A deflating quality TVET education in Gauteng Technical, Vocational Education and Training Colleges

Sizwe Marcus Mahlangu(a) Thokozani Isaac Mtshali(b) *

(a) Dr, Lecturer, Department of Information and Communication Technology, Tshwane University of Technology, Pretoria, South Africa
(b) Dr, Lecturer, Department of Technology and Vocational Education, Tshwane University of Technology, Pretoria, South Africa

INTRODUCTION

The post-secondary vocational education system in South Africa encounters many challenges, including a lack of professionalism among certain teaching people, an unresponsive curriculum, and inadequate management of day-to-day operations, leading to fragmentation within the system. This is corroborated by a 2014 Training Needs Assessment Study (TNAS) that uncovered a dearth of effective college leadership management abilities and the utilisation of insufficient instructional approaches in certain vocational schools. This study aimed to investigate the possible factors influencing the quality of Technical and Vocational Education and Training (TVET) in certain colleges located in the Gauteng area of South Africa. The study employed a quantitative research methodology, collecting data using a survey. Subsequently, the data was subjected to analysis using SPSS. This study hypothesised that the current state of affairs may be attributed to inadequate and fragmented leadership and management techniques. The researchers expressed uncertainty regarding the implementation of a more integrated and focused leadership approach that would disperse responsibility for student accomplishment in order to enhance outcomes. This study aimed to examine the main obstacles to enhancing students’ performance in TVET colleges and explore how a dispersed instructional leadership approach may be conceptualised to tackle these challenges at the institutional level. The study highlights the significance of collaboration and a fair allocation of power and competence to promote a collective leadership vision in the pursuit of enhanced institutional performance in a sector in need of positive results.

Introduction

The past decade has given us a clear picture on the quality level of Technical Vocational Education and Training (TVET) college education system in South Africa. With the surveyed literature, there is a reason to believe that there has been a lot of challenges than successes in the curriculum operation and the management of these institutions. For example, a study by Nkwanyane (2023) reveal that the NCV: Building and Civil Engineering program is not aligned with the industry expectations and that the curriculum is too theoretical to the detriment of TVET students. Also, Ramongwane, Manto and Moses (2022) report that TVET colleges are still battling in balancing discipline specific teaching and learning resources, equipment, plus a responsive infrastructure for lecturers to impart practical knowledge and skills. Perhaps it is even fair to say that not much is known about relevant teaching methodologies and philosophies that underpin TVET college lecturers’ andragogical and pedagogical activities. This, in a bird’s eye view persuades us to think that there is a sharp decline in the quality of TVET education in some colleges around Gauteng Province.

Despite being cautioned by Nonyana et al. (2024) that most TVET studies are specific to individual cases and cannot be generalized, it could be argued that labeling TVET colleges in the Gauteng province as providing subpar education may be incorrect. We, however, are motivated by Buthelezi (2018) study who reported that across the board, South African TVET college lecturers are not compatible with the recent curricular reforms, and they struggle with agency to adapt to constant radical reforms. Also, we took into account the recent announcement by the minister of higher education in South Africa on the 26th of March 2024 who recently deregistered some
colleges offering some vocational subjects on account that they have underqualified teaching personnel and sometimes these colleges lack professionalism amongst other concerns (Bakharia, 2024). Of course, these are damning findings and have a potential to put all lecturers offering vocational subjects in a bad picture globally and locally. However, there is no reason to gloss over empirical facts as this may be the only way to directly address all the deficiencies in vocational education institutions and find viable and pragmatic solutions to the deflationary education system. We must face the reality that most South Africans do not have a TVET college that has the same status as any other higher education. In fact, the prevailing opinion is that studying at a vocational college is a waste of time. Recently, as the second author of this piece, I had conversations with parents who were angry that universities were not interested in their kids and who completely disregarded my suggestion to show them around Gauteng TVET colleges. Their strong disapproval of TVET colleges led them to prefer matriculation upgrades over TVET colleges. This experience demonstrates these institutions' depressing nature.

