



Folk Development Colleges (FDCs) The Source of Skilled Construction Industry Workforce Dynamic Demands

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Abstract

Folk Development Colleges (FDCs) are community-based education systems established in 1975 to stress the commitments to youth and thus national development. The youth's state, position, and prospects are paramount and fundamental for the nation's development in lower-middle-income and developing countries like Tanzania that should not be neglected as a group that symbolize and represent a remarkable potential cluster within our societies and acts as a latent human capital resource to various production areas including the construction industry. Notwithstanding their significant importance, the effects of technological development and global business competition have left much youth even in Tanzania suffering from high unemployment records which marks the severe and challenging thought in getting a well-founded and stable foothold into the labor market. Despite unemployment states the construction industry in Tanzania is still under pressure to find the potential knowledgeable, skilled and experienced youths to undertake charges to fill the gap of skilled workforce shortages in the industry. Towards this end, this study aims to examine whether the FDES have a significant effect in producing the skilled workforce to meet the dynamic demands of the construction industry job market and hence reducing the construction workforce shortages. One hundred and three (103) respondents were purposely sampled with both qualitative and quantitative methods involved through questionnaires, in-depth face-to-face and telephone interviews for data collection. Using factor analysis, seventeen effects of FDES to meet the construction industry job market demand were identified through a comprehensive literature review; then, RII (relative importance index) were used to identify the perception gaps among stakeholders and obtaining eleven potential effects upon analyzing online survey data. The findings show that FDES have a substantive contribution in imparting knowledge, skills and competence to help in reducing the construction workforce shortages within the Tanzania Construction Industry. Moreover, the results have documented an increased number of enrollment and programs that can help to promote self-employment, enhance reduction of skilled labor shortages in the construction industry and cater the dynamic demands of the construction industry job market.

Keywords: Tanzania; FDC's; Incubation Centre; Entrepreneurship; Construction Workforce Skills

1. Introduction

Youths symbolize and represent a remarkable potential group within our societies and act as a latent human capital source. A lower-middle-income and developing country like Tanzania cannot afford to neglect. Consequently, youth's state, position, and prospects are paramount and fundamental for the nation development. Notwithstanding their significant importance, the effects of technological development and global business competition have left much youth, even in Tanzania, suffering from high unemployment records which marks the severe and challenging thought in getting a well-founded and stable foothold into the labor market. Despite that, the construction industry has still under pressure to find the potential knowledgeable, skilled and experienced youths to undertake charges to fill the gap of skilled workforce shortages in the industry. However, despite the presence and importance of FDCs to youths, our current national education system and culture have left many of them leaving school (either primary or secondary) without acquiring even the requisite skills or competencies compulsory for their today's subsistence life economy and social life in particular. Thus, the questions remain; Is government continuing to empower FDCs? What are prevailing critical challenges facing FDC? Can FDCs assist to reduce shortages of skilled workforce in the construction industry? What are correlation of potential strategies to uplift the FDCs performance?

2. Literature Review

2.1. Tanzania

Immediately after its independence in 1961, Tanzania recognized to adopt the socialism and self-reliance strategic path for its national development. This strategic path approach recognized the need to increase and grow social-economic development service, including water delivery, health services, and education for all (Kassam Y, 2020). To attain the self-reliance goal which entails, the ability to work both independently and freely in the community with others without depending on others to instruct what to do, Nyerere's education philosophy on adult education was adopted to train learners the sense of responsibility that encouraged the society to work hard aiming for a common goal of personal improvement within the village life (MoEVT, 2008). However, to promote and enable adult education as lifelong learning in Tanzania, the government established the Folk Development Colleges (FDCs) that enabled literacy to acquire some academic and technical skills whenever they missed formal education. Correspondingly, for more than 30years (1967-1997), the United Republic of Tanzania (URT) has followed the Arusha Declaration policies before establishing the 2025 vision. The exact purpose of fighting against the three enemies (poverty, disease and ignorance) announced by the nation immediately after independence of 1961, was still aimed at during the public policy reforms linked to the Structural Adjustment Programme (SAP) and incorporated within the fundamental objectives of the strategic vision plan of 2025. In short, the vision emphasized highly quality livelihood, peace, stability and tranquility, good governance, an educated imbued with development ambition and a competitive economy. It is generally to say eradicating poverty and attaining sustainable social-economic development. The economic development aimed to lift the nation out of the low income (LIC) and becoming a semi-industrialized state and a middle-income country (MIC) by 2025 (Veta, 16 Dec 2006). The later strategic vision task has been fulfilled before the predicted year after the World Bank (WB) categorized Tanzania as the lower-middle-income country by July 2020. Similarly, improving education was among the stated drivers for the second five-year Strategic vision development plan under the theme: "Nurturing Industrialization for Economic Transformation and Human Development" intended to demonstrate and align the community's efforts to realize the country development ambitions (Kalole, 2013).

