Involvement in Quality Assurance Processes in Developing Countries

Most of the academic institutions in developing countries have adopted the idea of involving students in quality assurance processes to enable the management get direct feedback from students themselves as key inputs for improving the quality of education. For example, Tick, Thondhlana & Churuma, conducted a study in Zimbabwe (2015), on students' involvements in quality assurance processes, the results indicate that, by involving students in quality assurance processes, it improves the quality of teaching and learning through the students' feedback on the content, methods and resources. Chong and Cheah (2009), added that, involving students enable them to become competent and effective in terms of mastery of the subject matter content, knowledge on the curriculum, pedagogy and psychology of the learners through discussing with students about their needs, interests and career aspirations.

Similarly, involving students at considerable levels, ensure that colleges have; clearly defined mission, effective governance and administration, competent human resource, mechanisms for designing, developing and monitoring programmes, mechanisms for maintaining and improving academic status, adequate learning opportunities as well as consolidated development (business) plan which integrate the use of all the identified indicators (Sanyal, 2013). Moreover, students' involvement in internal quality assurance processes enable them to develop different skills which include: Communication skills, analytical skills as well as leadership skills. It makes students confident and improve their awareness about their institutions (Noha, 2013).

However, the study conducted in Ghana indicated that, students' involvement in quality assurance processes is impeded by the mistrust and fear for conflicts among different stakeholders in the process (Essel, Boakye-Yiadom & Kyeremeh, 2018).

The study financed by the German Academic Exchange Service (DAAD) in countries of southern of Africa indicated that, all 15 countries under Southern African Development Cooperation (SADC), they lack common modalities on involving students in quality assurance processes. While in Botswana, Republic of Congo, in Mozambique students are the eyes of the institutions for quality improvement hence direct and actively involved in the quality assurance processes within their institutions, in Malawi, Mauritius and Lesotho, students are just recipient of quality education with minimal role during the process (Hoosen, Chetty & Butcher, 2018). Likewise in developing countries as it is in developed countries, the major focus of students' involvement in quality assurance processes intends to ensure that the provision of welfare services, teaching and learning processes as well as the teaching and learning environment are favorable to the students as the ultimate goal of quality assurance processes, benefiting the students and not the process itself (Nyenya & Rupande, 2014).

Students' Involvement in Quality Assurance Practices in Tanzania

In Tanzania, the Ministry of Education, Science and Technology is mandated to conduct monitoring of the quality of education through different departments and organs. The Tanzania Commission for Universities (TCU) established under Act no. 7 of 2005 is mandated to assure quality education in higher learning institutions (universities and university colleges) (TCU, 2020);

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The National Council for Technical Education (NACTE) established under Technical Education Act no. 9 of 1997 is responsible for quality assurance processes in tertiary and technical training institutions (NACTE, 2010) and the school quality assurance department under the Ministry of Education, Science and Technology was established under the Education Act no. 25 of 1978 to assure quality for the basic, secondary and teacher education (Kambuga & Dadi, 2015). In all the three quality assurance systems in Tanzania education, the focus of students. involvement in quality assurance processes is to ensure that, the developed competences, the teaching and learning environment, the teaching and learning methods as well as welfare services provided to students in their institutions address their needs and interest (NACTE, 2010; MoEST, 2017a; SUA, 2017; ADEM, 2020; TCU, 2020). That means, involving students in quality assurance processes to develop their abilities towards performing quality assurance functions has been given a little consideration.

THEORETICAL UNDERPINNING

The study was guided by students' involvement theory developed by Alexander Astin (Astin, 1984). The theory holds that, students' involvement is the amount of physical and psychological energy which students devote to the academic experiences with the assumptions that: physical and psychological energy devoted by students' involvement in academic activities improve their learning outcomes. That means, the amount of physical and psychological energy devoted for students' involvement in quality assurance processes determines the rate of competences development towards quality assurance processes (Nkala & Nkube, 2020).

This implies that, the evaluation of the students' involvement in quality assurance processes in teacher Colleges bases on the view that, the physical and psychological energy of students manifested through their direct involvement in quality assurance processes determine the level of quality assurance competences they would develop when in Teacher Colleges and demonstrate in schools after graduation (Rudragoudar, 2014).