TVET colleges are found in all provinces of South Africa and the main aim is to improve skills development and create employable citizenry (Gamede & Uleanya, 2019). Among others Gauteng is South Africa's smallest province, covering only 1.5% of the country's land (Oelofse, Muswema & Ramukhwatho, 2018). However, Gauteng is a significant center of learning in South Africa, and TVET College is one of the institutions established (Olowoyo, Ramaila & Mavuru, 2020). Subsequently, TVET colleges, formerly known as Further Education and Training (FET) colleges, educate two groups of people, those seeking a career-focused education rather than a traditional matric, and those who have completed their secondary education and are seeking a tertiary qualification but do not qualify for university admission (Obinnim, 2021).

NATED or Report 191 programs, which were once the theoretical component of the artisanal training system for apprentices employed by private sector enterprises, are the two basic educational courses offered by TVET colleges (Obinnim, 2021). According to Nhutang (2021), students can now participate in NATED programs without being employed or receiving employer sponsorship, and courses are offered over six terms (for engineering programs) or three semesters (for business and services programs). Furthermore, in 2007, National Certificate (Vocational) programs were launched, which emphasize practical and vocation-specific learning over a three-year period and account for the bulk of TVET students (Nhutang, 2021).

According to the National Development Plan, the TVET sector has the ability to play a vital role in South Africa's development and unemployment reduction (Mahlangu & Mshali, 2024; Thamsanqa, 2018). According to Olowoyo et al. (2020), one of the NDP's aims is to enrol 2.5 million students in TVET colleges by 2030, up from 640 000 in 2013. While enrolment in TVET colleges has increased significantly during the last decade. However, it is unknown whether and to what extent TVET graduates' skills meet employer needs and are in demand in the labour market. Theoretically, it is also unclear if the performance of South African schools can be improved quickly enough to produce the requisite number of TVET-eligible school leavers. In 2015, fewer than 350 000 matriculants earned grades sufficient to be admitted to universities and diploma programs (Norton, 2016). This means that a greater proportion of the population will need to attend TVET colleges in order to acquire the necessary skills to work in the South African economy. However, a gap in the literature regarding the skills required of lecturers in TVET colleges prompted a review. Between November 2014 and October 2015, DNA Economics conducted a performance and expenditure review (PER) of the TVET sector (Plooy & Preez, 2022). The review attempted to describe how the sector operates and is financed, how those funds are spent, the implications of expanding the sector to meet the National Development Plan's targets, and how its efficiency could be increased. Thus, the aim of the paper is to assess the challenges faced in TVET colleges as far as acquiring and retention of skills staff members in Gauteng province. The next section presents a literature review of the study.

**Literature Review**

Vocational training is a contentious issue in South Africa, where large number of unemployment, particularly among youth and post-school workers, are frequently cited (Plooy & Preez, 2022). Vocational study programs at TVET colleges are frequently cited as a possible solution to these issues. According to the Department of Higher Education and Training (DHET), the long-term goal is to increase the number of learners who qualify as artisans, which is a critical/scarc skill area in South Africa (Nohlahla, 2019). However, TVET students' throughput and certification rates are alarmingly low, with National Certificate (Vocational) (NC(V)) Engineering courses consistently ranking among the lowest (Gamede & Uleanya, 2019). A thorough understanding of the perceptions and concerns of TVET NC(V) Engineering lecturers and students may aid in resolving issues locally, at individual TVET colleges, and globally, at the national policy and Sector Education and Training Authority (SETA) levels, which may contribute to improved academic performance, including higher throughput and certification rates, for NC(V) Engineering students in the future. However, the issues are exacerbated by deficiencies in the TVET lecturer’s qualifications.