Recently, the Tanzania government has provided funds to various FDCs to rehabilitate the old college(s) infrastructures and construct a new one to create a conducive learning environment.

Infrastructures such as classes, workshops (including close-close and close-open), student's hostels, stores, administration offices and toilets have been newly constructed and or rehabilitated. Almost all fifty-five FDCs in the country, including the one visited by the researcher such as Nzega, Sikonge, Kasulu, Buhangija, Mwanahala, Mwava, Malampaka and Urambo located in the Lake Victoria zone were, and others are under construction aiming to attain the exact purpose of creating a good learning environment. Generally, the government investment in FDCs has sought to empower them to acquire the missioned establishment goals that encompass not only advancement of community knowledge, skills and capabilities for self-governing but also participation in cooperative endeavors as well as knowledge and advance skills promotion in the field of agriculture, handcraft and domestic science and technology. Thus, it has been stipulated in the Ministry of education and vocation training (2008) that; In Tanzania, FDCs play a significant role as they:

"Focuses on the development and advancement of adult knowledge, skills and abilities to enable citizens to participate in democratic, economic and cooperative endeavors. Folk education also promotes knowledge and skills in agriculture, handcraft, domestic science and health science. This serves to broaden the knowledge of the population as a whole, and in the process, it prepares adults for self-employment."

2.2. Folk Development Colleges (FDCs)

FDCs are community-based institutions established in 1975 (Mligo, 2017). They were renamed Folk Development Colleges to stress their commitment to local and national development plans to meet the necessities and challenges of post-literacy continuing education by providing educational opportunities that encompass general and vocational education. In the beginning, FDCs were run jointly by the Ministry of Education (MoE) and the Swedish aid agency – SIDA (Rogers and Allan 2017). They supported financially for twenty-one years as an international development assistance programme. During SIDA's assistance (1975-96), 52 FDCs became embedded in different regions, and the training was based on the Scandinavian Folk High School (FHS) tradition. The transfer of FDCs from the Ministry of Education to the Ministry of Community Development (MCD) increased their engagement in their community development role.

However, various training programmes consisted of long courses (one to three year), mainly as vocational training, short courses on and off-campus and outreach activities, including self-reliance projects and other special activities. A key distinguishing feature of the FDCs is that, unlike other post-school education establishments, there are no required unique entry and strict conditions; anyone can be enrolled, even primary school 'drop-outs'. To date, FDCs are proving their certification of skills attainment rather than nationally recognized certificates. However, to clarify, the government has officially changed the curriculum from English to Swahili Language for easy and quick understanding of students, although these changes have brought challenges due to lack of extra text and Swahili written reference books.

Despite SIDA's ending direct assistance (1996-2016) that contributed to shock, fearing the programme would collapse, the colleges have today even grown slightly from 52 to 55 FDCs (Figure 1) supported by the government from time to time. Previously, emphasis was given to colleges and encouraged to fund themselves. Costs on part-time employed staff, on buildings maintenance and construction and outreach activities, were deducted. Thus, income came mainly from students' fees, and each FDC was free to explore other fundraising possibilities, including other donors. The Swedish assistance continued to individual FDCs from individual Focal High Schools in Scandinavia. Currently, FDCs are 100% financed by the government and operating under the Ministry of education science and technology. However, sometimes and programmes, a cost-sharing style is adopted.

FDCs' objectives aim to equip participants with knowledge and skills for self-employed and self-reliance, enhance their understanding, and solve their immediate problems that arise within their society (URT, 2016). The primary abilities provided include Agriculture, Carpentry, Electrical, Masonry, Mechanics, welding, Fisheries, Information Technology, Tailoring, Cookery, Agriculture and livestock etc. Other general subjects aimed at widening their horizon include Environmental education, Gender, Civics, Leadership, Housekeeping, Principles of good governance and Business, Entrepreneurship, Market and Credit referrals, aiming to enhance income-generating activities. In addition, an integrated skill development programme with Simple and applicable technology was introduced in 2008/2009 to provide skills to specially targeted groups, including women and special needy people with disabilities, to empower and excel in their endeavors. As noted from Faraji, J.Mwadua, (Mwanahala College Principle) saying;

"Programme like ("Elimu Haina Mwisho") conducted at our college has helped most young ladies to acquire various life and economic skills who under various circumstances have failed to continue with studies".

For forty-five years since establishment, FDCs has suffered ups and downs, facing countless challenges that have made its operation difficult. Challenges include but not limited to understaffed, inadequate staff accommodation, inadequate funding, low student enrollment, poorly and skilled staff shortages, outdated infrastructure facilities, lack of management and leadership skills, deficient infrastructures, Non- provision of equipment to graduates to support them with self-employment, lack of or no close follow-up system to monitor performance continuity and assist programme graduates lack of training programmes and failure to grapple with modern technologies and use (MoEVT, 2008), to mention a few. Various measures have been implemented by governments to minimize the challenges and improve the performance that incorporates adequate budget allocation to FDCs, increased government support on infrastructure construction facilities, employing adequately, skilled, qualified and competent personnel, increasing facilities, involving stakeholders in planning, increasing development partners and sponsors and undertaking regular training for employees capacity building [1] to mention a few.

