

TVET TEACHER TRAINING IN SOUTH AFRICA: LITERATURE REVIEW

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Abstract. *In the light of the annually increasing TVET learners' enrolment numbers, TVET lecturers are central in TVET institutions. However, TVET teachers' training in South Africa is under-explored. The research aim is to analyse literature on TVET teachers' training in South Africa underpinning the elaboration of directions of further research. Literature review served as the research method was implemented in November-December 2021. The obtained data were structured in accordance with the previously established criteria. Summarising content analysis was performed. The conclusion is that the research done in the field of TVET lecturers' training programmes in South Africa is fragmentedly presented to the scientific community. The structuring content analysis allows finding that the research in the field of TVET lecturers' training programmes does not address TVET lecturers' digital skills despite their impact on human being everyday life in the light of COVID-19 pandemic. Another finding is the entrepreneurship education is not embedded into TVET lecturers' training programmes, too. Future work will include the implementation of empirical studies in the field of the analysis of TVET training programmes in South Africa. The novelty of the research is reflected in the directions of further work.*

Keywords: *Competences, Literature review, Technical and Vocational Education and Training (TVET), TVET lecturer, training programme, types of learning, South Africa.*

Introduction

The often-cited statistic of TVET graduate unemployment in South Africa is 33% (Mama, 2019). The unemployment rate amongst Business and Engineering graduates in South Africa is even 47% (Mama, 2019). The COVID-19 pandemic has exacerbated South Africa's labour market woes. Figure 1 shows the official unemployment rate among young people aged 15 – 34 years in South Africa in 2021 (Statistics South Africa [Stats SA], 4 June 2021). Figure 2 demonstrates the number of young people aged 15-24 who were not in employment, education and training (NEET) in South Africa (Stats SA, 4 June 2021).

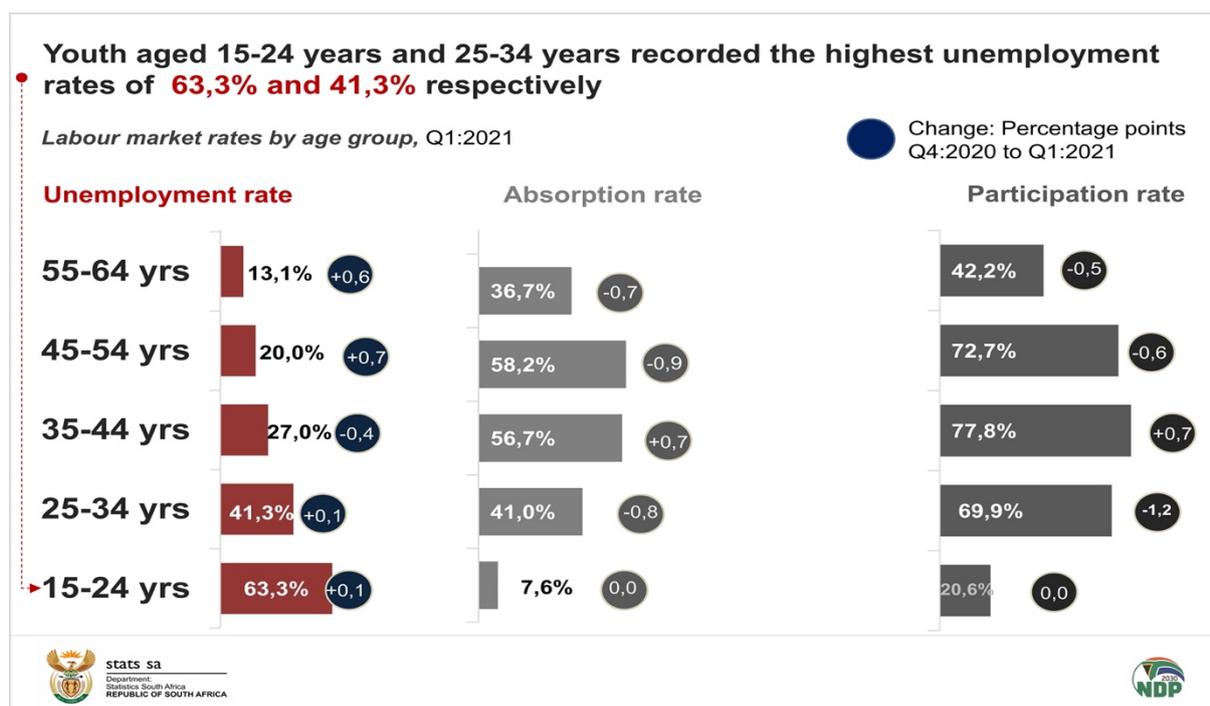


Figure 1 The official unemployment rate among young people aged 15 – 34 years (Stats SA, 2021)

