



Teachers' and Students' Perspectives on the Implementation of the Vocational Education Stream in Secondary Schools in Kilimanjaro Region, Tanzania

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Abstract : This paper explores the implementation of the Vocational Education (VE) stream in secondary schools through the perceptions of teachers and students in Kilimanjaro Region, Tanzania. The study is based on the Human Capital Theory (HCT) and it involves examining the perception of the stakeholders on the relevance, practises, and outcomes of VE stream that is implemented to facilitate the attainment of employability and self-reliance. Data collection was done using a qualitative descriptive, case-study design which included twenty-four (24) participants; such as three heads of schools, six teachers and fifteen students; through semi-structured interviews, focus-group discussions and classroom observations. Thematic analysis has shown that VE is taken as a relevant means of developing practical competence, creativity and life skills that equip learners to the labour market. Nonetheless, the lack of resources, teacher training and the presence of social stigma regarding vocational courses are the obstacles to its implementation. Participants pointed out that VE promotes problem solving, collaboration and innovation, which is consistent with national initiatives of Education for Self-Reliance (ESR). The research paper concludes with the view that changes in the implementation of the study should be based on strategic investment in teacher capacity-building, the supply of sufficient tools and material, and community sensitisation to rebrand vocational education as a dignified and sustainable learning process.

Keyword : Vocational Education Stream; Teachers' Perceptions; Students' Views; Human Capital Theory; Kilimanjaro Region.Tanzania.

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INTRODUCTION

Vocational Education (VE) has become a recognised part of the world today as a key element in providing the skills (employable and entrepreneurial) required by the learners to fit the labour market demands of today. In the highly developed nations like Finland, Sweden, and Germany, VE combines the classroom teaching with industry training, leading to a high rate of youth employment and strong innovation (European Commission, 2021; Krötz & Deutscher, 2021). The comparable systems in the United States and Asia show that vocational streams enable the reduction of the gap between the schooling and practical work readiness (Lerman, 2020; Zheng, 2024).

Vocational education is perceived as a pragmatic solution to unemployment of the youth and stagnation in the economies of Africa. According to scholars such as Oketch (2020), VE is able to change societies by rendering technically competent citizens. However, the lack of infrastructure, untrained educators, negative attitudes of the society, and similar problems continue to limit its effects (Paramole & Adeoye, 2024).

In Tanzania, VE is built into the longstanding philosophy of Education for Self-Reliance (ESR) expressed by Julius Nyerere (1967) which prioritised productive learning and self-dependence. This vision is strengthened by the recent policies of the government under the Ministry of Education, Science and Technology (MoEST, 2023), which introduce the vocational streams to the secondary education in addition to general education. This is supposed to be aligned with the industrialisation objectives in Tanzania Development Vision 2025 to help young people gain proper technical skills

to transform the socio-economic landscape of the country.

Although there has been an improvement in policies, the results of implementation are very uneven across regions. According to previous studies Moshia (2020); Kombo (2023); Mwinuka and Farrelly (2023), in most schools, there are no specialised equipment and devices like workshops, machines, and instructional resources. The other hindrances include the preparedness of teachers and the communities. In Kilimanjaro Region, with a number of schools implementing VE streams in the first place, the lived experience of teachers and students can provide a valuable insight into the ways in which the policy is turned into practise.

Even though vocational learning is incorporated in the national curriculum, there is still data that indicates that there is a sustained disparity between policy expectations and classroom practises. Educators regularly have problems with the interpretation and practical implementation of the components, and students feel insecure about the choice of courses and social acceptance. Mohamed (2016) and Kombo (2023) research support the idea that the VE stream is frequently considered to be of inferior quality in comparison to the academic one, which is why some competent students do not even consider taking it. Equally, resource insufficiencies and partnerships with industries are also identified in the MoEST (2023) report as obstacles to efficient delivery.

As a result, one should study VE implementation in the perspective of individuals who are the most directly engaged into it the teachers that facilitate it and the students who have the experience.

Their views will give a concrete evidence on the way vocational learning is operating at school level and what contributes to its success or failure.