METHODOLOGY

The study adopted a descriptive survey design and a mixed approach dominated by qualitative to guide data collection, analysis and presentation (Nassaji, 2015). Information was collected through semi-structured questionnaires from 174 respondents who included, 89 members of the College Management Teams (CMTs) from 35 Teacher Colleges in Tanzania and 85 school quality assurance officers (SQAOs) from 12 education zones. Interview sessions were conducted to 12 students' representatives, 12 Teacher College Principals and 12 Zonal school quality assurance officers, one from each zone for triangulating the information obtained through questionnaires. CMTs and SQAOs were sampled randomly from participants trained on education leadership and management. Purposeful sampling was used to obtain students representatives, college principals and zonal school quality assurance officers by virtue of their positions hence expected to be familiar of modalities of students' involvement in quality assurance processes particularly in Teacher Colleges. The quantitative data were analyzed through descriptive statistics while

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qualitative data were subjected into verbatim and content analysis techniques. Data presentation involved chart, percentage, verbatim quotes and descriptions.

FINDINGS AND DISCUSSION

The respondents were asked 'What are the current modalities of students' involvement in quality assurance processes in Teacher Colleges? to answer this question, SQAOs as external college evaluators and CMTs as internal quality assurance personnel were provided with seven quality assurance modalities available in Teacher Colleges to rate modalities in which Teacher Colleges involve students. The results are presented in terms of percentage as shown in figure 1.

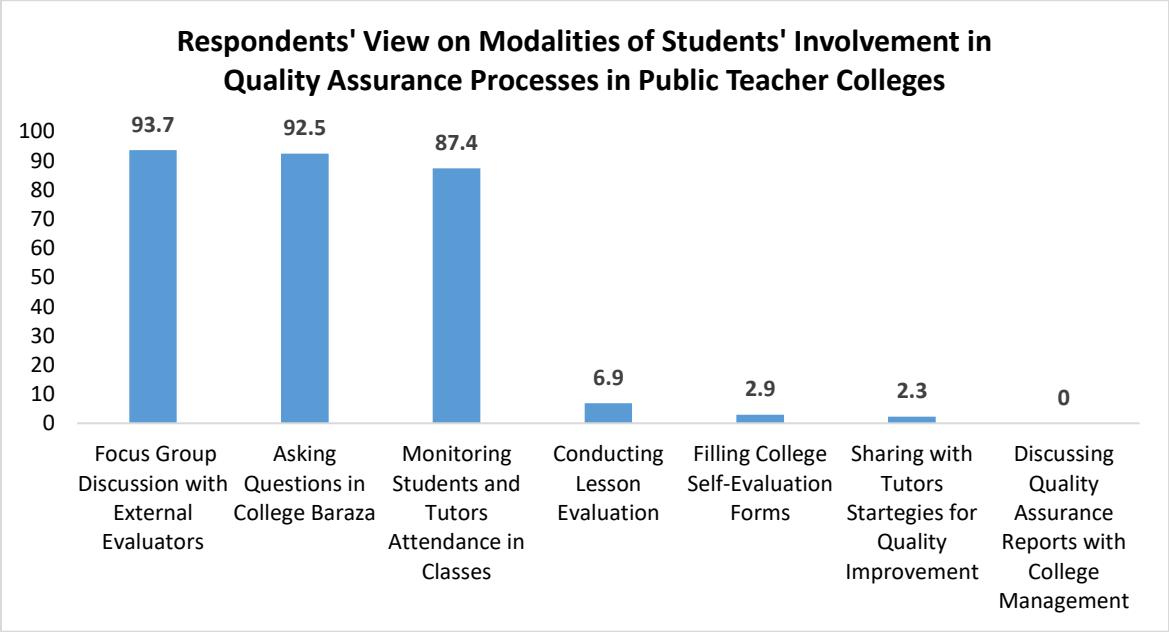

Figure 1: Respondents' Views on Modalities of Students' Involvement in Quality Assurance Processes in Public Teacher Colleges

