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RESEARCH ARTICLE

Implication of Higher Education Institutions' Learning Environment on Students' Attitude to Learn Sustainable Labor Market Competencies in Tanzania: a systematic review

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Author's Contributions

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ABSTRACT

Higher education institutions' learning environment is very important for students' attitude to learn labor market competencies. The objectives of this paper is to analyze the strengths, challenges and opportunities encountered by higher education institutions in Tanzania in the course of promoting labor market competency learning among university students. This research employs a qualitative method with a systematic literature review approach focusing on reviewing the implications of higher education institutions' learning environment on students' attitude to learn competencies for sustainable labor market in Tanzania. Results reveal that higher education institutions in Tanzania play a core function in the implementation and achievement of competency learning including; developing required skills and competencies among students, working with different institutions to promote sustainable labor market competencies and conducting research. However, challenges are encountered including challenges in teaching and learning process, increasing number of unemployment among graduates, the number of learners in some higher learning institutions being relatively higher than the recommended number, meager budget, and graduates' lack of necessary competencies in the job market. The article recommends taking action to harmonize the situation so as to allow smooth implementation of competency learning and development by encouraging more research on education provision processes, encouraging entrepreneurship and job creation skills among higher education learners by universities and policy developers for sustainability. Moreover, the government could support public and private universities more equitably so as universities can sustainably create supportive environment for learners' attitude in developing job market competencies.

Keywords: Sustainability; higher education; policy developers; competency learning; unemployment

INTRODUCTION

In order to promote job market competencies among university students, teaching and learning environment should be suitable (Randy, 2017). This is not only for students' learning but also for lecturers' teaching. Such kind of environment ought to promote students' attitude to learn competencies for sustainable labor market. Globally, universities are responsible for knowledge and

innovation production, diffusion and developing skilled graduates capable of applying and synthesizing knowledge and renewing competencies across all sectors (Jan & Hanne, 2021). Universities are potential institutions for the development of graduates' skills and competencies required in the job market and national economy (GUNI, 2017). Nevertheless, the processes through which learners

develop these competencies, is a matter of agency in research. This paper focuses on first, exploring the way universities' learning environment promote students' learning of job market competencies in Tanzania; secondly, assessing challenges in universities' learning environment for promoting students' learning of job market competencies; and thirdly, examining the opportunities for universities in promoting students' job market competencies. NASEM (2013) asserts that universities have a role to produce educated students who in-turn include founders of new companies, employees and customers of those companies. Khelalfa and Sabrina (2023) stress that the university has three basic functions; education, scientific research and community service. All these functions require learners to develop the key competencies.

Luhanga et al. (2003) contend that expectations of Africans from universities after independence were to produce skilled indigenous human resources for managing challenges, generate developmental research, and gear social transformation and services. This marks the essence of developing competencies among learners in the contemporary higher education. The University of Nebraska (2023) identifies four lifelong learning competencies namely; critical thinking, creativity, communication, and collaboration. Carnevale et al. (2020) stress that these competencies are important since communication enables workers to converse with clients and colleagues in accomplishing targeted objectives. Collaboration unites workers in completing shared responsibilities through skills like persuasion and social integration. Critical thinking and creativity enable workers to identify challenges, create solutions, measure results and foster interpretation. Hyttinen (2024) asserts that Tanzania's national system of innovation emphasize the increasingly active role HEIs should play in sustainable development.

Khelalfa and Sabrina (2023) argue that in 2002, the United Nations announced that 2005-2014 was the education decade for sustainable development aiming at integrating the principles and practices of sustainable development into all aspects of education and learning. Luhanga et al. (2003) assert that higher education institutions in Tanzania have indicated some developments globally and regionally on students' enrolment expansion, improved scope and delivery mode of academic program and enhancement of university-society linkage.

University institutions have increased from one University College in 1961 to the current 60 Universities

(34 full-fledged universities, 15 University Colleges and 11 University Campuses, Centres and Institutes (TCU, 2019). Out of the total 34 recognized full-fledged Universities in Tanzania 12 are public universities and 22 are private universities. The total number of students enrolled in Tanzania universities by 2023/2024 was 254,000 (TCU, 2024). Mushi (2009) contends that the Education and Training Policy of 1995 enabled higher education reforms and expansion for accessibility, better meeting globalization challenges and market economy. The increase of these institutions has significantly produced more graduates for the job market. TCU (2019) claims that increased number of universities suggests increased investment in higher education, though calls for more investment in quality assurance systems enabling realization of Vision 2025 which envisages in high quality livelihood and a well-educated society.

