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TITLE: CULTIVATING ENTREPRENEURSHIP THROUGH TVET CURRICULUM

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Abstract

This study examines the current state of entrepreneurship education in TVET colleges in the Eastern Cape, South Africa, focusing on the transition of graduates into entrepreneurial activities. Despite reforms and increased enrolment in the TVET system, the entrepreneurial engagement of graduates remains low due to various challenges. Using a mixed-method approach, including telephonic surveys and workshops, data were collected from graduates of eight TVET colleges who completed qualifications related to entrepreneurship and business management between 2017 and 2021.

Key findings highlight the demographic distribution of graduates, their motivations for choosing TVET education, and their post-graduation employment status. The study reveals a significant gender disparity, with a majority of female respondents, and identifies a predominant age group of 21-30 years. Factors influencing enrolment include the practical nature of TVET programs, affordability, and enhanced employability. However, a substantial portion of graduates remains unemployed or employed in fields unrelated to their studies.

The study identifies critical barriers to student entrepreneurship, such as inadequate resources, limited market access, and gaps in practical and financial management skills. It emphasizes the need for curriculum alignment with industry needs and comprehensive support systems to enhance the entrepreneurial ecosystem. Recommendations include incorporating entrepreneurship education across all TVET qualifications, strengthening delivery mechanisms, and fostering ecosystem collaborations.

The paper concludes that while efforts to integrate entrepreneurship into vocational and occupational curricula are evident, more must be done to stimulate interest and support among students and graduates. Policy interventions and strategic improvements are necessary to create a conducive environment for entrepreneurial success, contributing to socio-economic development and addressing youth unemployment in South Africa.

Keywords: TVET Colleges, Entrepreneurship, Employment

About the author

Lusanda currently holds the position of Sector Development Specialist at ECSECC. Her key responsibilities include fostering stronger alignment between sector development initiatives and the labor market, with a focus on education, skills, and entrepreneurship. She has actively engaged in various international study tours, resulting in the establishment of Memorandums of Understanding (MoUs) and practical Public-Private Partnerships. Drawing on extensive experience in investment promotion, research, project development, and entrepreneurship, Lusanda has showcased her research findings at both local and international conferences. Furthermore, she has played a role in shaping national and provincial strategy and policy development processes with her research outputs. Additionally, Lusanda is currently pursuing a Ph.D.

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Abbreviations

CfERI	Centre of Entrepreneurship and Rapid Innovation
DSBD	Small Business Development
MoA	Memorandum of Agreement
NATED	National Accredited Technical Education Diploma
NCV	National Certificate Vocational
PSET	Post-schooling Education and Training
TVET	Technical Vocational Education and Training
SETAs	Sector Education and Training Authorities
WIL	Work Integrated Learning

1. INTRODUCTION

The global recognition of entrepreneurship skills as a vital catalyst for employment creation, economic growth, and youth empowerment underscores the critical role of technical and vocational education institutions (Abdullah, 2020). In South Africa, the Technical and Vocational Education and Training (TVET) system is instrumental in equipping citizens, particularly the youth, with the essential skills required for self-employment and labor market integration (Department of Higher Education and Training, 2013). Despite significant reforms and increased enrollments in recent years, the transition of TVET graduates into entrepreneurial activities remains fraught with challenges.

This study aims to address these challenges by providing a comprehensive analysis of the current state of entrepreneurship education in TVET colleges in the Eastern Cape. It examines the effectiveness of existing programs and identifies key barriers that hinder graduates from successfully engaging in entrepreneurial ventures. The findings will inform policy recommendations and strategic improvements necessary to enhance the entrepreneurship ecosystem within these institutions, thereby fostering a more conducive environment for entrepreneurial success among graduates.

2. CONTEXTUAL BACKGROUND

The White Paper for Post-school Education and Training positions the TVET College sector as central to skills development (Department of Higher Education and Training, 2013). Additionally, this sector is viewed as a foundation for industrialization in the era of the Fourth Industrial Revolution (Gamede and Uleanya, 2019). Since the post-apartheid era, the TVET College sector has been undergoing reforms to enhance equitable accessibility facilitated by the promulgation of the FET Act of 1998. These reforms have resulted in significant reconfigurations across institutional, structural, and curriculum areas (Buthelezi, 2018).

In 2007, a new qualification, the National Certificate Vocational (NCV), was introduced specifically to prepare students for business careers rather than academic pathways (Papier, Powell, McBride, and Needham, 2019). Moreover, TVET Colleges have established Centers for Entrepreneurship to promote entrepreneurship education, training, and development. The Department of Small Business Development (DSBD) has formed strategic collaborations with colleges through Memoranda of Agreement (MoAs) to host these Centers (NACI, 2020). However, not all TVET Colleges have physical centers dedicated to running the Entrepreneurship and Rapid Innovation programs; in some institutions, these centers are managed by a single individual which can be overwhelming. The collaborations between the DSBD and TVET Colleges align with DSBD's priorities of fostering an entrepreneurial nation and reducing youth unemployment, reflecting a commendable inter-ministerial effort to advance the government's development agenda.