2.3. Incubation Centre

Various scholars have defined the term Business Incubation Center (BIC) as centers that give small entrepreneurs or enterprises assistance towards small business start-up or development. Incubation Centre always acts as a fundamental effective strategy to promote community entrepreneurship, support innovation and job creation by supporting new business structures and schemes and encouraging diversification of business opportunities (Campbell C. et al, 2020).

An incubation Centre provides, promote and stimulates the growth of entrepreneurs within local economies. Moreover, it offers technological tools to improve the performance and quality of products or services. Additionally, it is believed that BIC assists to provide opportunities that integrate education and training. It further helps to focus on entrepreneurship, business, management, new skills needed at work, mentoring and training of small company employees involved in business incubation or community (Jamil, F. et al, 2015). Despite that, repeatedly, BIC faces significant challenges of lacking the required skills for business survival; they play an essential role in generating and promoting technology-intensive training for better life and infrastructure development. that BIC provides knowledge-based services and long-term use of physical infrastructure Jamil F. et al. (2015).

In Tanzania, FDCs are considered BIC as they tend to train different people with various academic life background. However, the government as policy-makers needs to pay attention to entrepreneurship and capital support and critically emphasize FDCs to create more entrepreneurship

opportunities for learning, creativity, innovation, and social development. Despite all, the question remains, Can Tanzania FDCs acts as an incubation Centre for entrepreneurship opportunity and assist in reducing the shortage of skilled construction workforce?

2.4. Entrepreneurship

Various themes among academics and researchers in the commercial and business arena have appealed much attention to entrepreneurship. Despite many research conducted and articles published regarding entrepreneurship, it is still maintained that there is still a challenge on the absence of an acceptable standard and universal definition of entrepreneurship and or entrepreneurs that have been uniformly accepted in the literature. In trying to raise its definition, it is noted that many researchers have focused on the economic function served by the entrepreneur. Later, the definition has begun to focus on the risks and challenges associated with combining various factors of production to generate outputs that would be made available for sale is constantly changing markets (Filion, J, 1997). Along with the struggle, the definitions have focused on various terms such as innovation, creation, founding, adapting to managing a venture, personality traits and life experiences of the entrepreneur. The personality traits have been considered in an attempt to create the lists of common entrepreneurial characteristics. Thus, it is generally argued that selecting the suitable foundation for defining and understanding entrepreneurship has made an excellent challenge for academicians due to several schools of thought that consider entrepreneurship as it fundamentally originates from different perspectives (Shane, S. & Venkataraman, S. 2000).

Entrepreneurship is a communal expression and a subject conquering a prominent position on the research agenda of scholars with diverse backgrounds, credentials, and disciplines, which has stimulated and occupied more interests from individuals of various professions, including scholars, educators, and policy-makers. The term "entrepreneurship" has been historically referred to the efforts and struggles of an individual who dare to take risks in creating a successful business enterprise. At foremost, Schumpeter launched the field of entrepreneurship by associating it clearly with innovation (Mokaya S 2012). Entrepreneurship is defined as an activity that encompasses the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, raw materials through organizing efforts that previously had not existed and processes (Utting P, 2010).

The entrepreneurship process includes creativity and innovation, scanning the business environment, recognizing and evaluating business opportunities, organizing resources, establishing and running a business that grows by making a profit. Schloss (2016) defined entrepreneurship as the function of seeing investment and production opportunities; organizing enterprises to undertake a new production process, raising capital, hiring labor, arranging for a supply of raw materials, finding a site and combining these factors of production into a going concern; introducing new techniques and commodities, discovering new sources of natural resources; and selecting top managers for day-to-day-operations (Mokaya S, 2012).

Besides, entrepreneurship covers factors that differentiate an entrepreneur from none. Factors include opportunity recognition and vision, innovation, risk-bearing, value-process, business growth, and adoption and application of the best strategic management concept. Further, it is agreed and accepted by the world's government, development aid agencies, and researchers that entrepreneurship is considered the heart of the modern business and a catalytic for employment creation, business growth, and social-economic development. Thus, it can be concluded that there are many definitions of entrepreneurship as there are many efforts to define it, and none of them considered in isolation gives a complete explanation to its meaning; instead, they are complementary (Akomah,B. et al, 2020).

2.5. Construction Workforce Skills

Skills can be described as the necessary competencies or know-how that can be knowledgeably applied in a particular environment for a specific purpose. Skills shortage always arises whenever employers are incapable of filling vacancies for a specific occupation or specialized skill needed within that occupation, under current levels of remuneration and conditions of employment and location (Aghimien, L.M. et al.2019).