Despite developments in higher education in Tanzania, there are challenges in education at different education levels which limit achieving socioeconomic requirements and lead to producing incompetent graduates who could not compete at the labor market (URT, 2014). Challenges in higher education include financing and quality output (Kalolo, 2025), failure to adapt dynamic demands of socio-economic African environment, financing, questionable relevance of some academic programs, increased number of unemployment and poor quality output, political interference in some universities, some academicians getting in politics leading to unfairly handling academic issues, and overcrowding of university classes (Luhanga et al., 2003). The challenges may have implications to learning environment with high chance of affecting students' attitude to learn competencies for sustainable labor market in Tanzania.

Soomro and Farooq (2018) attribute learning-environment to students' development of skills such as communication. They consider learning environment to include various physical venues, cultures, and contexts in which students learn. Soomro and Farooq propose that a positive environment enhances students' interaction to confidently express ideas, concepts, views, and feelings. Seatter and Kim (2018) contend that teaching sustainable development in higher education requires a transformative pedagogy which enhances learner's beliefs, engagement and critical thinking potential. Teaching through a non-substantive pedagogy leaves students without insight, commitment, and ownership of meaningful beliefs and actions. A

transformative pedagogy helps to build a sustainable individuals and society. It is therefore important for universities to create such suitable learning environment for students' competencies learning.

Randy (2017) affirms the effectiveness of the university training in response to the industry employers' needed skills namely; communication, computer skills, critical thinking, problem solving, research, teamwork, planning, time management, productivity, creativity and character. These skills are highly needed and critical for workers in a competitive job market (Brewer, 2013; Carnevale et al. (2020). Rubeba (2025) asserts that students perceive content, pedagogical, assessment and technological competencies to be the key indicators of lecturers' teaching competencies improving the teaching and learning process. This implies that university lecturers should master the perceived competencies and link them to students' needs, beliefs and aspirations during their teaching.

Some of the initiatives for tertiary education development in Tanzania include management of quality assurance and relevance. It has been a government desire that accessibility improvement to higher and technical education liaises with quality assurance for the education provided. However, there has been a feeling that the quality output and relevance of education is in question (URT, 2014). To handle that, the Ministry of Higher Education, Science and Technology established both the National Accreditation Council for Technical Education [NACTE – 1997] and the Universities Act No.7 (2005) establishing the Tanzania Commission for Universities [TCU] for coherent management and quality assurance for the technical and University education respectively (Msolla, 2007).

Many found literatures do not reveal how the learning environment suitability in higher education institutions links to students' attitude on learning sustainable job market competencies. Therefore, this paper intends to analyze the strengths, challenges and opportunities encountered by higher education institutions in Tanzania in the course of promoting labor market competency learning among university students.

METHODOLOGY

The study employs a desktop study where a systematic literature review approach is used to establish implication of higher education institutions' learning environment on students' attitude to learn sustainable labor market competencies in Tanzania. The objectives

of the study guided as the inclusion and exclusion criteria for documents to review. Only related documents including twenty five articles were reviewed, specific cases from the University of Dar es Salaam (public) and St. Augustine University of Tanzania - Mwanza campus (private) were taken because of long service in education provision (63 and 27 years respectively). Guidelines from Tanzania Commission for Universities (TCU), Ministry of Education and Vocational Training (MoEVT); and Higher Education Students' Loans Board (HESLB) were reviewed in making this article viable. Research Gate and Google scholar were used as the research base in this study.

FINDINGS AND DISCUSSION

The paper analyses the strengths, challenges and opportunities related with higher education institutions' learning environment in promoting students' attitude to learn competencies for sustainable labor market in Tanzania. URT (2008) affirm that on the component of learning environment, the government of Tanzania envisages that learning environments should be suitable for all subjects and learners, and conducive to the acquisition of required knowledge and skills. The indicators for the improved learning environment include first; creating higher education teaching and learning space consisting of lecture rooms, laboratories, libraries and seminar rooms. The second indicator is creating STEM facilities such as workshops, laboratories and incubators. The third indicator is using ICT platforms like e-libraries and data management platforms. The fourth indicator is ensuring staff and students satisfaction with teaching/learning and research environment. URT (2025) inform that the strategies to achieve these indicators include improving the quantity and quality of teaching/learning facilities including education curriculum. These strategies are expected to result to better learning outcomes and enhanced access to knowledge, information sharing, collaborative learning and research.