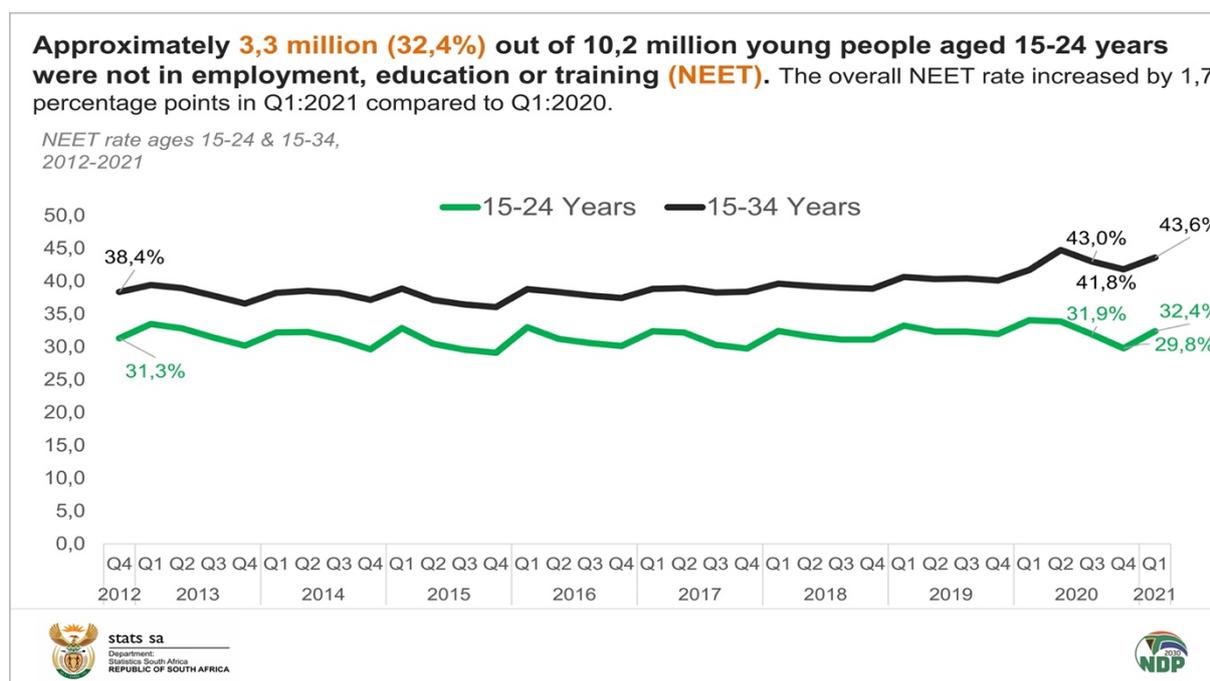


Figure 2 The number of young people aged 15-24 who were not in employment, education and training (NEET) (Stats SA, 2021)

The expansion of TVET has long been advocated as a solution to the problem of youth employment (Department for Higher Education and Training [DHET], 2021).

Thus, TVET in South Africa is a key policy priority as TVET plays a pivotal role in developing a knowledgeable and skilled citizenry who are able to contribute effectively to the social and economic development of the country (DHET, 2013).

Since the demographic development in South Africa is positive (Stats SA, 19 July 2021), Technical and Vocational Education and Training (TVET) in South Africa is attracting concerted efforts from policy-makers, scientists and practitioners, employers and other stakeholders. Hence, TVET sector is to rise the enrolment numbers from 688.028 students in 2017 to 2.500.000 students in 2030 (DHET, 2019). In these conditions, TVET teachers, also known as lecturers, are central to educational activity in institutions that offer TVET (DHET, 2013). However, TVET teachers’ training in South Africa is under-explored and requires more researchers’ attention.

The research aim is to analyse literature on TVET teachers’ training in South Africa underpinning the elaboration of directions of further research in the field of TVET training programmes for TVET lecturers.

The research method is literature review. Literature review was selected as it serves as the grounds for future research and theory (Snyder, 2019) in the field of TVET lecturers’ training programmes. The obtained data will be structured in accordance with the previously established criteria. Summarising content analysis will be performed.

The novelty of the research is reflected in the directions of further work.

Literature Review

A vision is required in order to build a TVET teacher training programme. (Oluwajodu, Blaauw, Greyling, & Kleynhans, 2015). South African Policy on Professional Qualifications for Lecturers in Technical and Vocational Education and Training (DHET, 2013) serves as a framework of training programmes for lecturers in the TVET system.

According to DHET (2013), a training programme results in TVET lecturers’ competences reflected in Table 1.