Despite various initiatives to promote entrepreneurship as a career option, entrepreneurship activity in South Africa remains low. This is attributed to factors such as the inadequate quality of education, limited industry exposure, and bureaucratic red tape (Writer, 2017). Only 10% of the employed population is self-employed, and South Africa significantly lags behind its upper-middle-income counterparts such as Brazil (World Bank, 2021).

3. OBJECTIVES OF THE STUDY

The primary objective of this study was to acquire comprehensive insights into the status of student entrepreneurship during the post-graduation phase. This involves assessing the effectiveness of entrepreneurship programs at TVET colleges by determining the proportion of graduates who subsequently engage in entrepreneurial activities.

4. RESEARCH METHODOLOGY

A mixed research method was employed to gather both qualitative and quantitative data through the use of a questionnaire and a break-away workshop. The questionnaire was chosen due to the size of the sample and the volume of data required. Prior to data collection, visits were made to eight TVET colleges to solicit information and access the records of graduates with qualifications in New Venture Creation, Entrepreneurship, and/or Business Management, which are integrated into the curriculum to foster entrepreneurial knowledge and skills.

Data collection was conducted through a telephonic survey administered by trained fieldworkers to gather information from graduates. The workshop, selected as a complementary data collection method, facilitated collaborative engagement among stakeholders from various organizations, fostering a deeper understanding of the subject matter and encouraging constructive feedback. This approach not only provided an avenue for participant observation but also added depth, complemented, and enhanced the credibility of the data collected through the survey methods.

4.1. Research Design

The research design adopted a tracer survey methodology targeting graduates from the eight TVET Colleges in the Eastern Cape who completed qualifications related to entrepreneurship and/or Business Management between 2017 and 2021. The sample included graduates holding qualifications in NATED and NCV programmes. Entrepreneurship components were not integrated into the engineering qualifications during the study period, resulting in their exclusion from the investigation (Rogan and Papier, 2020).

4.2. Sampling procedures

The sampling process involved drawing from a stratified random sample; stratified by college and geographical location to ensure equitable representation across regions. The initial sample size retrieved from the databases of the TVET colleges totalled 9343. Utilizing a 5% confidence level with a 5% margin of error, the total required sample size was calculated to be 370. Out of the 370 distributed questionnaires, 257 were completed and deemed usable, resulting in a response rate of 69%. This response rate is notably high for a tracer study, indicating robust engagement from participants (Gines, 2014).

4.3. Data Collection

Data collection involved telephonic surveys administered by trained fieldworkers. A total of three hundred and seventy (n=370) graduates participated in these surveys, responding to a semi-structured questionnaire over a duration of twenty to thirty minutes per interview. In addition to telephonic surveys, a workshop was utilized as a supplementary data collection method adhering to the triangulation principle recommended by Denzin (1978). This workshop not only facilitated collaborative engagement among stakeholders from diverse organizations within the entrepreneurship ecosystem but also enabled participant observation. Furthermore, this method enriched the depth and credibility of the data gathered through survey research techniques (Denzin, 1978).

4.4. Qualitative Data Analysis

Qualitative data analysis involves the systematic examination and interpretation of non-numerical data to uncover patterns, themes, and insights within the dataset. Techniques such as thematic analysis, content analysis, and narrative analysis are commonly employed to organize and analyze qualitative data (Smith, Flowers & Larkin, 2009). The process typically begins with data familiarization, followed by coding, theme development, and interpretation to generate findings. Interpretations are often contextualized within theoretical frameworks to provide a deeper understanding and meaning to the data. Various themes were formulated from the responses and these were used to interpret the data from the respondents. The findings were further confirmed by the use of triangulation. Triangulation involves the use of multiple data sources, methods, or perspectives to corroborate findings and enhance the validity and reliability of research conclusions (Denzin, 1978).