As indicated in figure 1, The rate of students' involvement in quality assurance modalities in Teacher Colleges are moderate in which, among seven quality assurance modalities conducted in Teacher Colleges, students are mostly involved in three of them. Most of the respondents among CMTs and SQAOs, 163 (93.7.0%) out of 174 disclosed that, students are highly involved in Focus Group Discussion with external evaluators, asking questions during college Baraza 161 (92.5%) and through monitoring tutors and students' attendance in classes 152 (87.4%). Few respondents indicated that, students are involved in the key quality assurance modalities such as conducting lesson evaluation 6.9%, filling college self-evaluation forms 2.9%, sharing strategies for quality improvement with college management 4 (2.3%). No respondent indicated that students are involved in discussing quality assurance reports with College Management Teams.

Triangulating the information filled by CMTs and SQAOs through questionnaires; students' representatives, college principals and school quality assurance officers at zonal level

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were interviewed about the existing modalities of students' involvement in quality assurance processes as well as the impact of those modalities in developing quality assurance competences among students. Their responses and discussions are presented in paraphrasing, verbatim quotes and descriptions.

Involvement in Focus Group Discussion with External Evaluators

The results of the study indicated that, the highest modality of students' involvement in quality assurance processes is participation in focus group discussion with school quality assurance officers. Respondents said that, when school quality assurance officers as external evaluators visit Teacher colleges and meet with students with whom they conduct focus group discussions. An interview question was asked to the zonal school quality assurance officer on how they get students to represent others in focus group discussion she said *'Few students are picked randomly to represent others in discussing issues posed by school quality assurance officer'.* During interviews with students on their involvement in focus group discussion, one student said '*We are doubtful if the issues we pose to SQAOs reach to the CMTs undiluted because SQAOs meet with CMTs separately after conducting discussion with us.* When a SQAO was asked the reason for separating students from CMT and tutors during focus group discussion she said *'Those discussions are conducted in absence of tutors and members of the management teams in order to give students freedom to express their concerns in relation to college life as some issues might touch CMTs or Tutors'.* This separation of students from tutors during the focus group discussion with external evaluators leaves a gap between the two important stakeholders who could collaborate for quality improvement. This finding is contrary to the study conducted by Degtjarjova, Laina & Freidefelds in 2018, which insist that, students as customer stakeholders in education, their voices must be heard direct to the management and tutors during the quality assurance processes. This observation implies that, the participation of students in focus group discussion with SQAOs in absence of CMTs and tutors does not develop quality assurance competences among students.

Involvement in Asking Questions During the College Baraza

The study revealed that, the open avenue for most of the students to air out their views concerning the quality assurance issues in their college is the College Baraza. The member of CMT during interview said that '*During the college Baraza, students are given chances to ask questions after the management teams have presented all the agendas they planned*.' The interview with students indicated that, questions sessions come at the end of the Baraza when students are already tired or feel hunger so chances are limited as the chairperson or the moderator picks the student to ask questions basing on his/her preferences. A student revealed that '*Critical students are rarely given opportunities to ask questions, in most cases, questions are limited within the agendas presented which might not be students' interests*. This finding that college management present their issues in college Baraza which might not be on favour of students needs and interest is contrary to the study conducted by Lau in 2014 which establish that, the extent to which institutional management

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provides satisfactory needs and interests to students, depends on the extent at which students are engaged in the processes.

Involvement in Monitoring Tutors and Students Attendance in Classes

The study results indicated that, students are adequately involved in managing students and tutors' attendance in classes through the use of class attendance and class journals respectively. An academic dean during interview said '*When tutors delay to attend their classe they remind them and they do tick present and absent students, taught and untaught lessons'.* A student interviewed added that*, students are involved directly in ensuring the quality of students and tutors' attendance by using class journals and class attendance'*. Through such initiative, tutors fulfil their responsibilities and students avoids absenteeism hence improve the academic performance which is the benefit to students, management and the college as well. This result is in-line with the study conducted by Nyenya in Zimbabwe (2014) which indicates that, there are benefits to the students, management and institution when students are involved as active participants in quality assurance processes. However, quality assurance competences required to be developed by students through their direct involvement in the process, entails the actual teachers' preparation, participatory and interactive teaching methods, resources availability, quality supportive services and readiness of the tutors and learners for teaching and learning which are far beyond attendance in classes.