Strengths

In 2004 the government enacted a law to establish the Higher Education Students Loan Board (HESLB) (URT Act No. 9, 2004) to manage students' loan scheme primarily to facilitate access to higher education. The scheme provides eligibility for loan to all university students including students from public and private universities. This initiative resulted to increase in student loans to needy of higher education students from 51,772 in 2006/07 to 55,584 students in 2008. The

number increased to 220,376 beneficiary undergraduate students in 2023/2024 (HESLB, 2023). Further, loan management software system was also established in 2007/08 to enhance performance of HESLB in processing loans. All this intended to create smooth learning environment for students. Results reveal that higher education institutions in Tanzania play a core function in the society in promoting economic growth and development. Higher education provides high quality skilled labour, scientific innovation and technology, improves social services like health and education, professional advisory services and consultancies, knowledge economy, and civic competence for a healthy democracy (Makulilo, 2014). This is likely to promote competency learning including; developing and refining required skills and competencies among the potential incumbents in the labor market.

HESLB (2024) declares placing special consideration on various applicants groups to ensure balance in equity and national priorities. Loan allocation is prioritized to vulnerable social economic groups, academically strong students and program cluster ranking. With this regard, not all qualified university students get loans in Tanzania because the Higher Education Students' Loans Board (HESLB) has limited funds (Makulilo, 2014). Loan allocation is based on neediness, academic excellence, and programme clustering. Consequently, limited funds may lead to inequality in access since not all who qualify access the loan. HESLB (2024) reports that it may provide the loan to cover all or some of the following items; meals and accommodation, tuitions fees, stationeries, special faculty requirements, field practical training/teaching practical and research. Nevertheless, given the small size of the fund for loan is provided based on the applicant academic performance where only applicants with better qualifications qualify for the loan, (URT, 2008). This means that not all students who qualify to enroll in higher education can access the loan. Even among those who get the loan not all get one handed percent so still face challenges which may hinder their smooth learning environment and thus affect their attitude to develop requisite competencies

Innovation hubs and community engagement

At the University of Dar es Salaam there is an innovation hub [UDICTI] which addresses quality education through learning job market competencies beyond classroom. UDICTI (2025) promotes critical thinking and creativity through providing progressive

feedback for learning while using innovation to deliver education products for students and community. UDICTI collaborates with partners to drive climate action and solutions to climate change, creating a global community of innovators and problem solvers for a sustainable future. Zahoro & Banele (2024) highlight the critical role of business support services in enhancing the performance of digital entrepreneurs, fostering innovation and economic growth at the UDSM Hub. Regarding to decent work and economic growth, UDICTI (2025) promotes entrepreneurship and workforce development and collaborates to drive innovation to achieve sustainable economic growth. Misso et al. (2024) contend that these hubs guide students through creating and implementing solutions to real-world problems, significantly contributing to innovative products, solutions, entrepreneurial skills development, and stirring social innovation. Unfortunately, literature does not tell how many students participate in the innovation hub activities at the campus.

At SAUT, there is SAUT Service-Learning Program (SSLP) since 2017 serving to integrate community service with academic study, reflection, and analysis to enrich the learning experience of students, teach civic responsibility and strengthen communities. SSLP achieves this through partnerships and collaboration, mentorship and exposing the young people to professional development opportunities. Through this students acquire and develop relevant work-based skills, leadership, critical thinking and problem-solving, as well as collaboration skills (Schreiber-Barsch & Eble, 2023; Mitchel & Howells, 2019). Siyengo (2020) found that Service Learning at SAUT contributes on transforming university students and teachers' perspectives. Further, it helps in professional preparation, skills and experience acquisition and empowering and supporting local community. However, a few students take part in SSLP, Schreiber-Barsch & Eble, (2023) show that only less than fifty students participated in 2023. Activities done by UDICTI and SSLP provide students opportunities to interact with each other, experts, national and international communities where they get to learn more skills and competencies beyond the classroom level. This provides a positive environmental platform likely to promote students attitude to learn job market competencies. However, the number of students participating in the innovation hub activities need to be up-scaled.

Challenges

Higher education institutions face a number of challenges and these challenges affect learning environment for students (Kotecha, 2012). Commonly mentioned challenges include; meager budget allocation to education, questionable relevance of some academic programs, increased number of unemployment and poor quality output (URT, 2014), political interference in some universities, some academicians getting in politics leading to unfairly handling academic issues, western neocolonialism affecting universities programs, and overcrowding of university classes leading to questionable quality output (Luhanga et al. 2003). Titlestad (2013) observes similar challenges in African universities and calls for global membership, open, distance and online education among higher education institutions to address the challenges.