4.5. Quantitative Analysis

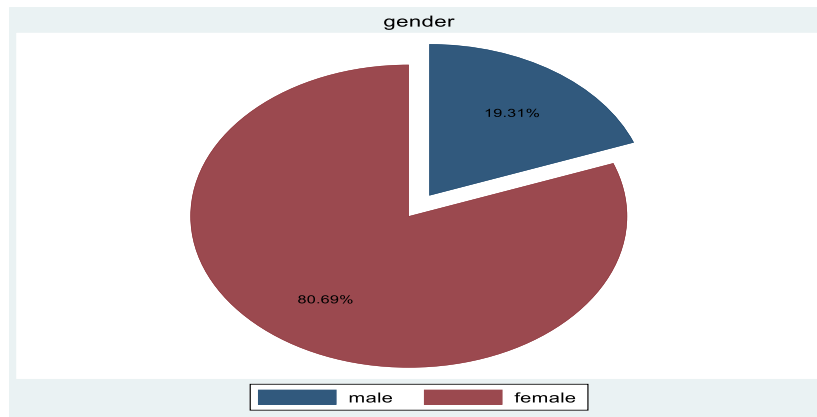
Descriptive statistics were employed to analyze the data collected in this study. This method involves summarizing and organizing the data to provide a clear understanding of the patterns and trends present. The primary aim of using descriptive statistics is to present the data in a meaningful way, allowing for an easy interpretation of the results. The descriptive statistics enabled a comprehensive interpretation of the survey results. By examining the central tendencies and variations in the data, the analysis provided insights into the effectiveness of the student entrepreneurship programs at TVET colleges. Overall, the use of descriptive statistics provided a robust framework for quantifying the extent of entrepreneurial activities among TVET college graduates, thereby facilitating data-driven conclusions and recommendations for enhancing entrepreneurship education (Gines, 2014).

5. PRESENTATION OF THE FINDINGS

5.1. Biographical data

The percentage distribution of respondents across the eight TVET colleges was relatively even, averaging approximately 14% per college. A significant majority (81%) of respondents were female, with males comprising 19% of the total respondents.

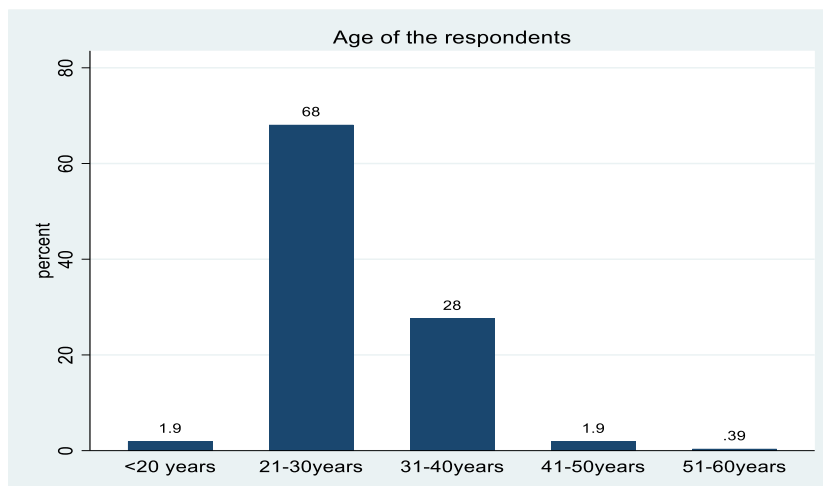
Figure 1: Gender distribution of respondents



Source: Survey data (2022)

This indicates that TVET colleges are making significant strides in empowering young female students by granting them access to education and training, thereby enhancing their prospects in the labor market, whether in terms of employment opportunities or entrepreneurship (Sultana, 2017).

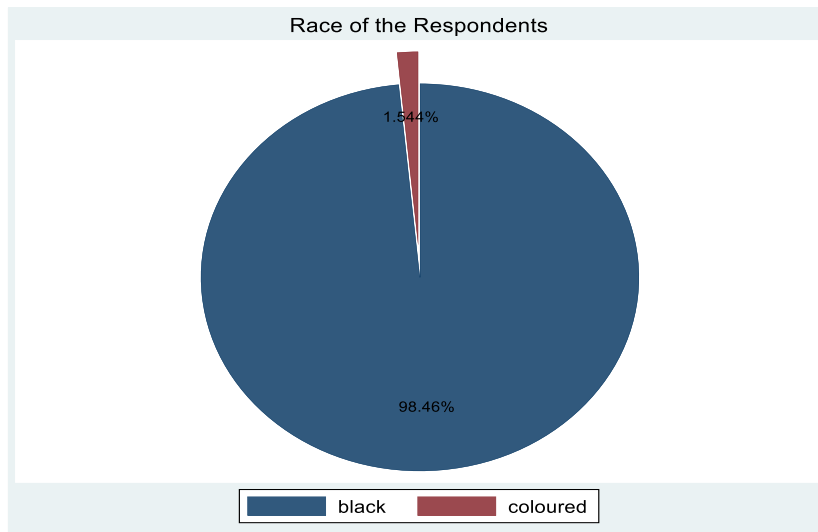
Figure 2: Age distribution of respondents



Source: Survey data (2022)

The age distribution of respondents revealed that a significant majority (68%) fell within the 21-30 age group, with the 31-40 age group constituting 28%, and a very small percentage (2.29%) aged 40 years and above. This highlights the importance of TVET colleges in providing entrepreneurship training to young individuals aspiring to launch their own ventures, thereby enabling them to become self-employed and generate job opportunities for themselves and others within their communities (Chabongwa, 2018).