The construction sector is reflected globally as one of the significant and prevalent contributors and essential of any national economic developmental constituent segment (Aghimien, L.M. et al.2019). However, it is clearly stated that better performance of construction activities depends entirely and are influenced by a skilled workforce. Despite its importance, the inadequacy and inaccessibility of skilled workforce have continued to be the foremost and critical challenges within the sector. Various literature has claimed that most construction projects have attained mass failures due to a lack of skilled workforce (Akamah, B. et al. 2020).

Additionally, multiple researchers have postulated that factors for inadequately skilled workforce in the construction industry have been attributed by construction industry associated risks and never-ending accidents, an increasing number of ageing employees, lack of sustained training and training policies, increasing number of projects, the wrong public perception about construction workers and the unappealing nature of the industry to the youth who were in the majority and low payment for subsistence (Akamah,B. et al. 2020). Similarly, it was noted from South Africa that, the shortage of skilled artisans, supervising staff, and site management have become the critical constraint to production evidenced to be caused by lack of training. Aghimien, M. et al. (2019) proposed to adopt strategies such as motivation and incentives to emphasize and invest in training and ensure workers attending the conference to reduce shortages of the skilled workforce (Al-Bayati, A. et al 2017).

In the same vein, a study by Akomah. et al. (2020) noted from the building construction industry of the central African region that skilled workforce shortage was due to socio-economic conditions, external forces, job attractiveness, job characteristics, job satisfaction, industry limitations and personal factors (Matemani.J, and Ndunguru, B. 2019). The study encouraged and proposed the employees develop their trade abilities and competencies that would help them change their attitude to work. However, it was suggested to employers to capacitate to build their workforce through training fully. Furthermore, Langat, S. (2018) note from Kenya that, shortage of skilled workforce has to a large extent, negatively impacted the quality of construction project through the development of mistakes and defects. He added that the defects caused have resulted in high repair costs, and some errors have led to buildings collapse. Thus, the factors for defects and mistakes have been due to a lack of knowledge (Matemani, J. and Ndunguru, B, 2019).

However, the effects of skilled workforce shortages had always led to severe consequences on construction productivity and performance, which eventually have affected various nation's economic growth and civilians' wellbeing and living standards and escalating indirect cost (Langat ,2018). Arguably, it has been noted that in Africa, the problem of the unskilled workforce has attained the most prominent and significant number that has led to most project's budget overruns, time extension with low construction quality in different countries (Matemani, J. and Ndunguru, B 2019). Tanzania, in particular, the inadequate staffing and imbalance of skilled workforce in various construction industry projects and institutes have been contributed by multiple factors such as lack of training, lack of promotion, lack of motivation, job mishmash, and low salary (Langat ,2018). Despite the efforts imposed to tackle the problem, including the establishment of folk colleges, the dilemma of deficiencies and imbalances of skilled workforce in Tanzania construction environments has remained questionable. Thus, this study

intends to examine the type and workforce skills required and the effects of these colleges to reduce the problem.

3. Methodology

This study involved a mixed method approach (both qualitative and quantitative) but dominating quantitatively. A questionnaire survey tool and an in-depth face-to-face and telephone interview were considered relevant to facilitate the discussion with respondents to understand the prevailing situation and assess the workforce skills required for the Tanzania construction industry. The methodology has similarly assisted in examining whether folk colleges have a significant role in reducing the problem within the industry. The skills assessment was categorized based on technical, operational and supervisory/decision-making aspects. A Five-Likert likely scale was adopted to collect the information from respondents within five folk development colleges (including principals, tutors and students) and construction industry stakeholders, including clients, consultants, contractors and suppliers who participated during the rehabilitating/remodeling and construction of similar colleges. However, the binary Likert scale number (from 1= Not Important, to 5= Very Important) intended to indicate the numerical ranks only; neither absolute magnitudes nor equality interval between them was meant. A continuous average rating with proposed ordinal values facilitated the translation of the respondent's opinion results. The formula: (Highest Point Minus Lowest Point in the Likert scale, divide by the number of the levels, was assumed to compute the level of each item (Nguli, 2017).

Conversely, the following group Likert scale points [(1 to ≤ 1.8 Represented Strongly Disagree); (1.81 to ≤ 2.6 represented Disagree; 2.61 to ≤ 3.4 described Moderate; (3.41 to ≤ 4.2 represented Agree) and (4.21 ≤ 5 expressed Strongly Agree)] were used. The purposively collected sample data were encoded, edited, analyzed descriptively, and checked for construct validity and reliability analysis using SPSS 24 statistical software. While construct validity was performed to measure the extent to which all items on a scale measure the same construct, data reliability was examined to test the internal reliability of the 5-point Likert scale. Thus, the analysis intended to check if the questionnaire survey tool provides equivalent results at different sets of tests. A reasonably (103) returned questionnaires out of (120) questionnaires distributed (Table 1) accounted for a good response of (85.83%) have provided the justifiable solution of the study.