Overcrowding of university classes

The challenge of overcrowding of university classes lead to questionable quality output since it compromises the recommended standard of lecturers-student ratio. The TCU (2024) report reveals that Tanzanian universities with education cluster in 2023/2024 enrolled 27,731 students in universities for the first year. Meanwhile the number of lecturers was 836. If this number would be the same in the second and third year, universities with education cluster would have 81,993 students bringing about a lecturer- student ration of 1:98. According to the TCU (2019) guideline, the recommended lecturer-students ratio should be 1:50, though this should be more interpreted at the departmental level. Big classroom accommodating about 300 students, students moving with chairs from one class to the other, students queuing to access books from libraries were common challenges in Tanzania and all these hamper students' learning which limit their skills. Private companies have complained about inability of fresh graduates (Istoroyekti, 2016). Luambano (2013) reveals that there were psychological effects such as dissatisfaction, stress, frustration, depression, trauma and anxiety due to overcrowding in the halls of residence at the University of Dar es salaam. The participants disclosed that those psychological effects affected them in classroom participation such as losing classroom concentration, being ineffective in classroom tasks, lack of classroom attendance and having weak or incomplete course work.

Shortage of funds for students loan

Despite a good intention of the government to establish Higher Education Students Loan Board (HESLB) in 2004, the fund allocated to education is always insufficient to cater for the needs of all students who qualify to enroll in higher education (URT, 2004). The loan is provided based on the applicant academic performance. This limits accessibility to higher education especially for students who come from low socio-economic status families (Makulilo, 2014). Even those who endeavor the studies take a risk of studying under harsh financial environment which may significantly compromise attitude to learn requisite job market competencies. URT (2025) informs that the financial allocation for higher education declined significantly, peaking at 15.0% of the budget in 2019-2020 and falling to 8.8% in 2022-2023. This reduction suggests a possible shift in resource allocation to other educational priorities or emerging needs. The unit costs have dropped from 5,664,787 TSh in 2019 to 2,205,177 TSh in 2023, taking into account the budget decline. Funding for higher education was far less prioritized. Rupia (2017) suggests strategic budgeting and proper utilization of physical, financial, human and technological resources for better results. When financing in HEIs is in question, competency learning may also be in doubt.

Quality of HEIs policies and guidelines

TCU (2019) observes HEIs questionable institutional policies and guidelines in order to acquire fully-fledged status. Kazoka et al. (2024) observe a gap between HEIs-stakeholders engagement in addressing sustainability issues. This implies that some universities may need to work hard to improve their policies and guidelines. TCU (2019) points out that the management tools include documents like academic policy, gender policy, community engagement policy, research policy and examination policy. If a university has no such documents or has documents below the required standards may create questionable environment for students to acquire and develop job market competencies. Kaijage (2020) confirms that after audit, Tanzania's Commission for Universities (TCU) ordered closure of two university colleges and suspended enrolment in 12 others in the 2018/2019 academic year due to quality lapses. Such documents delineate clearly what students ought to do to in developing requisite competencies. Weak or lack of such policies can discourage competencies development among students if directives and procedures are not clearly stipulated.

TCU (2019) clearly delineates that it is important for the university to have a clear educational policy, expressing evidently the principles of choosing the programs and settling its profile. The policy should be expressing clearly rules for curriculum design, curriculum revision, and involvement of all stakeholders. There should be a practice of moderation of examinations to ensure quality. The assessments should have clear and published grading criteria for passing and failing. The academic staff should be competent and qualified for their job with regard to the set criteria of academic performance. Elmes (2016) put forward that the Education ministry was analysing a report into the quality of higher education and was contemplating to close down substandard institutions.

Quality and quantity of other facilities

TCU (2019) observes that the university should have enough lecture halls, seminar rooms, laboratories, reading rooms, and computer rooms to meet the relevant requirements. The library should be sufficiently equipped for education with hard copies of books, computers and accessible electronic recourses ranging from reliable internet to on line books, Journals and articles. Furthermore, there should be accessible hostels for students' accommodation). Komba (2017) affirms that assessment of trends in financing higher education in Tanzania reveal underfunding of higher education sector by the government. This trend affects the accessibility, equity and quality in higher education. The major concern is if higher education is underfunded, can the quality of requisite materials and infrastructure like lecture halls, seminar rooms, laboratories, reading rooms, and computer rooms, library and its accessories as well as accommodation meet the standards?. It is worth pondering if this situation can promote students' attitude to develop requisite competencies for the sustainable labor market. Mtitu (2025) proposes the need for consistent policy application, improved communication, adequate resource allocation, fostering a culture of quality and addressing structural challenges for HEIs in Tanzania to adopt quality strategies and enhance outcomes for their students.