LITERATURE REVIEW

Theoretical Framework

This research is supported by the Human Capital Theory (HCT), which at first was developed by some economists (Theodore Schultz 1961 and Gary Becker 1964). The conceptualisation of the theory views education and training as investments that are productive in terms of improving efficiency, skills and net economic returns over a long period of time. Formal schooling and vocational preparation is one type of capital accumulation in the formulation of Becker (1993), which leads to the growth of individual income and national productivity. In educational research, HCT has therefore become a powerful theory in connecting schooling to socio-economic performance particularly in skill-based and industrialising economies.

The implementation of HCT on the vocational reforms in Tanzania makes education as the key input towards labour-market preparedness and entrepreneurship. The theory is similar to Education for Self-Reliance (ESR) philosophy of Julius Nyerere (1967) who believes that learning and productive work and community service should be combined. In this theoretical perspective, VE is understood as more than employment preparation but as a calculated investment with more extensive social returns decreased unemployment, increased innovativeness, and better national productivity.

However, HCT has also faced criticism due to the propensity to prioritise

economic results and under-represent social and cultural, as well as contextual aspects of learning (McGrath & Powell, 2016). The distribution of resources and the lack of institutional capacity in the Tanzanian situation prompts a question of whether all learners can equally turn educational opportunities into economic benefits. These constraints provide reasons to consider the importance of the complementary approaches that explain the contextual factors including social stigma, teacher motivation, and community attitudes variables that became more prominent in the current study.

In its meaning, VE covers learning experiences that prepare students with practical and technical skills in the given trades or professional areas (ILO, 2019). It is clearly aimed at filling the gap between theory and practise at the workplace. In the Kilimanjaro Region, where VE streams have been implemented in some secondary schools, the subjects provided are tailoring, agriculture, information and communication technology (ICT), creative arts and mechanical engineering (MoEST, 2023). These fields equip the students towards the employability as well as self-employment which mirrors the national agenda in transforming industries and ensuring economic sustainability.

Vocational education has been institutionalised internationally as a part of the national development strategies. In Germany, as an example, the model of dual system combines the learning in schools with the apprenticeships, which allows the students to get the direct experience in the industrial sphere (Deissinger, 2015). On the same note, Finland and Sweden have incorporated vocational modules into general education systems, which has led to high youth employment rates and

enhanced social cohesion (European Commission, 2021). Countries like South Korea and China in Asia have used VE to foster innovation and technological development, despite the fact that the society still favours academic routes (Zheng, 2024). Taken together, these experiences worldwide prove that vocational systems can be successful due to the coherence of the policies, proper resourcing, and sound school-industry relationships.

In Africa, vocational education has been advanced as a strategic instrument of dealing with unemployment and poverty. Nevertheless, there are still major implementation issues. In Nigeria and Kenya, as an illustration, VE is commonly seen as a second-best alternative to be used among academically underperforming students (Paramole & Adeoye, 2024), whereas in Ghana, low fit between the curriculum and labour-market demands is a threat to the relevance and efficiency (Oketch, 2020). It is always emphasised by scholars that successful vocational programmes need adequate funding, professionally trained teachers and the society as a whole to reevaluate the value of vocational work as dignified and worthwhile.

The idea of incorporation of vocational education into secondary schooling in Tanzania is based on the initial philosophy and hopes of ESR and Tanzania Development Vision 2025. The Ministry of Education, Science and Technology (MoEST, 2023) defines VE streams as learning frameworks that are the result of the integration of theoretical learning and practical experience to encourage creativity, innovation, and self-employment. Although this progressive policy is adopted, a number of studies have

reported persistent inadequacies. Moshia (2020) cites inadequate teacher readiness and insufficiencies of teaching materials; Kombo (2023) emphasises the continuing negative social judgments that frame VE as inferior; and Mwinuka and Farrelly (2023) recognise plural inconsistent linkages in the industry that restricts effective exposure. These structural and cultural barriers, when combined, create background on which the current study examines the lived experiences of the teachers and students of Kilimanjaro Region.