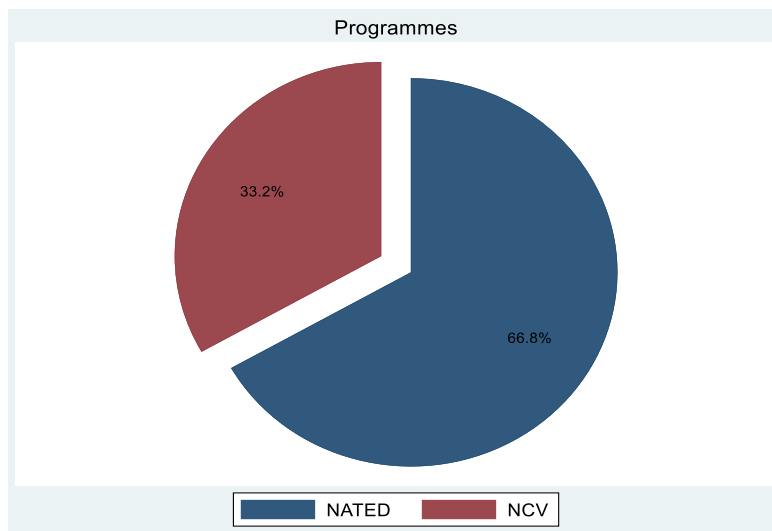
Figure 3: Race composition of respondents



Source: Survey data (2022)

The data indicates that the vast majority (98%) of respondents were black, with only 2% classified as colored. TVET colleges play a pivotal role in empowering black and colored students in South Africa by equipping them with the necessary skills and training to excel in the workforce and mitigate the enduring effects of apartheid. These institutions actively address historical disparities in education by affording black and colored students equal opportunities to pursue education and training, thereby promoting parity and redressing inequalities (Rogan and Papier, 2020).

Figure 4: TVET programmes



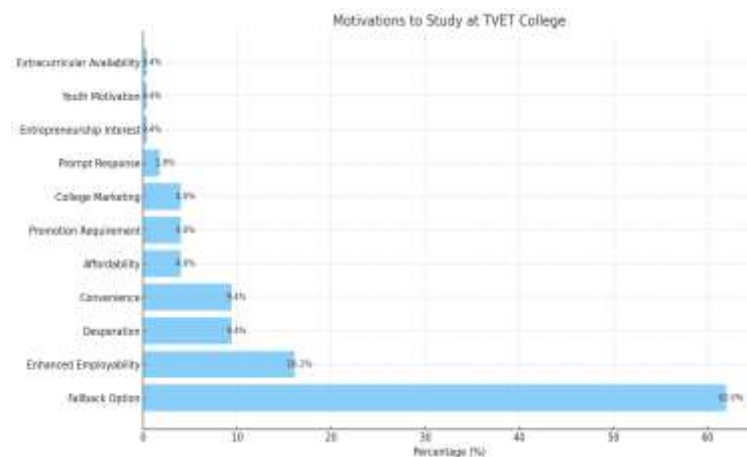
Source: Survey data (2022)

Regarding the programs in which the respondents were enrolled, approximately two-thirds were registered for NCV (National Certificate Vocational) programs, while one-third was enrolled in NATED (National Accredited Technical Education Diploma) programs. NATED programs typically involve 18

months of theoretical study and 24 months of practical training for engineering qualifications, or 18 months for non-engineering qualifications.

These programs are intentionally structured to equip students with practical skills and knowledge essential for success in the workforce. Conversely, the NCV program is tailored for students without a matric qualification, developed to accommodate students with interests in business or engineering fields. Completion of the NCV program equates to achieving a Grade 12 level, with certification obtainable even without placement in an industry setting (Papier et al., 2019).

Figure 5: Motivation to study at at TVET College



Source: Survey data (2022)

Respondents cited the following reasons for choosing to pursue studies at a TVET College over other post-schooling institutions:

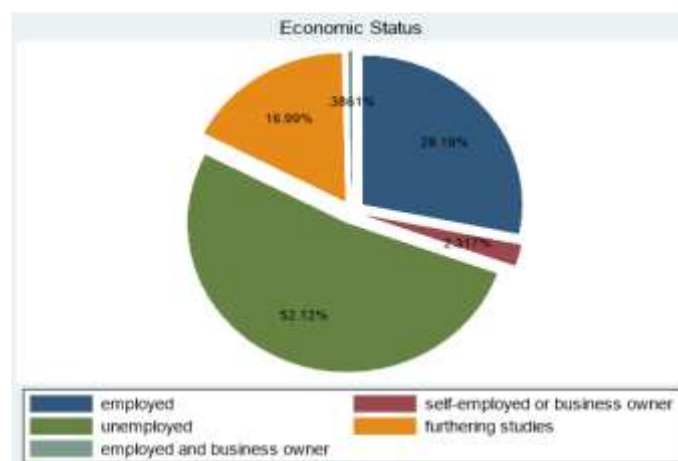
- **Fallback Option:** A notable concern arises as the majority of respondents (62%) viewed enrollment at a TVET College as a fallback option. Reasons included not meeting university entrance requirements due to academic performance, avoiding a gap year, and seeking to improve poor Matric results.
- **Desperation:** The sentiment of desperation was prevalent among respondents, with explicit comments reflecting a lack of alternative options for further education due to not meeting university entry criteria.
- **Enhanced Employability:** Approximately 16.1% of respondents acknowledged the importance of obtaining qualifications for improved employability. They emphasized the practical nature of TVET programs, which enhance skills acquisition and align with industry needs, thereby facilitating smoother transitions into the workforce (Field, Musset & Álvarez-Galván, 2014).
- **Convenience:** A subset of respondents (9.4%) highlighted the convenience of TVET Colleges in terms of affordability, proximity to residential areas, flexible part-time attendance options, and sponsorship by mentors.
- **Affordability:** TVET Colleges appealed to respondents from economically disadvantaged backgrounds who sought accessible avenues for education and training. The availability of financial aid through the National Student Financial Aid Scheme (NSFAS) made TVET programs particularly attractive (Sambav Foundation, 2023).

- **Entrepreneurship Interest:** A small percentage of respondents (0.4%) expressed interest in entrepreneurship and were drawn to TVET Colleges offering courses tailored to entrepreneurial skills development.
- **Youth Motivation:** Similarly, a minority of respondents (0.4%) aspired to serve as mentors to younger individuals, emphasizing the transformative role of education in unlocking opportunities for success.
- **Promotion Requirement:** For 4% of respondents, pursuing studies at a TVET College was directly linked to career advancement opportunities promised by their employers upon attainment of relevant qualifications.
- **College Marketing:** A segment of respondents (4%) cited awareness programs at high schools and positive recommendations as influential factors in their decision to enrol at specific TVET Colleges.
- **Extracurricular Availability:** A small percentage of respondents (0.4%) were attracted to TVET Colleges due to the availability of diverse programs and sporting activities.
- **Prompt Response:** Finally, 1.8% of respondents highlighted the efficiency of TVET Colleges in processing admissions compared to universities, prompting their choice of institution.

These insights underscore the multifaceted considerations driving student enrolment at TVET Colleges and emphasize the importance of addressing perceptions and promoting the value of vocational education and training as a viable pathway to success.

5.2. Graduate economic status

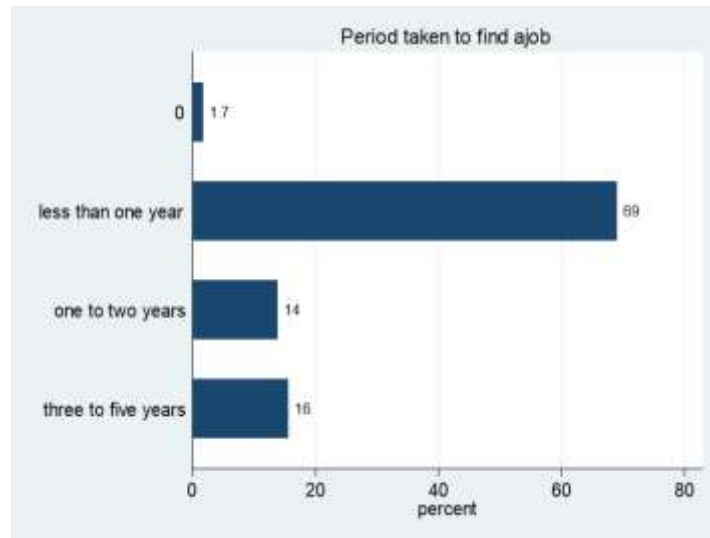
Figure 6: Graduate economic status



Source: Survey data (2022)

28% of the respondents reported being employed, while the majority (52%) were unemployed. Approximately 16% of respondents stated that they were currently pursuing further studies. Only 2% of respondents identified as business owners, whereas less than 1% were simultaneously employed and engaged in entrepreneurial endeavors.