Involvement in Conducting Lessons Evaluations in Their Colleges

The study indicated that, students have rare chances to conduct lesson evaluation in Teacher Colleges despite the fact that, lesson evaluation is important to improve teaching and learning resources, strategies and plans for staff training. The interview question asked to college principals on 'why are students not involved in conducting lesson evaluation?'. The response from one among them, was '*Students cannot evaluate their tutors, this will make tutors lose confidence and it may result into conflict between students and tutors when the comments are negative'.* This result differs from findings established by Zavale *et al* (2016) at Eduardo Mondlane University in Mozambique where students are well involved in quality assurance practices through evaluating lecturers' performances in different programmes and course review processes. This implies that, college management do not get direct feedback from students concerning the course content, teaching methodologies and mode of assessment hence cannot take effective measures for improvement as proposed. If, students do not conduct lesson evaluation, when they will become teachers, they will hardly allow the evaluation from their students too hence jeopardize the quality improvement motives in education. This is because, teachers do the way they were taught (World Bank, 2018).

Involvement in Filling College Self Evaluation Forms

The present study found that, students are inadequately involved in filling college self-evaluation forms in Teacher Colleges. The CMT and SQAOs acknowledge that, each college is given a self-evaluation form for self- assessment and it is the responsibility of the college management team

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and not students to rate themselves in respect to the six domains of quality assurance. After filling such form, the form is sent to the respective quality assurance zonal office, before SQAO from such zone conduct a college visit to compare the self-evaluation form filled by the college and the reality in the college. An interview question asked to students if they are involved in filling college self-evaluation forms revealed that they are not involved at all and they had never seen them. One of the student replied *'Self-evaluation forms!, I do not know them?*.

The question was posed to both, principal and zonal quality assurance officer on why Teacher Colleges do not involve students in filling college self-evaluation forms. The principal replied that, '*some information in those forms is confidential thus too risky to expose them to students*. The ZSQAO replied *'even the school quality assurance framework which is shared by Teacher Colleges, Primary and Secondary Schools, does not say if students should be involved in filling college self-evaluation forms or not. After all, the purpose of involving them is not to train them as quality assurance officers but safeguarding their needs and interests*'. In this aspect, the study indicates that, the shared school quality assurance framework among Teacher Colleges, Primary and Secondary Schools is the source of the problem in two aspects. One, by being shared for mere students and student-teachers, second by being silent on how should students be involved in quality assurance processes. Such tendency of leaving aside students in filling college self-evaluation forms makes the processes not participatory. Excluding students in filling college self-evaluation forms limit competence development towards effective quality assurance practices because ability to conduct self-assessment is a necessary competence for teachers and future quality assurance personnel.

Involvement in Sharing Strategies for Quality Improvement with Management

The study found that, students have little opportunity to share strategies with management team for quality improvement. After identification of the weak areas affecting the quality of the college during the college visit, on the exit meeting, SQAOs and CMTs discuss strategies for quality improvement in all the weak areas. A question was asked to SQAOs and CMTs if students are involved in sharing strategies for quality improvement with the management. The response was as follows: The Zonal School Quality Assurance Officer said '*You know, these students are not trained in quality assurance issues, by the way even quality assurance practices is not part of their curriculum so they lack knowledge and skills altogether.'* A member of the CMT said '*some issues are confidential, so sharing with students is very risk to the management, the institution and the government altogether'*. A student from the students' government replied '*As students, we are not given opportunities to share our views with the management, but we have constructive ideas which can work because we live, play and study with our fellow students so we know exactly our needs, interest and expectations than the staff members do'*. The students' concern is in-line with the study conducted by Essel & Boakye-Yiadom in Ghana (2018), where he found that, students' involvement in quality assurance processes safeguards their needs, interests and learning goals and motivate them to work hard. That means, Teacher Colleges in Tanzania do not utilize important role of students in sharing strategies for quality improvement. As, students in colleges might have

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positive solutions for challenges they face. This observation implies that, students' mind in Teacher Colleges are fixed not to think and share the strategies for improving quality assurance in education, strategies which would improve students themselves in performing quality assurance functions when they graduate as teachers.