4. Results and Discussion

4.1. Respondent's Demographic Information

The respondents' demographic information has been presented in (Table 1) below. Of the collected information, the study involved all potential stakeholders who participated in one way or another during construction and renovation or maintenance. Study participants included college principals (4.81%), tutors (27.18%), students (23.3%), contractors (17.48%), consultants (6.8%), clients (11.65%) and supplier (8.74%).

The study composed various respondents engaged between 18-30 years occupying 26.21%, 31-40 years with (41.75%), 41-50 years conquering 25.24% and of above 50 years representing 6.8%. Moreover, the respondents had different educational background qualification including certificates (16.5%), diploma holders (44.66%), degree graduate 28.16%, master's holder with 7.77% and 2.91% PhDs. Generally, the respondent's characteristics have acknowledged the involvement of potential stakeholders from FDCs who have provided beneficial answers and constructive opinions that have helped reaching the study findings and conclusions.

Table 1: Respondent’s Demographic Information

Item	Class	Frequency	Percentage Response (%)
Age (Years)	18-30	27	26.21
	31-40	43	41.75
	41-50	26	25.24
	Above 50	7	6.8
Educational Level	Certificates	17	16.5
	Diploma	46	44.66
	Degree	29	28.16
	Masters	8	7.77
	PhD	3	2.91
Position	Principals	5	4.85
	Tutors	28	27.18
	Students	24	23.3
	Contractors	18	17.48
	Consultant	7	6.8
	Client	12	11.65
	Supplier	9	8.74

4.2. The Government Empowerment On FDCs

Assessing the role of government to empower FDCs was among the vital part of the study. To obtain the stakeholder’s opinions, college principles as respondents were asked to indicate the type of assistance and or support the government has provided to FDCs. College principles have provided the data (Table 2) to indicate the extent of support provided recently specifically aimed for construction and maintenance of new infrastructures. The support in terms of finance have facilitated improvement of infrastructures by constructing new various building and rehabilitation or maintenance of old ones. However, the study findings on five folk development colleges have revealed the study programs increases and enrolment stimulated by an increased and improved infrastructure.

The collected information from 2019/2020 budget have revealed that the government have facilitated to capacitate the long-term vocational study training to 7079 participants and a short term training to 1079 participants from 54 FDCs to empower their capability and hence uplift their performance (Isaga, N 2012). Moreover, the ministry has set a plan to increase the training from FDCs to 15000 participants on long term training and 24000 participants for a short term training (UN, "UNCTAD, 2018). The training from FDCs as an incubation center aimed to empower and capacitate more participants to enable them create more entrepreneurial opportunities.

Furthermore, despite various identified challenges facing FDCs in Tanzania, the study findings have distinguished the presence of more support and empowerment to FDCs from government resulted from release of more funds for new infrastructures development and rehabilitation or maintenance. The findings have revealed a total of 2,917,167,644.72 Tanzania Shillings equivalent to approximately 1,259,126.42 USD allocated in 2018-2020 to five FDC colleges (found in a case study area) for various

developmental activities. Moreover, using the allocated funds, various, offices, toilets, classes, dormitories, compute labs, kitchens, dining halls and workshops have been either constructed or rehabilitated to create a good learning environment.

Table 2: Government Empowerment to FDCs

S/N	College	Fund From Government to FDCs (Tshs)	New Infrastructure	Rehabilitated Infrastructure
1	BADIADI	622,600,910.60	Administration Block (1), Carpentry workshops, Electrical workshop, M.V Mechanics Workshop, welding workshop, Hostel (1), Toilets	Toilets
2	BUHANGIJA	647,696,810.3	Administration Block (1), Electrical workshop, Tailoring workshop, Welding workshops, carpentry workshop, Hostel (1), Toilets	Classes (3), hostel (1), Computer Lab (1), Kitchen (1), Dining, Store (1) & Office (1)
3	SIKONGE	592, 491,124.0	Administration Block (1), Computer Lab (1), Design Sewing and Cloth technology workshop, Electrical installation workshop, M.V Mechanics Workshop, Boy's Hostel (1), Extended toilets & Workshops	Dining (1), Girl's Hostel (1) & Classes (2)
4	MALAMPAKA	594,679,434.82	Hostel (2), Double Decker (80), Kitchen (1), Dining Hall (1) Drilling of Borehall Toilet (2)	NIL
5	MWANVA	459,699,365.0	Administration Block (1), Electrical Workshop (1), ICT workshop (1), Plumbing workshop (1), M.V Mechanics Workshop (1) & Masonry workshop	NIL