Figure 7: Period taken to secure a job

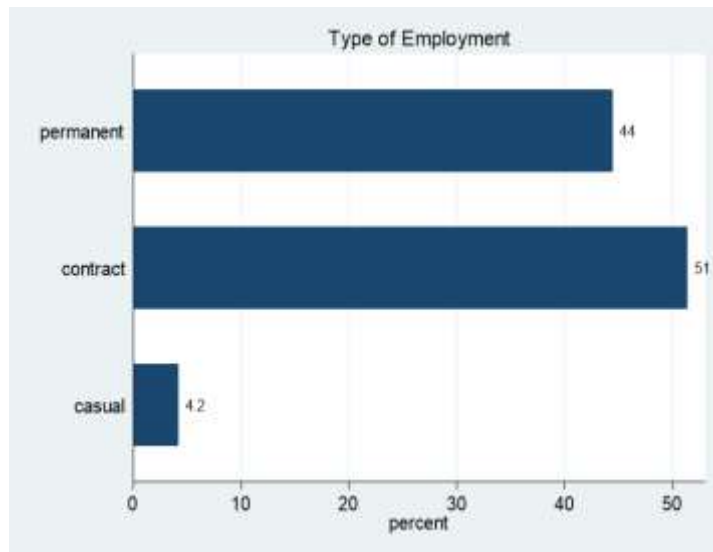


Source: Survey data (2022)

For those employed, a significant majority (69%) secured employment within one year of graduating. Approximately 14% reported finding employment within one to two years, while 16% indicated securing employment within three to five years post-graduation. The average time for graduates in South Africa to find employment after graduation is six months (Higher Education and Skills in South Africa, 2021), indicating that TVET graduates are in line with the national average for job search duration.

Graduates whose transition into the labor market extended beyond one year cited several reasons for the gap, including job scarcity, delays in obtaining in-service training, inconsistencies in funding from Skills Education and Training Authorities (SETAs), and transitions from NCV to NATED programs. Some graduates also reported dropping out and searching for employment or expressing uncertainty regarding the specific reasons behind the delay.

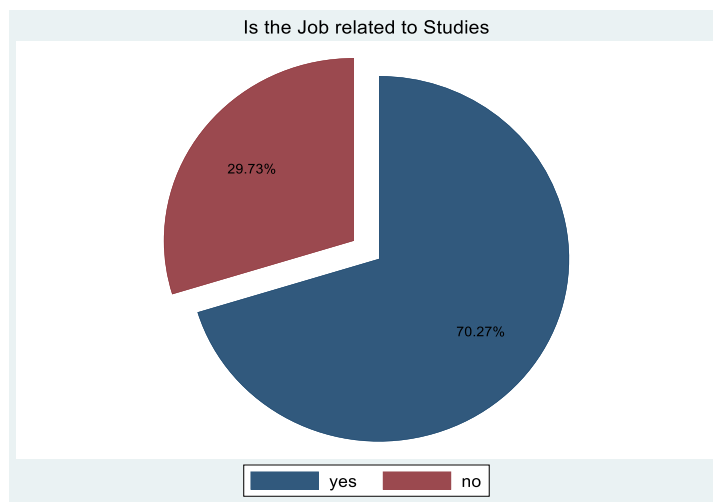
Figure 8: Types of employment



Source: Survey data (2022)

Regarding employment types, half (51%) of the respondents reported being engaged in contract work, while 44% held permanent positions. Only a small fraction (4%) were employed in casual jobs. Contract work offers flexibility and diverse experience but may also entail limited job security and benefits (Moosa, 2022).

Figure 9: Jobs related to the TVET qualification

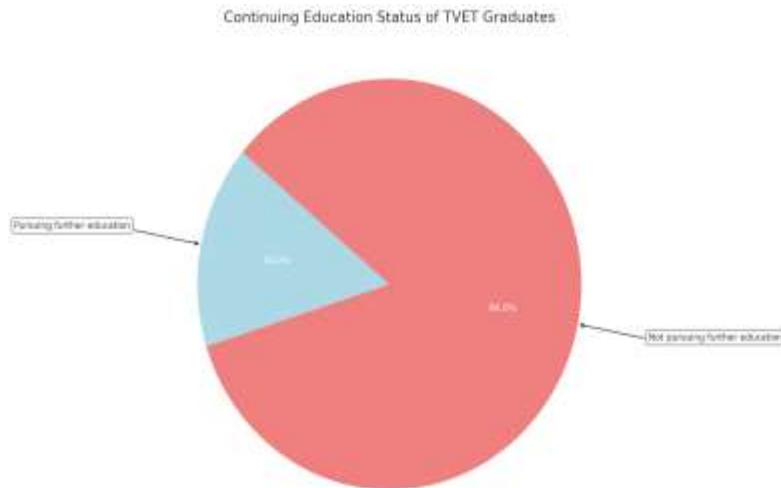


Source: Survey data (2022)

A significant majority (70%) of respondents stated that their current employment is directly relevant to their studies at the TVET college, while approximately one-third (29.7%) expressed that their current jobs were not aligned with their educational background. Conducting an employer satisfaction survey and a comprehensive analysis of the mismatch would provide valuable insights into the nature of this issue (Quitevis et al., 2019).