Involvement in Discussing Quality Assurance Reports with Management

The findings of the current study, indicate that, students are not involved in discussing quality assurance reports with the management. Both CMT and SQAOs established that, after filling college self-evaluation forms and present them to the zonal school quality assurance office, SQAOs conduct a college visit to collect evidences of what has been filled in the form then prepare a comprehensive report which is sent back as feedback to the college management. Students do not access such feedback and they have no opportunity to discuss it. An interview question was posed to the college management team on why are students not involved in discussing quality assurance reports with the college management. A member of the college management replied '*Unless there are guidelines on how to involve students' in quality assurance processes, it is hard to expose quality assurance reports with them'.* Lack of guideline about students' involvement in quality assurance in Teacher Colleges is contrary to the studies conducted in European countries which reveal that, there are standards and guidelines for students' involvement in quality assurance processes (Logerman, 2014; Leisyte & Kersting, 2014). Likewise, denying quality assurance feedback to students who are the important stakeholders in Teacher Colleges contradict with the advice given by controller and audit general on the importance of feedback systems to education stakeholders as important inputs for quality improvement (NAOT, 2016). Since, the effective quality assurance mechanism in education depends on the quality of feedback it provides to its customers for improvement, students who are not given quality assurance feedback for the education processes they pay and undergo through, it is unlikely that, when they become teachers, they will provide valuable feedback which is a mark of effective quality assurance personnel.

CONCLUSION

The study concludes that, the current practices of students' involvement in quality assurance processes in Teacher Colleges in Tanzania intend to benefit students by safeguarding their needs and interests but not beneficial to the processes itself. The existing modalities of students' involvement in quality assurance processes, limit their physical and psychological energy for developing quality assurance competences for their teaching career which would enrich the quality assurance processes with competent personnel. This situation is attributed with the shared school quality assurance framework among Teacher Colleges, Primary and Secondary Schools. From this observation therefore, the study recommends: Policy intervention for separating quality assurance practices in Teacher Colleges from primary and secondary education, establishing quality assurance framework specific for Teacher Colleges, incorporating quality assurance competences in teacher education curriculum and coaching & mentoring college management teams on how to

involve students' involvement in quality assurance processes. Further studies can develop a model of students' involvement in Teacher Colleges' quality assurance processes.

REFERENCES

ADEM. (2021a). Pedagogical Leadership and Management Training Manual for Teacher Colleges Management Teams. Bagamoyo. The Agency for the Development of Education Management.

ADEM. (2020). Quality Assurance Policy. Bagamoyo: Agency for the Development of Education Management

ADEM. (2021b). Teaching Manual for Internal Quality Assurance Teams in Tanzania: Bagamoyo: The Agency for the Development of Education Management.

Alaniska, H., Codina, E. A., Bohrer, J., Dearlove, R., Eriksson, S., Helle, E., & Wiberg, L. K. (2006). Students Involvement in the Process of Quality Assurance Agencies. Helsinki: European Association for Quality Assurance in Higher Education.

Anangisye, W.A.L. (2010). Developing Quality Teacher Professionals: A Reflection Inquiry on the Practices and Challenges in Tanzania. Dar Es Salam: University of Dar Es Salaam.

Astin, A.W. (1984). Students' Involvement: A Development Theory for Higher Education. Journal of College Students' Development. Vol. 40. pp. 518-529.

Barnes, C.D., Kohler-Evans, P. and Wingfield, R.A. (2020). Are We Effectively Teaching Today's College Students?. International Journal of Education (IJE). Vol. 8 (4). pp 45-54.

Baker, P.S. (2016). Making Paradigms Meaningful in Mixed Methods Research Journal Vol.10 (4). 319-334. Sage Publishers.

Berner, A. (2017). Would School Inspection Work in United States?. John Hopkins School of Education: Institute for Education Policy.

Blake, D. (1994). Quality Assurance in Teacher Education. A Case Study of Quality Assurance in Education. Vol.2 (1). pp 26-31.

Chong, S and Cheah, H.M. (2009). A Values, Skills and Knowledge Framework for Initial Teacher Preparation Programmes. Australian Journal of Teacher Education Vol. 34 (3).