4.3. What Are Prevailing Critical Challenges Facing FDC?

Understanding the critical challenges facing FDCs was among the important study attribute and a fundamental strategy towards a dramatic change and performance improvement. Embracing the descriptive analysis through the average mean and standard deviation for the prevailing critical challenge were adopted. Only respondents scored above the stated five Likert scales ranging from (Implying 3.41-

agree, critical or effective to 5-strongly agree/very critical) were considered the potential critical challenge facing FDCs. The findings of the study documented nine (9) potential critical challenges. The most top five critical challenges including inadequate financial allocation (M=4.43, SD=1.839); lack or inadequate skilled and qualified staff (M=4.43, SD=0.892), Poor and outdated learning infrastructure (M=4.39, SD=0.892); Poor and outdated learning infrastructure (M=4.31, SD=1.914); absence of modern technological facilities (M=4.26, SD=1.721); and a prolonged low enrolled students (M=4.22, SD=1.914) scored above the stated threshold mean value of above 4.21 implying extreme or very critical. The last four critical challenges that scored a mean above 3.41 implying critical include lack of training to capacitate staff (M=3.97, SD=1.782); Lack of enough practical training to graduates (M=3.81, SD=10.972); More students drop out (M=3.77, SD=0.837); and Community' negative attitude (M=3.69, SD=1.793). The above aforementioned critical factors were mentioned to hinder the FDCs performance.

Table 3: Critical challenges facing FDCs

Potential Challenges Facing FDCs	Remarks	Mean	Std. Deviation	Skewness	Kurtosis
Inadequate financial allocation	A	4.43	1.839	0.792	0.752
Lack or inadequate skilled and qualified staff	B	4.39	0.892	0.826	1.722
Poor and outdated learning infrastructure	C	4.31	1.914	0.429	0.621
Absence of modern technological facilities	D	4.26	1.721	0.765	-0.827
A prolonged low enrolled students	E	4.22	1.003	0.482	0.682
Lack of training to capacitate staff	F	3.97	1.782	0.629	-0.872
Lack of enough practical training to graduates	G	3.81	0.972	0.691	1.792
More students drop out	H	3.77	0.837	0.862	1.682
Community' negative attitude	I	3.69	1.793	0.793	0.961

4.4. Reducing the Skilled Workforce Shortages

The study also aimed to assess whether FDCs can help to reduce shortages of skilled workforce in the construction industry. The findings of the study (Table 4) acknowledged the presence of the additional study programs and thus an increased number of student enrollment in science and construction related courses such as welding, carpentry, masonry, electrical installation, plumbing to mention a few. The increased programs and enrollment have witnessed the increased technicians who could be employed to reduce the skilled workforce shortages in the CI.

Table 4: Increased Student Enrollment

S/N	COLLEGE	YEAR OF ENROLLMENT					
		15/16	16/17	17/18	18/19	19/20	2021
1	BARIADI	4	11	7	6	20	73
2	BUHANGIJA	-	-	138	154	82	551
3	SIKONGE	26	25	40	87	98	225
4	MALAMPAKA	60	13	101	126	176	221
5	MWANVA	30	36	40	73	83	110

The findings represented in (figure 1) have identified the increased number of students after further infrastructure development and maintenance. The increased number of enrollment have been resulted from the increase of programs accelerated by infrastructure improvement and maintenance. The new introduced programs were to various FDCs includes mechanics, driving and computer course at Buhangija FDCs; electrical, tailoring, welding and mechanics at Bariadi FDC; welding and metal fabrication, ICT, hair dressing and motor vehicle mechanics at Sikonge FDC; M.V. Mechanics, animal husbandry, welding and masonry at Malampaka and Mwanva FDCs. The increased number of enrollment and programs helped to promote self-employment and reduction of shortage of unskilled labor in the construction industry.