The high percentage of unemployed TVET graduates is concerning, especially in light of the increasing rate of graduate unemployment in South Africa. This is indicative a low absorption rate of graduates into the labor market.

Figure 10: Continuing education



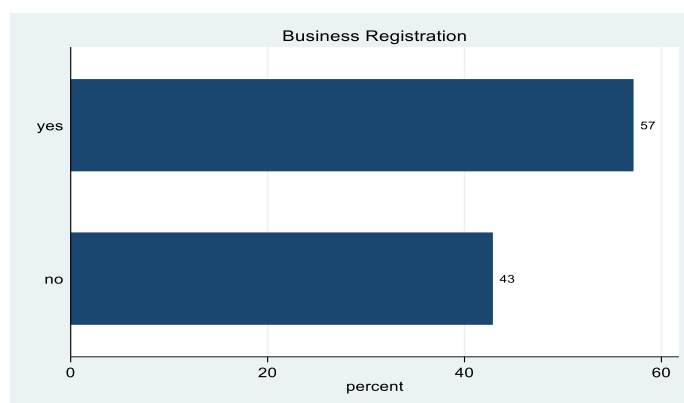
Source: Survey data (2022)

Approximately 16% of the respondents are currently pursuing further education at the college level through NATED programs and at universities. The seamless transition of TVET college graduates to higher education reflects the progress made by Post-School Education and Training (PSET) institutions in advancing the objectives outlined in the white paper on post-schooling education and training (Department of Higher Education and Training, 2013).

5.3. Presenting graduate entrepreneurship data

Of notable concern is the small fraction (2%) of respondents who identified themselves as entrepreneurs (see figure 6 above). The decision to start a business is influenced by various factors, including the pursuit of self-employment, unemployment, passion for specific fields, and market gaps (Odia & Odia, 2013). The majority of entrepreneurs were owners of the businesses, while the remainder were co-owners, highlighting the advantages and challenges of joint business ownership.

Figure 11: Business registration



Source: Survey data (2022)

A majority (57%) of respondents' businesses were registered, indicating progress in navigating the complexities associated with small business registration. However, challenges such as lack of resources, market access, skills gap, curriculum shortcomings, insufficient awareness, and reliance on employment were identified as hindrances to student entrepreneurship success.

5.4. Advocacy for Student Entrepreneurship Education

Despite challenges, there is a strong argument for incorporating entrepreneurship education across all TVET qualifications to impart basic entrepreneurship skills, enhance employability, reduce unemployment, and foster an entrepreneurial mindset. Advocates emphasize the importance of funding constraints, curriculum alignment, practical components, and increased entrepreneurship awareness (Field et al., 2014).

5.5. Ecosystem Collaborations

Collaborative efforts aimed at promoting entrepreneurship within the TVET College sector involve partnerships with the Department of Small Business Development (DSBD), Allan Gray Makers and other stakeholders. Centers of Entrepreneurship and Rapid Innovation (CFERi) initiatives support startups and accelerate enterprise growth. However, capacity constraints and resource limitations hinder broader implementation (NACI, 2020).

5.6. Suggestions for Improving Student Entrepreneurship Education & proposed policy interventions

The baseline study of student entrepreneurship in EC TVET Colleges has revealed several critical areas for strategy and policy intervention to enhance the effectiveness and impact of entrepreneurship education. This section outlines detailed recommendations by respondents towards improving the curriculum, institutional support, entrepreneurship awareness, graduate employment outcomes, and the overall entrepreneurship ecosystem.

First, it is essential to enhance the curriculum and instruction across TVET programs. The curriculum should be updated and aligned with current industry needs, incorporating more practical components to bridge the gap between theoretical knowledge and real-world application. This includes the integration of modern accounting practices, computerized financial systems, and advanced computer literacy from N4-N6. Moreover, entrepreneurship education should be embedded in all TVET programs, ensuring that students from all disciplines, including engineering, acquire entrepreneurial skills. Practical business start-ups should be made a compulsory part of the curriculum from the first year, supported by mentorship programs with experienced entrepreneurs. Regular guest lectures and workshops from industry experts should be organized to provide students with exposure to real-world business scenarios.

Institutional support and resources must be strengthened to create a conducive environment for student entrepreneurship. Developing efficient data management systems is crucial to track graduate outcomes and maintain updated contact details for better follow-up and support. Adequate resources, including modern workshops, updated libraries, and sufficient classroom facilities, should be allocated to all TVET colleges. Providing students with tablets or other devices can further enhance their learning experience. Additionally, the number of accredited Centers of Entrepreneurship and Rapid Innovation (CfERI) should be increased, and these centers should be provided with the necessary support and resources for their establishment and operation. Continuous professional development for faculty members is essential to ensure they possess current knowledge and skills, and hiring lecturers with practical entrepreneurial experience can significantly benefit students.