It is claimed that effective educational leadership communicates directly to student achievement and leads to better student outcomes. Instructional leadership and distributed instructional leadership, a contemporary branch of this leadership concept, are two important educational leadership theories that emerged from traditional models and are relevant to this study. For the purposes of this study, studies of instructional leadership in schools are relevant to distributed instructional leadership in vocational colleges because similar staffing and management methods are used, and many campuses are led by campus managers (the equivalent of school principals).
Deficiencies in TVET lecturer qualifications

The Green Paper on Education and Training referred to the lecturer shortage (Siani & Yarden, 2022). According to Motala and Pampallis (2002) the Green Paper, lecturers in technical fields are primarily recruited from various industries. As a result, as noted in the Green Paper, many have work experience and knowledge but receive little pedagogical training (Motala & Pampallis, 2002). The shortcomings of TVET college lectures are not limited to a lack of pedagogical training. In 2009 McBride, et al. (2009) conducted a study of lecturers in the Western Cape Province. The results reviewed that only 6% of TVET lecturers possessed expertise in all three domains, namely an academic qualification, a teaching qualification, and a workplace qualification or experience. Over 90% of lecturers surveyed lacked the desired combination of academic, teaching, and professional credentials (McBride, et al., 2009). Since 2009, the situation has not significantly improved. In 2016, Wedekind (2016) noted that a sizable number of lecturers should pursue relevant studies in order to upgrade their credentials. In 2019 it was noted that a sizable proportion of academic staff in South Africa’s TVET college system lacks a professional teaching qualification that meets national minimum requirements, and this has continued to halt their ability to invoke a discipline specific pedagogy (Mtshali & Singh-Pillay, 2024; Van der Bijl 2020).

According to a study conducted in the North-West province, 5% of lecturers had only certificates as their highest qualification. A total of 47% of lecturers held a diploma, while 36% of lecturers in the study held a degree (Manyau, 2015). Earlier research in the Western Cape discovered that 50% of lecturers held an academic degree. Eleven % of these lecturers possessed only an academic degree without a teaching credential (McBride et al. 2009). Manyau (2015) found that 78 % of lecturers in the North-West Province lacked teaching qualifications. 11% of these lecturers held a diploma in education, while 4% held an Advanced Certificate in Education or a Postgraduate Certificate in Education. It was clear that the majority of lecturers struggled with their teaching abilities, as 50% of participants required training in teaching strategies (Manyau 2015). The majority of these individuals require additional development in their teaching abilities, including facilitation, assessment, and moderation (Manyau 2015). In comparison, McBride et al. (2009) discovered that 65% of lecturers possessed a teaching qualification. 17% of these lecturers possessed only a teaching qualification and lacked academic or work-related credentials and experience. A total of 29% of lecturers also held an academic qualification, while only 12% held a teaching qualification combined with work experience and qualifications (McBride et al. 2009). Manyau (2015) argues that technical and industry-related exposure and skills are required of TVET college lecturers. According to Manyau (2015), 2.1 % of TVET lecturers had less than one year of work or industry experience, while 49.5% had between two and four years. 25.3 % of lecturers had five to seven years of work experience, while 16.5 % had eight to ten years of work experience. 51.6 % of lecturers lacked work experience or exposure to industry (Manyau 2015). McBride, et al., (2009) study found that 37% of lecturers possessed workplace credentials and experience. A total of 14% of these lecturers held only a workplace qualification without an academic or teaching qualification, 4% held an academic qualification in addition to their workplace qualification, and 12% held a workplace qualification in addition to a teaching qualification (McBride., et al. 2009). As a result, a sizable number of lecturers entered and continue to enter the South African TVET college sector without obtaining an official teaching qualification. Without a formal teaching qualification, college lecturers must develop their teaching abilities in other ways (Van der Bijl, 2015).

Research and Methodology

A descriptive research design was used in this study. The descriptive design is a technique for gathering data that involves interviewing or administering a questionnaire to a random sample of people (Rea & Parker, 2014). The study surveyed all technical instructors and graduate students in engineering and business studies departments at public technical training institutions in South Africa's Gauteng Province. In Gauteng, there were currently 26 technical teachers and 31 technical students enrolled in TVET institutions. Purposive (Stratified and convenience) sampling was used to select participants from the accessible population. Questionnaires were used to conduct the research. Teachers and students completed the questionnaires. The data were analyzed using descriptive statistics techniques, particularly measures of central tendency. The data collected via questionnaires were analyzed using the Statistical Program for Social Science to identify emerging patterns or opinions (SPSS).