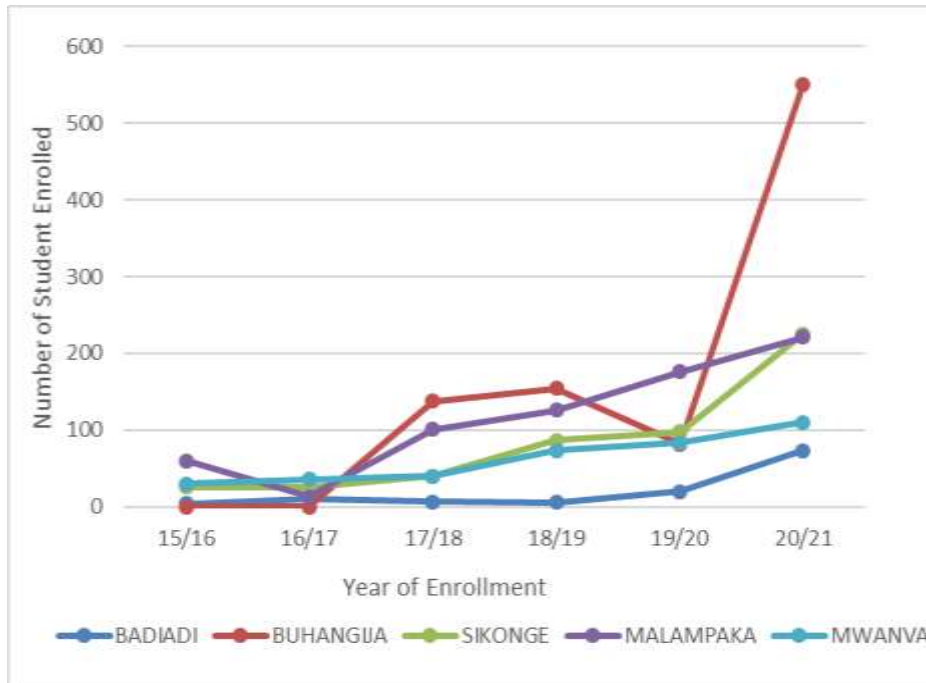


Figure 1: Student's Enrollment

4.5. The Correlation of Strategies to Improve the FDCs Performance

In order to determine the correlation between strategies for FDCs performance improvements, using statistical package for Social Science (SPSS) the leading process was ranking the strategies in ascending mean score order. The Relative Importance Index (RII) was opted and computed in reference to the formula: $Relative\ Importance\ Index\ (RII) = \frac{\sum W}{AN}$ Where W define the Likert scale weight (1-5) given to each strategies by respondents, A is the Likert scale highest score weight (5) and N is the total number of respondents (103). The computed values enabled ranking of eleven (11) strategies implying significant to facilitate FDCs performance improvement. Nevertheless, if two or more strategies fall within the same scale mean value score, the one possessing the lower standard deviation was foremost ranked. Further, the SPSS-AMOS was used to generate the correlation between strategies (Figure 2). Significantly, only the top four ranked strategies will be explained.

Table 5: FDCs Improvement Strategy Ranking

Category Strategy	Elaborated Strategy	Remarks	Respondent's Frequency (N)					Total N	ΣW	RII	Rank
			5	4	3	2	1				
Economic Related Strategy	Setting adequate financial budget	ES1	52	40	9	1	1	103	450	0.8738	1
	Increase enrollment to maximize fees collection	ES3	41	37	22	1	2	103	423	0.8214	6
	Encourage inward investments	ES4	43	31	27	0	2	103	422	0.8194	7
Capacity Building Related Strategy	Ensure regularly training	CBS1	51	38	11	0	2	103	443	0.8602	2
	Entails joint venture with other Colleges	CBS2	43	30	27	2	1	103	421	0.8175	8
	Provide potential working resource facilities to staff	CBS3	40	56	3	4	0	103	441	0.8563	3
Technological Related Strategy	Adopt technology use in teaching & Learning	TS2	39	43	19	1	1	103	427	0.8291	4
	Embrace systems automation within FDCs	TS3	43	36	11	10	3	103	415	0.8058	10
Leadership Related Strategy	Encourage recognition and Motivate employees	LS1	47	35	14	2	5	103	426	0.8272	5
	Embrace a participatory leadership	LS2	45	26	28	3	1	103	420	0.8155	9
	Commit coaching for a continued growth	LS4	40	31	20	5	7	103	401	0.7786	11

In economic related factor, setting of adequate financial budget was uppermost ranked ever since it plays the foremost fundamental role to facilitate easing of every operation that leads to high productivity. The findings concur with the study findings raised that, the financial performance has been acknowledged as a key priority in all economic decision making related aspects of any enterprise's growth [1]. Reference to respondent's opinion, many FDCs are confronted with difficulty situation and unnecessary government bureaucracy in accessing loans resulted from the tight imposed high-loan-interest rates by financial institutions. Thus, the government needs to ensure the effective availability of finance flow for FDCs improved performance.

Regular training of the workforce was secondly ranked as part of capacity building strategy to facilitate FDCs improved performance. The same was recognized by various Scholars and business strategists as an important catalyst for any organization's competitive advantages in this violent environment. Boadu. et al (2018) proposed that training always emphasizes the workforce on recognizing, it increases employees' skills or abilities guaranteeing through strategic learning, it facilitates productivity, it enable employees to accomplish present or future jobs that eventually enhances organizational efficacy. Thus, it is recommended to develop an effective on-job staff training schedule to help improving FDCs performance and thus become competitive.

Moreover, provision of adequate and potential working resource facilities to staff was ranked third. The findings revealed that effective resource availability with proper utilization among the prioritized strategies for FDCs' performance improvement. The intended resource include finance,

competent and skilled labor and technology. Equally, Hajli. et al. (2017) accentuated resource consideration and consumption as one of the firm's potential business strategies to formulate and implement the main objectives of attaining a competitive advantage (N, Hajli. et al., 2017). It can be conclusively that only firms that can plan properly, allocate and utilize effectively, manage and control more efficiently the prized available resources can comprehensively implement the strategies compared to other competitors. Thus, FDCs needs to prioritize the resources to their improved performance and growth.