Promoting entrepreneurship awareness and support is another critical area of focus. Entrepreneurship education and awareness programs should be introduced at the basic education level to promote the business side of various careers and the potential for self-employment. Collaboration with financial institutions is necessary to provide start-up funding and resources for student entrepreneurs. Funding awareness campaigns and access to financial support during their studies should be organized. Ensuring that students develop comprehensive business plans as part of their coursework will prepare them for the realities of starting and running a business. Establishing platforms for business networking and mentorship, facilitating student business tours, and creating opportunities for students to showcase their business projects are also recommended.

Improving graduate employment outcomes requires strengthening work-integrated learning (WIL) and developing programs to assist graduates in transitioning to the labor market. Partnerships with industry should be strengthened to provide more practical training and work-integrated learning opportunities, ensuring that practical components are integrated into the curriculum and supported by industry partners. Graduate placement and bridging programs should be developed to assist graduates in transitioning to the labor market, including work-readiness programs and assistance in compiling in-service training reports. Engaging a wider range of employers beyond the retail sector is crucial to provide diverse internship and job opportunities for graduates, with a priority on recruiting TVET graduates by public and private sector employers.

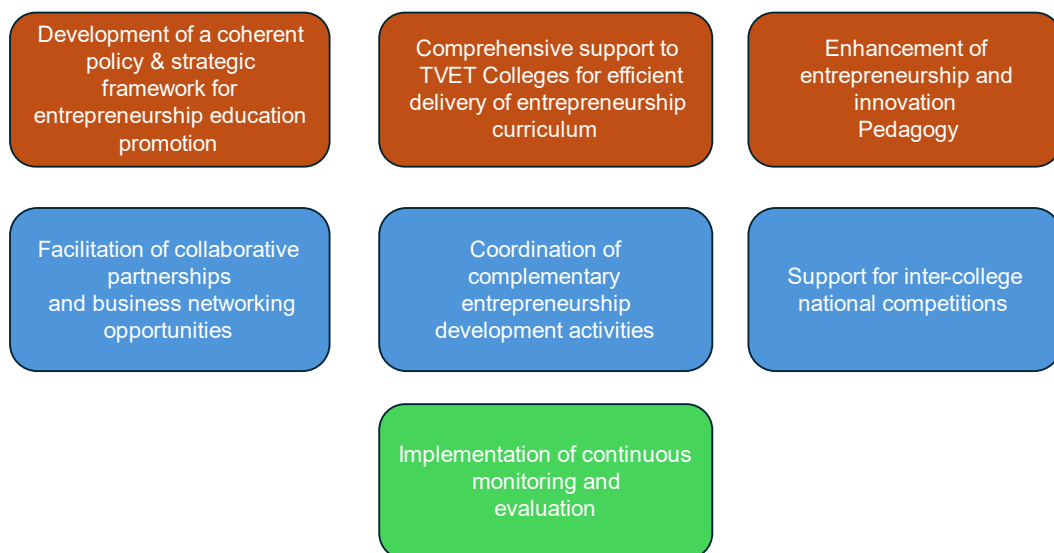
Enhancing the overall entrepreneurship ecosystem involves fostering collaboration between academic institutions, government, development institutions, and the private sector. National and provincial strategies should be aligned with local strategies to cater to the unique realities of the student community and graduates. Establishing more incubation and accelerator programs within TVET colleges and providing comprehensive support, including non-financial assistance and access to markets, is essential. Utilizing incubators as a monitoring tool to measure the impact of

entrepreneurship programs and conducting regular assessments to ensure continuous improvement and relevance is also recommended.

Finally, addressing systemic challenges is vital for the successful implementation of these policies. Administrative processes should be improved to enhance efficiency, including the timely issuance of certificates and disbursement of NSFAS funds. Robust systems should be developed to prevent data loss and ensure smooth operations. Reducing bureaucratic barriers is necessary to simplify the business registration process and reduce hurdles that hinder the establishment and growth of small businesses.

Given the foregoing discussions in this paper, the following policy and strategic interventions to enhance TVET colleges entrepreneurship programmes in the short term, medium term and long term are proposed.

Figure 12: Proposed policy & strategic interventions



Source: produced by author

6. CONCLUSION

The report presents findings on the current status of TVET College graduates with entrepreneurship education transitioning into entrepreneurial roles within the labor market. The research indicates limited engagement in entrepreneurial endeavors despite efforts to integrate entrepreneurship into vocational and occupational curricula. Participants recognize the importance of entrepreneurship skills development in addressing socio-economic challenges and contributing to economic growth. Enhanced curriculum alignment, increased interest in entrepreneurship, and support for the informal economy are essential for fostering entrepreneurial success among TVET college graduates.

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