Degtijarjova, I., Lapina, L. and Freidenfelds, D. (2018). Students as Stakeholder 'Voice of Customer' In Higher Education. Riga Technical University.

Essel, H.B, Boakye-Yiadom, M and Kyeremeh, F.A. (2018). Assessing Students' Experiences of Internal Quality Assurance Practice in Selected Private Higher Education Institutions. International Journal of Science and Research. Vol. 7, pp. 2319-7064.

Fedeli, L. (2016). Comparative Study on Students' Involvement in Quality Assurance. The European Students Union.

Haki Elimu (2021). The Education We Want. Dar Es Salam: Haki Elimu.

Harmandeep, S. and Arjinder, K. (2013). Quality Assurance in Teacher Education. Journal of Social Science Research. Vol. 1 (1) pp 21-29.

Hickman, L. and Akdere, M. (2017). Stakeholder Theory: Implications for Total Quality Management in Higher Education. 4th International Conference on Six Sigma for Higher Education. 25-26 May, 2017.

Hongoke, C. and Mmbando, J.S. (2010). Management, Inspection and Supervision of Effective Delivery of Quality Education: Thematic Paper for the Joint Education Sector Annual Review: Dar Es Salaam: Ministry of Education and Vocational Training.

2021, Vol. 1, No. 3, p. 130-144. e-ISSN: 2805-4695

Hoosen, S., Chetty, Y and Butcher, N. (2018). Dialogue on Innovative Higher Education Strategies State of Play. Regional Quality Assurance in Southern African Countries Report. Bonn: German Academic Exchange Service.

Kambuga, Y. and Dadi, H. (2015). School Inspection in Tanzania as Motor for Education Quality: Challenges and Possible Way Forward. Review of Knowledge Economy. Vol. 2 (1) pp 1-13.

Kitilia, D.M (2015). Teacher Education Preparation Program for the 21st Century. Which Way Forward For Kenya. Journal of Education and Practice. Vol. 6 (24).

Komba, S.C and Mwakabenga, R.J. (2019). Teacher Professional Development in Tanzania: Challenges and Opportunities in Educational Leadership. London: Inteck Open Publishers.

Lau, J.W.C. (2014). Enriching Stakeholder Theory: Students Identity of Higher Education American Journal of Industrial and Business Management. Vol. 4. pp 762-766.

Leisyte, L., Westerheijden, D., Epping, E., Faber, M., and Weert, E. (2013). Stakeholders and Quality Assurance in Higher Education. Centre for Higher Education and Policy Studies Paper for 26th Annual CHER Conference. Laysanne.

Logermann, F. (2014). Students as Stakeholders in the Policy Context of the European Standards Guidelines for Quality Assurance in Higher Institutions: A Comparative Study of the Dutch and German Higher Education Institution. Master Thesis School of Management and Governance. Universiteit Twente.

Mahmoud, G.H.A.A. (2018). Effects of Corrective Feedback on Learners of English as a Second Language (ESL). International Journal of Education (IJE). Vol. 6 (4). pp 43-52.

Mgaiwa, S. (2018). Emerging Fundamental Issues of Teacher Education in Tanzania: A Reflection of Practices. International Journal of Educational Process. Vol. 7. pp 246-264.

MoEC (1995). Education and Training Policy. Dar es salaam: Ministry of Education and Culture.

MoEST (2017a). Basic, Secondary and Teacher Education Quality Assurance Framework. Dar es Salaam: Ministry of Education, Science and Technology.

MoEST (2017b). School Quality Assurance Handbook. Dar es Salaam: Ministry of Education, Science and Technology.

MoEST (2017c). School Quality Assurance Operational Manual. Dar es Salaam: Ministry of Education, Science and Technology.

MoEVT (2007). Teacher Development and Management Strategy 2008-2013. Dar es Salaam: Ministry of Education and Vocational Training.

MoEVT (2014). Education and Training Policy of Tanzania. Dar es Salaam: Ministry of Education and Vocational Training.