Ensuring Validity of the research

A study's validity should verify that there are connections between the explanations for the phenomena being examined and the world’s reality. Table 1 summarizes the strategies utilized to increase the study's validity.
Table 1: Data Collection and analysis (Ensuring validity)

<table>
<thead>
<tr>
<th>Data collection &amp; Analysis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants</td>
<td>Data were collected from 34 students after a pilot study was conducted. The results of the pilot study enabled the researcher to validate the instrument used.</td>
</tr>
<tr>
<td>Member checking and participant review</td>
<td>Participants received a synthesis of all interviews and questionnaires conducted by the researchers.</td>
</tr>
<tr>
<td>Validating participants</td>
<td>Participants validated the data analysis process throughout the process by confirming the results of the data analysis.</td>
</tr>
<tr>
<td>Coding of data</td>
<td>An external coder meticulously coded and verified the data. Generalizations were made by concentrating exclusively on the data that substantiated any statements.</td>
</tr>
<tr>
<td>Avoiding unfair segregation of data</td>
<td>The researchers were guided against their own preconceived notions and expectations about the research.</td>
</tr>
</tbody>
</table>

Findings

School-based factors affecting the quality of TVET programs

The study sought to evaluate to what extent the school-based factors act as challenges in the quality of the curriculum implementation. School-based factors were operationalized in two; student factors and teacher’s factors. Student factors affecting the quality of TVET programs, and the results of student factors are shown in Tables 1 and 2.

Table 1: Student performance in TVET colleges

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ poor reading culture</td>
<td>3.37</td>
</tr>
<tr>
<td>Students' peer group influence</td>
<td>3.23</td>
</tr>
<tr>
<td>Students’ practice of examination malpractice</td>
<td>3.11</td>
</tr>
<tr>
<td>students’ irregular attendance</td>
<td>3.11</td>
</tr>
<tr>
<td>Students’ interest in learning</td>
<td>3.01</td>
</tr>
<tr>
<td>Students’ disobedience to school regulations and rules</td>
<td>2.99</td>
</tr>
<tr>
<td>Lack of required learning material</td>
<td>2.40</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.347</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.915</td>
</tr>
</tbody>
</table>

Table 2: T-test analysis of the performance of TVET students taught by experienced and inexperienced lecturers

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>T-cal</th>
<th>T-crit</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced lecturers</td>
<td>74</td>
<td>54.65</td>
<td>6.94</td>
<td>178</td>
<td>7.81</td>
<td>2.51</td>
<td>0.0021</td>
</tr>
<tr>
<td>Inexperienced lecturers</td>
<td>64</td>
<td>43.79</td>
<td>6.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 2, the computed t-value of 16.07 is more than the critical t-value of 1.96 at a 5% level of significance. As a result, the null hypothesis is discarded. This indicates a considerable difference in academic achievement between students of chemistry taught by skilled professors and those taught by inexperienced teachers.

Discussion

As demonstrated in Table 1, the low reading culture of students was identified as the primary impediment to the quality of curriculum implementation. With a mean of 3.37, this was a highly desired factor. With a mean of 3.23, students’ peer group impact was identified as the second most difficult aspect of curriculum implementation. Examination misconduct by students and students’ erratic attendance in class were ranked third and fourth, respectively. With a mean of 3.01, students' interest in learning was ranked sixth. The parental background of the student averaged 3.00 and was rated sixth. With a mean of 2.99, students’ disobedience of school regulations and rules such as tardiness to school was ranked sixth. With a mean of 2.4, the absence of needed learning materials such as textbooks was placed lowest. The student factors had a skewness score of -0.347, showing a negative distribution of values to the left. The kurtosis value was -0.915, indicating that the values are more widely distributed around the mean.