Empirical Literature Review

The article is called Stakeholder Involvement in the Delivery of Vocational Education: A Case of the UK Secondary Schools by Semali (2024). The research was done in the United Kingdom and it was meant to examine the manner in which the teachers and school administrators organise policy in vocational education in the secondary schools. The mixed-methods study design based on surveys and structured interviews with 200 teachers and 50 school heads revealed that administrators and teachers can play a crucial role in supporting vocational education but have constraints of training, infrastructure and collaboration. It proposed to empower teacher development and school-industry relationships. The missing point in the study was the lack of consideration of the experience and perceptions of the students. The paper was able to address this deficiency by incorporating the voice of teachers and that of students in Tanzania which would give a comprehensive view of the vocational education implementation and bringing out the interrelation between the preparedness of

the teacher and the motivation of the student in the local environment.

The article by NA (2021) analysed Teachers Role in successful Implementation of Vocational Education: A South Korean Perspective which was held in South Korea. The qualitative case study was centred on the classroom observations and teacher focus groups in five secondary school to determine the impact of teacher competence on vocational education outcomes. The results indicated that most of the teachers were not trained in pedagogy and technical skills and were therefore teaching theories and not practise. The research suggested continuous professional growth and increased contact between vocational colleges and secondary schools. This significant gap in the research was the absence of the perception and contextual cultural influences of the students. This was furthered in the paper to investigate the perceptions of teachers and students in Tanzania and how local issues including inferior facilities and poor attitudes of society influence implementation as far as teacher potential is not the only factor.

The study that was conducted by Mayega (2016) is titled Vocational and Technical Education and Youth Employment: Lessons in Dodoma Municipality Secondary Schools in Tanzania. This was done to identify effective vocational subjects and practises that enhance youth employability. A qualitative case study design was used and the data was gathered using interviews, focus groups and document analysis of 72 respondents made of teachers and students. Results revealed that practical course subjects such as motor mechanics and commerce increase employability but are impeded by bad facilities and teacher

training. The research suggested redesigning the curriculum and stakeholder cooperation with the government. The major gap was that it centred on employability and not the experiences of teachers and students as they go through with VE implementation. This was done by the paper discussing the perception and practise of vocational learning in the day to day life of the schools of Kilimanjaro in which practical interaction fosters invention and independence.

The study by Msangi and Mwila (2024) was about Enhancing Vocational Education in Primary Schools: Evaluation of Teacher Training Efficacy in Ilala Municipality, Tanzania. This was done to determine the effectiveness of teacher training in vocational skills in primary schools. The study, which utilised a mixed-methods approach comprising of 360 participants comprising of teachers, school heads, and education officers showed that there was more emphasis on theoretical knowledge than on practical skills in teacher training, and the lack of resources only worsened the situation. The research suggested lifelong learning, and more resource allocation. Nevertheless, its target on elementary education created a gap in the knowledge of VE application at the secondary level. This paper addressed this gap by putting into context the vocational education at secondary school level whereby teacher capacity is still an obstacle to learning nonetheless, students have the interest in practical learning and therefore they carry on doing so despite the limitation.

In the article, Mosha (2020) examined the Teacher Preparedness and Vocational Education Implementation in Tanzanian Secondary Schools. The

research, which was conducted in Arusha, was meant to analyse the willingness of teachers to implement VE curricula. Based on qualitative interviews and document analysis, it discovered that most teachers had no specialised training and resources and thus presented superficial coverage of the practical parts. Specific training and materials were prescribed in the study. It however did not explore the experiences and perceptions of students. The two sides were also included in this paper, thus enhancing the insight on the impact of ill equipped teachers on the attitudes and performances of VE streams in the Kilimanjaro context.

In *Perceptions of Vocational Education Among Secondary School Students in Tanzania*, Kombo (2023) attempted to examine the attitude of the society to vocational learning. The qualitative study carried out in a number of regions in Tanzania revealed the fact that VE is viewed to be inferior to the academic stream, which does not encourage enrolment or motivation. It advised sensitisation to the populace in order to decrease the stigma. The difference was in the fact that it overlooked teachers' perceptions and realities in the classrooms. This was the focus of this paper that combined the perspectives of both teachers and students to realise that despite the negative perception, both teachers and students can encourage positive changes towards appreciating VE through collaboration.