Shortage of graduates' competencies

Frequent shortage of graduates' practical competencies required by employers limits graduates' employability opportunities in sub-Saharan countries (Dishon et al., 2023). According to URT (2018) the Tanzania development vision 2025 envisions a significant technological up-skilling of Tanzania human resources

which implies a need for improved technical and vocational education as well as STEM in higher education. Nevertheless, basing on the rapid expansion in basic education, and financial constraints in the government budget allocation to education sector there is a need of increasing efficiency in utilizing available resources, and increasing investment by private sector in higher education so as to achieve the goals. Kibona (2023) observes that while students in Tanzania report that the emphasis on their learning in classes is firmly on developing employment competence, they also expressed their dissatisfaction with how the university curriculum is preparing them for the world of work. Proper utilization of available resources, public-private partnership in providing education and curriculum review remain the hopeful opportunity though with pending challenges.

Graduates' employability

Kimaro (2017) discloses that students reported their classroom learning to emphasize on developing employment competence. However, their dissatisfaction was on how the university curriculum was preparing them for the world of work. Students addressed imbalance between practical and theoretical learning and the insignificance of the curriculum to the changing needs of society. Kimaro notes that only about 5.7% of Tanzanian graduates find jobs in the formal sector, leaving most of them jobless. Kamuhabwa (2019) concurs with (Mbalamwezi, 2015) that the factors for youth employability challenges are poor education quality, improper education system not training in entrepreneurial skills, employers' overcapitalization on work experience which makes adults experienced at work to be preferable to the youth as non experienced job seekers. This may pose potential threat to students' attitude to learn job market competencies if after completion of studies there is no hope of getting employment.

Opportunities

Hyttinen (2024) associates sustainable leadership with educational institutions and introduces seven principles characterizing sustainable leadership namely; fostering continuous learning, pursuing long-term success, embracing communicative and inclusive decision-making, advocating for social justice, respecting human and material resources, promoting diversity, and engaging with the community. The characteristics denote a significance of public-private partnership in up-scaling job market competencies among learners in higher education institutions' learning environment in

promoting students' attitude to learn competencies for sustainable labor market. Kazoka et al. (2024) contend that a university cannot achieve its strategic thrusts without active internal stakeholders. These stakeholders include staff and students who are central to putting the strategy into action. Coordinating internal stakeholders involves bringing everyone together to discuss how strategic goals can be achieved. TCU (2019) informs that HEIs ought to have strong institutional policies and guidelines in order to acquire fully-fledged status for better teaching and learning process. These policies include a human resource policy, a quality assurance policy, a community engagement and outreach policy, a gender policy and a library/ICT policy.

Kazoka et al. (2024) contend that for HEIs to address sustainable challenges, they need to engage stakeholders in their activities through developing practical strategies and policies. The identified potential stakeholders comprise of regulatory bodies such as Tanzania Commission for Universities (TCU), Higher Education Students Loans Board (HESLB), National Council for Technical Education and Vocational Education Training (NACTE-VET), National Examination Council of Tanzania (NECTA), Commission for Science and Technology (COSTECH), the Ministry of Education, government and non-government organisations, students, and lecturers. HEIs ought to strengthen their relationship with these stakeholders in task forces, decision making, and industry related bond. Rupia (2017) asserts that proper utilisation of physical, financial, human and technological resources lead to organizational success. This implies that strategic planning, budgeting, resource allocation, designing needs-driven curriculum and accountability will help minimizing challenges and enhance growth of a sustainable institution and thus promote students attitude to learn job market competencies.

CONCLUSIONS AND RECOMMENDATIONS

We conclude that higher education institutions in Tanzania play a core function in the implementation and achievement of competency learning among the potential incumbents in the labor market. These institutions also conduct research about education needs and trends. Nevertheless, higher education institutions encounter challenges like underfunding which compromises the quality of infrastructure and facilities, some institutions have relatively high number

of learners contravening the recommended ratios by the Tanzania commission for universities. The increasing number of unemployment among graduates, and dissatisfaction by some employers of graduates' lack of necessary competencies in the job market are identified as major challenges. It is recommended for stakeholders to take action to harmonize the situation so as to allow smooth implementation of competency learning and development by encouraging research on education provision processes, encouraging entrepreneurship and job creation skills among higher education learners and policy developers for sustainability. Funding bodies could equitably give priority to public and private institutions in funding schemes since they both serve the national interest. Strengthening alumni associations could act as a motivating factor for university students in terms of networking in creating employment and self employment opportunities.

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