The results suggest that students' lack of interest is the root cause of a lack of a reading culture. Later research revealed that peer pressure was yet another important element causing poor performance. This could be as a result of inadequate coaching by lecturers in making life-altering choices. The findings corroborate Obinnim's (2021) assertion that inadequate mentorship from both parents and lecturers can result in kids choosing poor choices, which ultimately leads in low performance in class. On the similar line,
Olowoyo et al. (2020) stated that lecturers' inability to assist pupils in comprehending life outside the classroom is a result of inadequate qualifications and training. In terms of students' examination misconduct and irregular attendance, the unmotivating environment in TVET colleges may be a factor. Learners who are well supervised by qualified lecturers develop an innate desire to do well and succeed in life. The findings corroborate Arfo (2015) assertion that qualified instructors possess the ability to instil a love of learning in students and drive them to do good. While this is true, the next sections discuss the outcomes of TVET students taught by competent and unskilled instructors.

Table 2 demonstrates a significant correlation between teacher competence and students' academic performance in TVET colleges. This could be because the lecturer's intellectual ability is a critical factor in the quality of learning acquired by students in TVET colleges. A lecturer's competence in his work, as well as the qualities that enable him to inspire and develop his students' latent capacities, would automatically contribute significantly to the students' high academic performance in TVET colleges. Additionally, the lecturer's resourcefulness, effective teaching skills, and effective evaluation all contribute to the students' performance. This is consistent with Norton's (2016) finding that a significant relationship exists between teacher competence and student performance. This is also consistent with Nohlahla's (2019) findings, which stated that effective teaching occurs when the teacher utilizes instructional materials to influence the learners' ability to learn. As such, a qualified teacher is capable of translating students' knowledge, abilities, attitudes, and values into course outcomes established by professional standards. Following that, a qualified teacher possesses effective classroom management skills, effective communication skills, adequate subject knowledge, and the ability to employ a variety of teaching strategies in order to improve students' performance. This is consistent with Olowoyo et al (2020) assertion that all teachers require breadth and depth in the subject they will teach, as well as an understanding of new knowledge, which necessitates a high level of professional qualification. Finally, an effective and efficient instructional process ensures the students' and indeed, the learners' performance.

Conclusion

In accordance with the foregoing findings, the study concludes that there is a statistically significant relationship between teachers' qualifications and students' academic performance in technical and vocational education and training colleges. The result was that TVET students who were taught by qualified teachers outperformed their counterparts in terms of academic performance by a significant margin. The academic performance of TVET students who are taught by experienced teachers outperforms that of students who are taught by inexperienced teachers by a significant margin. Finally, it can be concluded that qualified lecturers who know how to motivate students to work extra hard can have a positive impact on the behaviour of students in technical and vocational education and training colleges.

Based on the results of the study the recommendations from the study are:

i. Certification as a lecturer should be considered a requirement for employment.

ii. In collaboration with SACE, the Department of Higher Education should work to professionalize lecturing by establishing professional employment standards for all new entrants.

iii. Seminars, workshops for skills development and training as well as other forms of professional development for lecturers should be prioritized by the South African Ministry of Education.

iv. All TVET colleges should have a qualified lecturer's policy that is enforced across the board.

Acknowledgement

All authors have read and agreed to the published version of the manuscript.

Author Contributions: Conceptualization, S.M.M and T.I.M; methodology, S.M.M.; formal analysis, T.I.M.; investigation, S.M.M; resources, S.M.M; writing—original draft preparation, S.M.M and T.I.M; writing—review and editing, S.M.M and T.I.M.

Funding: This research was funded by the department of Information Communication Technology at TUT.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the Sizwe Marcus Mahlangu, the first author. The data are not publicly available due to restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

References


Publisher’s Note: SSBFNET stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

© 2024 by the authors. Licensee SSBFNET, Istanbul, Turkey. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

International Journal of Research in Business and Social Science (2147-4478) by SSBFNET is licensed under a Creative Commons Attribution 4.0 International License.