The study by Mwinuka and Farrelly (2023) *Industry Linkages and Vocational Education Implementation in Tanzanian Secondary Schools* was aimed at evaluating the effect of school industry partnerships on VE quality. Interviews and field observation were utilised in the study,

and weak associations, poor exposure to practical training, and inconsistent evaluation criteria were discovered. The authors proposed to create standardised assessment systems and official collaboration with industries. Its absence of interest in classroom-level experiences was its gap. This addressed this by recognising how educators and learners mediate and survive on these systemic constraints in everyday life, which backs that a lack of strong collaboration in the industry directly hinders skill gaining and employability.

In his work, Oketch (2020) conducted a comparative study and called it *Vocational Education and Employment Outcomes in Sub-Saharan Africa: Lessons for Tanzania*. The study based on the cross-sectional data of Kenya, Ghana, and Nigeria found that VE helps to increase the employability of youth, but it has faulty resource distribution and ineffective responsiveness to market demands. It advised total policy changes and involvement of stakeholders. This gap consisted in the lack of micro-level attention to school experiences. It was an answer to this question because the study provided qualitative data about the Tanzanian classrooms, where the teachers and students pointed at the creativity, life skills, and resilience as the most important outcomes of VE.

Thus, the analysed literature demonstrates an opinion on the transformative potential of VE but demonstrates long-term implementation flaws that are especially poor facilities, lack of training of the teaching staff, and the stigma associated with it. It further points out the lack of micro level, perception-based research in Tanzania. This loophole supports the importance of studying the

opinions of teachers and students in the Kilimanjaro Region.

METHODOLOGY

The research was conducted as a qualitative study, which falls into a descriptive case-study design, and which allowed exploring the experiences and meanings held by the participants in-depth (Creswell & Poth, 2018; Yin, 2018). This methodological orientation allowed the flexibility to be able to get finer refinements of VE implementation as it takes place in the real school setting. Moreover, it was designed accordingly to the spirit of exploration that aimed at evoking subjective assessment of teachers and students instead of measuring the established variables.

The study involved three secondary schools in the Kilimanjaro Region that had VE streams. The selection of the region was intentional since it is one of the first areas to implement the VE policy and have vast number of secondary schools offering the VE streams comparing to other regions, providing relatively varied vocational subjects and formed collaborations with local industries. The socio-economic environment of Kilimanjaro, typified by a combination of rural and semi-urban populations thereby offered a reflective and relevant situation in determining the extent, applicability, and difficulties of VE implementation.

The population of interest included the school heads, teachers and students who were directly involved in the vocational stream. The participants were chosen on a purposive basis (24 subjects): three heads of schools, six teachers working with VE, and fifteen students studying in vocational stream lessons. This was appropriate sampling since it involved

inclusion of information rich participants who could express in depth practical experiences (Cohen et al., 2017). These roles combined to provide triangulation between the institutional, instructional, and learner level and thus provided deeper and more credible insights.

The combination of three data collection methods produced a holistic picture of VE implementation. The semi-structured interviews with school heads and teachers provided elaborate accounts on policy understanding, pedagogical behaviour and perceived limitations. Collective experiences and motivations and attitudes of the students towards VE were discussed in Focus Group Discussions (FGDs) and direct observation offered first-hand insights into the classroom setting, available facilities, and interactions between teachers and students during the practical. The sessions were all recorded on audio with the consent of the participants and transcribed verbatim so that the authenticity of the voices of the participants is maintained.

Thematic analysis of data was performed in accordance with six phases suggested by Braun and Clarke (2006): familiarisation, coding, theme development, review, definition and interpretation. The manual coding was also to be done to find out the common trends regarding VE implementation, especially the perspective of teachers and students. The new categories were then categorised under four broad themes problem solving skills, technical competence, life skills and employability that are the basis of the findings section that follows.

In order to achieve research rigour, the trustworthiness criteria of Lincoln and Guba (1985) were used. Triangulation of the interviews, FGDs, and observations led

to credibility, which brought authenticity and accuracy. The reliability was ensured through an open audit trail of all the methodological decisions and data management procedures. The confirmability was facilitated by providing direct quotes of the participants, thus reducing researcher bias in it, whereas Transferability was facilitated by the rich description of the context that allows making meaningful comparisons with other Tanzanian settings.