Table 1 TVET lecturers’ competences (DHET, 2013)

Nr.	Competence	Sub-competence
1.	Subject knowledge	-How to teach -How to select, sequence and pace content in accordance with both subject and learner needs -How to integrate teaching of knowledge, practice and affective attributes
2.	Understanding of the TVET context in South Africa	-Policy environment -Contextual realities -Practice adjustment

3.	Knowledge of who their learners are	-Socio-economic background -Age -Culture -Life and work experience -Learning styles and aspirations -Special education needs -Accommodation of learner diversity
4.	Effective communication in the language of learning and teaching	-Speaking - Reading -Writing
5.	Effective management of teaching and learning environments	-Learning enhancement
6.	Learner assessment in varied and reliable ways	-To use the results of assessment to improve learner's learning -A variety of types of feedback - Improvement of their (TVET lecturer) own practice
7.	ICT literacy	-Competent user of ICTs -To integrate ICTs in an effective manner in teaching and learning
8.	Workplace knowledge demands	-To equip learners with the subject knowledge to meet the workplace demands
9.	Positive work ethics	-Appropriate values -To enhance and develop the vocational teaching profession
10.	Critical reflection	-To reflect in theoretically informed ways - In conjunction with their professional community and colleagues, -To reflect on their own practice in order constantly to improve it and adapt it to evolving circumstances

For the enhancement of TVET lecturers' competences, training programmes are to be based on different types of learning described in Table 2.

Table 2 Types of learning in TVET training programmes (DHET, 2013)

Nr.	Type of learning	Learning components
1.	Disciplinary learning	-The study of education and its foundations: philosophy, psychology, politics, economics, sociology and history of education; cross-cutting themes (professional ethics related to knowledge and relationships between, self and others in the life) -The study of specifics and specialised subject matter relevant to academic, occupational or vocational fields
2.	Pedagogical learning	-Principles, practices and methods of teaching -General pedagogical knowledge (learner, vocational education, learning, curriculum, instructional and assessment strategies, etc)

		<ul style="list-style-type: none"> -Specialised pedagogical content knowledge (how to represent concepts, methods, rules and practices, etc) -Inclusive education - Barriers to learning
3.	Practical learning or Work Integrated Learning (WIL)	<ul style="list-style-type: none"> -Skills, techniques and practices in Work Integrated Learning (WIL) -Learning from practice (case study, video records, lesson observation, etc) -Learning in practice (teaching in authentic and simulated lecturing environment) -Workplace or industry practice (technical skills associated with the subject)
4.	Situational learning	<ul style="list-style-type: none"> -Situation -Context -Environment -Prevailing policy, political and organisational contexts -Diverse challenges
5.	Fundamental learning	<ul style="list-style-type: none"> -Official African language -ICTs -Academic literacies -Basic life skills

After having finished a TVET training programme, TVET lecturers’ learning achievements, or in other words, the development of their competences is formally recognised and certified as a qualification by an accredited institution (DHET, 2013).

Methodology

The literature review was carried out in November - December 2021.

Umbrella review was implemented. Umbrella review refers to review compiling evidence from multiple reviews into one accessible and usable document (Grant & Booth, 2009). It focuses on broad condition or problem for which there are competing interventions and highlights reviews that address these interventions and their results (Grant & Booth, 2009). Umbrella literature review allows defining gaps between known and unknown as well as proposing recommendations for further research (Grant & Booth, 2009).

The search for literature with the google was based on the use of the key words “TVET”, “training”, “teachers”, “South Africa”.

The type of articles that were selected for the literature review are theoretical papers, review articles, and empirical research articles (Ramdhani, Ramdhani, & Amin, 2014). Choosing literature with conflicting theoretical positions and findings along with the position or prediction empowers the analysis and synthesis for formulating the research findings (Ramdhani, Ramdhani, & Amin, 2014).

Analysis of literature is based on the criteria, namely TVET lecturers' competences and types of learning, shown in Table 1 and 2. Structuring and summarising content analysis was founded on the collected data interpretation. The researcher is the interpreter (Ahrens, Purvinis, Zascerinska, Miceviciene, & Tautkus, 2018).

Research Results

The literature analysis assisted in revealing the context of TVET training programmes for TVET lecturers' training. The selected literature investigation disclosed that, despite the TVET teachers are the key actors, only 4% of staff as fully qualified, and only 15% of staff are deemed to be academically and professionally qualified (DHET, 2021). In 2015 only 131 TVET teachers were trained, in 2016 – 19 TVET teachers, in 2017 – 36 TVET teachers, in 2018 – 201 TVET teachers, and in 2019 – 36 TVET teachers (DHET, 2021). The data about the number of trained TVET lecturers' shows the situation with the development of the TVET lecturers' competences formally recognised and certified as a qualification.