NACTE (2010). Guidelines for Establishing Institutional Policies and Procedures on Quality Control and Quality Assurance. Dar es Salaam: National Council for Technical Education

Namamba, A. and Rao, C. (2017). Preparation and Professional Development of Teacher Educators in Tanzania. Current Practices and Prospects. Journal of Education and Practices Vol. 8 (8).

National Audit Office of Tanzania (2008). A Performance Audit Report on School Inspection Programme for Secondary Schools in Tanzania: A Report of the Controller and Audit General of the United Republic of Tanzania. Dar es Salaam: National Audit Office of Tanzania.

National Audit Office of Tanzania (2016). A Performance Audit Report on the System for Quality Control of Education Programs in Tanzania: A report of the Controller and Audit General of the United Republic of Tanzania. Dar es Salaam: National Audit Office of Tanzania.

2021, Vol. 1, No. 3, p. 130-144. e-ISSN: 2805-4695

National Union of Students in Europe (2003). European Students Handbook on Quality Assurance in Higher Education. Brussels: European Union.

Niedermeier, F. (2017). Designing Effective Quality Management System in Higher Education Institutions. German: Potsdam University.

Nkala, P and Ncube, M. (2020). Institution Structures for Student-Inclusivity in Quality Assurance Promotion in Higher Education. The Case of One University in Zimbabwe. South African Journal of Higher Education. Vol. 34 (5). pp 92-108.

Noha, E. (2013). A Model of Student Involvement in the Quality Assurance System at Institutional Level. Journal of Quality Assurance in Education. Vol. 21 (2). pp 162-198.

Nyenya, T and Rupande, G. (2014). The Role of Students in Quality Assurance in ODL Institutions: The Case of Zimbabwe Open University. International Journal in Managerial Studies and Research. Vol.2 (4). pp 19-29.

Rauret, G. (2006). ENQA-ANECA Workshop on Students' Involvement in Quality Assurance Agencies. Future Trends on Students' Involvement in Quality Assurance Agencies Madrid 19-20th October, 2006.

Rudragoudar, P. A. (2014). Impact of Total Quality Management (TQM) in Education. An International Journal in Arts, Commerce, Education & Social Sciences. Vol. III (1). pp. 37-39.

Sallis, E. (2002). Total Quality Management in Education. London: Taylor & Francis.

Sanyal, B.C. (2013). Quality Assurance of Teacher Education in Africa. Addis Ababa: UNESCO International Institute for Capacity Building in Africa.

Saleh, A., Zaman, S. and Anjalin, U. (2016). Improving Total Quality Management in Education: Compatibility and Challenges. Open Journal of Social Sciences. Vol. IV pp. 2017-2017.

Scott, E.A. (2018). Students' Involvement in the Quality Assurance Process in Higher Education. Perception of Students, Teachers and Management. A Thesis Institute of Education, University of London

Schleicher, A. (2012). Building A High Quality Teaching Profession. Lessons from Around the World. Educational Studies, (1), 74-92.

SUA (2017). Quality Assurance Policy. Morogoro: Sokoine University of Agriculture.

TCU. (2020). Undergraduate Admission Guidebook for 2020/2021 Academic Year (For Holders of Form Six Qualification). Dar es Salaam: Tanzania Commission for Universities.

Tick, M. T., Thondhlana, S and Churuma. (2015). Perception of Students and Staff on Quality Assurance in the Department of Mathematics, Statistics and Educational Studies in Zimbabwe Open University Midland Region. Asian Journal of Humanities and Social Sciences. Vo. 3 (1).

UNESCO (2018). School Inspection Challenges: Experiences from Six Countries. Paris: Global Education Monitoring Report.

UN. (2016). The Sustainable Development Goals Report: New York: United Nations

URT (2000). The Tanzania Development Vision: Dar es Salaam: Planning Commission.

World Bank (2018). What do Teachers Know and DO, Does it Matter? Evidence from Primary Schools on African Education. Policy Research Working Paper 7956 Background Paper to the 2018 World Development Report. Development Research Group

Zavale, N.S., Santos, L.A Dias, M.C . (2016). Main Features and Challenges of Improving Internal Quality Assurance within African Higher Education Institutions. The Case of Eduardo Mondlane University. International Journal of African Higher Education.Vol.2.