Lastly, the St Augustine University of Tanzania Research Committee and other authorities in the region given the relevant education on the importance of conducting ethical research were sought to give ethical clearance. Each respondent gave informed consent and guaranteed confidentiality and voluntary participation. During findings reporting, pseudonyms were used to maintain anonymity.

RESULT AND DISCUSSION

This section shows and explains the study results in regards to teachers and students' views about the application of VE stream in secondary schools in the Kilimanjaro Region. The analysis of the data was conducted on the basis of their themes, and they were discussed with references to four main themes which appeared after the analysis of the data on the basis of the interviews, focus-group discussions and observations: Development of problem-solving skills; Acquisition of technical competence; Life-skills formation and socio-emotional development; Vocational employability and self-reliance.

Problem-Solving Skills

The teachers and the students repeatedly emphasised that vocational

education develops critical thinking and creativity because of the aspect of hands-on. Practical subjects were regarded as a way through which the students get to put the concepts they learn in the classroom to real life issues. One teacher explained:

“Vocational education assists the students to think and comprehend the application of knowledge in solving local problems. Tailoring people, as an example, may repair the school uniforms and even work out some income-generating projects in the school” (Interview, Teacher, July 2025).

A student in one focus-group discussion confirmed:

“We are taught how to prepare and repair things. This will enable us not to rely on other people even after school.” (FGD, Student, July 2025)

These perceptions mirror the connexion between VE and Education for Self-Reliance (1967) by Nyerere who preached learning through effective working. The educators noted that students learning through problem-solving projects gained more initiative and confidence, which correlated with the hypothesis of Becker (1964), according to which an investment in practical skills would make humans more productive. This discovery aligns with Oketch (2020), who has stressed that the vocation-based problem-solving ability directly leads to the national innovation and labour-market flexibility.

Nevertheless, other instructors noted that the success of this kind of training was ruined by the lack of tools and consumable materials. One of the teachers mentioned that students are interested and

have ideas, but the workshops are poorly equipped and we cannot always transform ideas into practise. This finding aligns with that of Kombo (2023) who designates a shortage of resources as a serious drawback in the Tanzanian implementation of VE.

Technical Competence

Technical mastery was named as the most concrete product of vocational education by the participants. Educators emphasised that students learned such skills as tailoring and electrical wiring, as well as simple agricultural methods and ICT functions. A teacher remarked:

"Students are empowered through vocational subjects to have the technical knowledge on how to use the basic machinery and tools. It renders the learning process more interesting and applicable even after the examinations." (Interview, Teacher, July 2025)

The data obtained through observation proved that practical sessions helped to make learners more motivated: students were able to work in small groups with sewing machines, horticultural equipment, and computers and were clearly excited. Teachers explained VE lessons by saying that they were dynamic and student focused, unlike the traditional lecture based lessons. This result aligns with the findings of Hashim and Ibrahim (2020), who determined that practical training provokes the learner activation and the ability to maintain the skills in the long term.

Even students realised the importance of technical competence. One student commented:

"I now am able to fix small electrical defects. My mother and father have begun to have confidence in me that I can repair things without being harmed." (FGD, Student, July 2025)

These results are consistent with the evidence provided by the European Commission (2021) that vocational training has a direct effect on individual empowerment and innovation on a local scale. Technical competence, so developed, is therefore not an end point of the curriculum, but a revolution that bridges the gap between school and the real world.

However, teachers complained about the issue of assessment standardisation. Additional practical assessment was also subjective and impaired by the absence of articulated rubrics or the practise of moderation, which resonates with Mwinuka and Farrelly (2023), who discovered unequal appraisal systems within Tanzanian VE programmes. Such inconsistencies have the potential to cast doubt on the integrity of vocational qualifications and must be solved by national guidelines.

Life Skills and Socio-Emotional Growth

According to both the teachers and students, the VE stream was the device that led to the growth of non-cognitive skills such as teamwork, discipline and communication. Students have stressed that project-based work involved cooperation, patience, and diversity. One student said:

"In job skill classes, we are engaged in groups. We are taught to respect one another as well as be patient when carrying out practical work." (FGD, Student, July 2025)

This was mirrored by teachers who said that the cooperative aspect of VE fostered empathy and shared responsibility. A school leader claimed that students who are involved in group projects demonstrate better behaviour even when they are out of school. This testimony can be used to reinforce Holp (2023) who maintains that social responsibility and motivation were more influential in ethical and values-based learning environments.