The literature analysis assisted in identifying two levels of TVET training programmes for TVET lecturers' training:

1. TVET lecturers or, in other words, individual level
2. TVET teacher education or, in other words, institutional level. It should be pointed that the institutional level of the creation and implementation of TVET training programmes also includes business and industry as well as other stakeholders.

Table 3 illustrates the results of the structuring content analysis of the literature review on TVET training programmes at the individual level.

*Table 3 Review of TVET training programmes at the individual level
(created by the author)*

Nr.	Type of learning	A short description of the investigation	A short description of the investigation results	Reference
1.	Disciplinary learning	Knowledge in the subject	Cooperation with local companies	Zinn, Raisch, & Reimann, 2019
2.	Pedagogical learning	-Teaching skills - The theory and method of reflection levels	Cooperation with local companies - Reflection is a good tool for analysis, planning, and development of complex learning situations	Zinn, Raisch, & Reimann, 2019 Hartmann, 2016

3.	Practical learning or Work Integrated Learning (WIL)	-Integrating the world of work into initial TVET Teacher Education - Regular exposure of lecturers at public VET institutions to industry	-The development of a comprehensive curriculum framework for the industry-WIL component of the qualifications - The development of TVET lecturers' technical and pedagogical competence	Bijl, 2021 Duncan, 2016
4.	Situational learning	-To shape the assessment of the state of innovation in TVET colleges in future - The policy recognition of the unique identity of TVET teachers and the relationship they should have with industry	-There are pockets of innovation practice in the TVET colleges -Innovation leaders may mentor those that are lagging -There is a willingness, and a need, to engage -The recognition of TVET as an essential actor - Training in pedagogy, in their subject knowledge, and have industry exposure/experience	DHET, 2021 Papier, 2016
5.	Fundamental learning	-Fundamentals of the development of Vocational Education and especially of the Further Education of VET teachers motivated	-The shaping-/competence-based and networked teaching and learning	Eicker, 2016

The structuring content analysis allows finding that the research in the field of TVET lecturers' training programmes does not address TVET lecturers' digital skills despite their impact on human being everyday life in the light of COVID-19 pandemic. Another finding is the entrepreneurship education is not embedded into TVET lecturers' training programmes, too.

Table 4 describes the results of the structuring content analysis of the literature review at the institutional level.

*Table 4 Review of TVET training programmes at the institutional level
(created by the author)*

Nr.	Topic	A short description of the investigation	A short description of the investigation results	Reference
1.	University-based Further Education Programmes (FEPs) models	The search for models and the prospect of their use in upskilling VET practitioners	Four models, namely -Formal Apprenticeship, -Dual System, -Modularized, and -Viaduct	Ogwo, 2016

2.	Technology-assisted, structured networking competency based Further Education among VET institutions	-Technology-assisted (cloud computing, intelligent tutors and software applications), - Structured networking (supported by regional bodies like African Union) competency	Technology-assisted and structured networking competency provides collective growth, shared resources, institutional/professional mentoring; which will be cheaper to fund and will promote transferability of knowledge/skills given the commonality in socio-cultural heritage	Ezekoye, 2016
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Summarising content analysis allows finding that the design of TVET training programmes requires the synthesis of two levels:

- TVET lecturers' individual level, and
- TVET institutional level.

Conclusions

The literature review allows concluding that the research in the field of TVET lecturers' training programmes in South Africa is an emerging area. Another conclusion is that the research done in the field of TVET lecturers' training programmes in South Africa is fragmentedly presented to the scientific community.

Literature analysis allows making a conclusion that in the light of the annually increasing TVET learners' enrolment numbers, TVET teacher training and its programmes of different qualification types are to become attractive for TVET lecturers. One of the ways for the creation of an attractive TVET lecturers' training programme is to put the emphasis on the enhancement of TVET lecturers' digital skills. TVET lecturers' digital skills are vital in the conditions of the COVID-19 pandemic. Entrepreneurship education in TVET training programmes could also enable the development of TVET lecturers' competences.

The presented research has some limitations. The inter-connections between TVET training programmes at individual and institutional levels, types of learning in TVET training programmes, TVET lecturers' competences and qualifications have been set. Another limitation is the only literature review was carried out. If other methods have been applied, then, different results could be attained. Also, the focus of the literature review referred to South Africa only. The researchers' data interpretation was limited by the researchers' previous research experience in the field of TVET training programmes.

Future work will include the implementation of empirical studies in the field of the analysis of TVET training programmes in South Africa. Examination of efficiency of TVET training programmes of different types of qualification is proposed. Integration of the development of TVET lecturers' digital skills and

entrepreneurship skills within TVET training programmes in South Africa will be considered, too. The empirical studies to be carried out in South Africa intend to involve TVET lecturers, TVET teacher education institutions' administration as well as business and industry stakeholders. Comparative studies of their views and opinions on TVET training programmes are of great research interest.

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