Furthermore, technology adoption and use in teaching & learning was mentioned the fourth to influence FDCs performance. Technologies are vital contributors for reducing performance time, improving productivity, quality, it supports knowledge sharing and management as well as supporting management decision making. Nonetheless, it can provide the appropriate funds and resources, encourage teams and help teams overcome problems, fostering cross-functional cooperation, knowledge and communication (García-Sánchez. et al, 2018).

4.6. The FDCs Strategic Structural Equation Modelling

The Structural equation modelling (SEM) technique was selected to test the correlation between performance improvement strategies of FDCs. Moreover, the structural model framework (Figure 2) was presented to designate the standardized estimates values between latent variables in attaining the improving performance. The Structural model framework have suggested the presence of positive relationships between four strategies namely economy, capacity building, technology and leadership. It is observed from the framework that, there is a good relationship between strategies in contributing attaining an improved performance. The percentage contribution (figure 2) between ES-CBS (76%), LS-ES (56%), ES-CBS (49%), TS-LS (41%), ES-TS (61%) and CBS-TS (39%) has proved the significant relationship between the construct variables (strategies) towards improving FDCs performance.

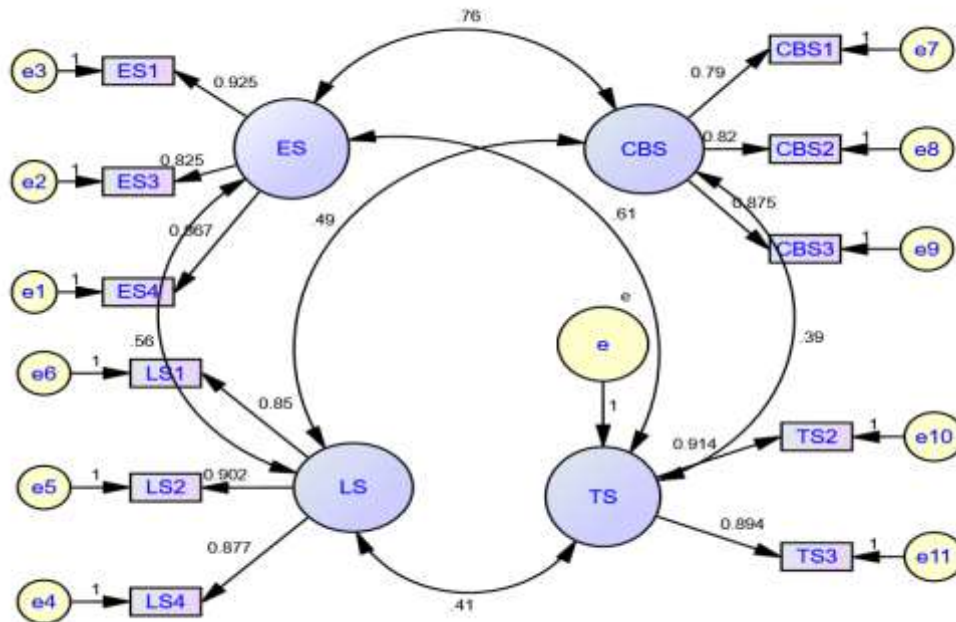


Figure 2: The Correlation of Strategies

Conclusion and Recommendation

The government of Tanzania has contributed in increasing construction labor force in the community by renovating the existing Colleges and reviewing Curricula hence increasing enrollment to cater for shortage of skilled construction workforce. Further, governments and development agencies alike should take increased efforts that involves setting the effective strategies in improving FDCs performance and thus promoting development. Effective Strategy needs to be formulated and enactment of policy and relevant legislation to enforce primary level and form four failure graduate to compulsorily attend a one to three year FDC to various interested training course to acquire entrepreneurship skills for their self-employment opportunities. The training and skills to be acquired would stimulate and create innovators and self-employment opportunities to many that would eventually increase entrepreneurs for national economic development and industrialization growth. Thus, the findings of the study would help to reach the conclusion that FDCs are still community based colleges at the exposure of community for utilization. Government is still believed investing to promote community development endeavors by introducing requisite innovations. Other income generating activities and sources of financing FDCs, capacity building, technology adoption and use as well as appointing the experienced, competent, innovative and creative leaders should be observed. The teaching staff should be kept motivated and upskilled to keep abreast of the current changes and new technologies available. The study recommends the government, development agencies and private partners to invest much efforts in promoting FDC development and consider a frequently review of FDES to comprehend with job market demand while considering various factors including gender, inclusivity, technology transfer and use, innovation as well as internationalization.

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