Regarding the HCT view, these soft skills are non-material but fundamental elements of human capital that are complementary to technical skills (Becker, 1964). The results thus make HCT more than its economic interpretation to include social and moral competencies that perpetuate employability.

Vocational Skills and Employability

There was a consensus among the participants that VE enhances employment opportunities and entrepreneurial preparedness of students. Educators noted that professional courses equip students to enter the labour market or start small businesses. One teacher noted:

"Our vocational stream students have an opportunity to become tailors or mechanics. Some of them are even able to use their skills to earn money in the community before graduating school." (Interview, Teacher, July 2025)

The same optimism was expressed by students. A respondent explained:

I have selected vocational subjects since I would like to have a practical thing to use after school." (FGD, Student, July 2025)

These views are congruent with those of Mosha (2020) and Oketch (2020), who believe that vocational education eases the gap between education and employment by providing the learner with competencies that are applicable to the job market. They also confirm the thesis put forward by Becker (1964) that human capital development leads to the creation of both individual and societal gains.

Nevertheless, even with their zeal, several students said that they are worried about the existence of social stigma. Other students and parents considered vocational streams as being options to less academically endowed students. One student complained that some of their classmates will take the opportunity to taunt them by saying that they are taking easy subjects, yet they do not realise just how difficult it is to create something with your hands. This stigma reflects something similar to the status divide reported by Paramole and Adeoye (2024) in Nigeria and Kenya. The fact that these attitudes persisted indicates the cultural aspect of implementation of VE which requires long term sensitisation efforts.

Altogether, the results prove that the attitude of teachers and students to vocational education is rather positive, as they see it as an opportunity to get closer to practise, innovation, and livelihood. However, their hope is entwined with disappointments over the lack of facilities, teacher training and stigma. These outcomes resonate with the two-sided implementation of VE observed in the broader literature: enthusiasm of policy implementation versus shortcomings of operations (Kombo, 2023; Mwinuka & Farrelly, 2023).

The relationship between the results of the study and HCT lends

credence to the argument of the economic worth of education which is rooted in quality inputs in the form of trained teachers, proper tools and conducive cultural settings. In places where these elements exist, vocational learning changes not only attitudes but also results; in places where they do not exist, the system stands the risk of reinforcing disparity and demoralisation.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This research was aimed at investigating the perceptions of the teachers and students on the introduction of the vocational stream of education in high schools within the Kilimanjaro Region. The results confirm that VE is popular in developing practical competence, innovation and independence among students. Vocational subjects are considered to be effective pedagogical tools to teachers so as to combine theory and practise, whereas they are interesting, meaningful and empowering to students.

However, the issue of poor infrastructure, inadequate professional training, uneven evaluation, and ongoing social stigmatisation may hinder the maximisation of the potential of the programme. The study ends by concluding that VE, with proper support, can be a strategic engine of Education for Self-Reliance and Vision 2025 of Tanzania by creating graduates who can creatively engage in the economy.

Recommendations

Continuous professional development (CPD) programmes relating to pedagogical and technical training of vocational teachers should be introduced

in the Ministry of Education, Science and Technology. Practical exposure can be increased in collaboration with VETA and local industries.

Vocational Education streams implemented in schools need well-equipped workshops, modern machinery and consuming materials. District councils are to provide specific budgets and consider the possibility of partnering with the business to maintain these resources.

The competency-based assessment tools developed by the National Examinations Council of Tanzania (NECTA) ought to be in a way to depict a practical performance instead of theoretical recall. Consistent moderation will enhance credibility and trust in the society.

School guidance units are needed to assist school students in making informed subject selection in respect to interests and labour-market opportunities, which will result in higher enrolment and lower dropout in VE streams.

The parents and communities should be sensitised by the educational authorities and the media to appreciate the usefulness of vocational education as an equivalent alternative to academic tracks. The minimization of stigma will help to increase the level of social acceptance and student motivation.

Schools are supposed to make arrangements with local businesses to get internships, mentorship, and project funding. This kind of collaboration will make training be relevant to the demands of the market.

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