Received: December 2023 Accepted: January 2024 DOI: https://doi.org/10.58262/ks.v12i2.205

Intervention Strategies to improve Technical Vocational Education and Training College Students Efficacy towards their Education

Maria Segakoane Nonyana¹, Thokozani Isaac Mtshali^{2*}, Moses Makgato³

Abstract

It is common cause that students should strive to work hard and subsequently progress to different levels of their learning. However, most students get consumed by various social activities that affect their learning hence a need for intervention by institutions to assist them in completing their studies on time. Thus, this study sought to investigate intervention strategies that could improve performance of National Certificate V ocational programmes NC (V) at TVET colleges. Structured interviews were conducted with 15 NC (V) lecturers and 5 campus management team of five TVET college campuses in Gauteng province, South Africa. The researchers also conducted observation study to collect qualitative data. Convenient sampling method was used to select participants. This study employed Weiner's theory to understand internal and external intervention strategies that could improve performance at TVET colleges. Based on high failure rate at the colleges, it is recommended that TVET colleges should institute student mentorship programmes, skills competitions and merits systems amongst other to assist in improving performance of NC (V) programmes at TVET colleges.

Keywords: Intervention strategies, NC(V) programmes, TVET colleges, NC(V) students

1. Introduction

Technical and Vocational Education and Training (TVET) is gradually becoming a first choice of education for most young people because of its aim into equipping students with industrial skills. According to Chong, Ding and Ho (2015) students are now embracing higher education more especially due to the widespread need to upgrade their education in the recent years as well as increased demand of vocational skills in their countries. Williams (2016) acknowledges that while this is good for TVET education, colleges have been overwhelmed with challenges that comes with increased popularity and skills demand. Most importantly, it has been challenging to deal with psychological warfare of students in their transition from a highly dependent to less a teacher dependant learning experience. This alone presents a huge learning challenge for students leading them to poor performance, hence a need for intervention.

The historical legacy of TVET colleges in South Africa is that it has been inhabited largely by personnel who are a work-in-progress when it comes to policy implementation, running programs and having clear articulation structure for it. This means that the lecturers present at TVET colleges are still finding their identity as TVET pedagogues, some are not even qualified teaching personnel (Mtshali & Ramaligela, 2021; Ngoveni, 2018). Also, with students, they

¹ Department of Technology and Vocational Education, Tshwane University of Technology, South Africa. Email: nonyanam2@gmail.com

²*Department of Technology and Vocational Education, Tshwane University of Technology, South Africa. Email: thokozanimtshali63@yahoo.com

³ Department of Technology and Vocational Education, Tshwane University of Technology, South Africa. Email: Makgatom@tut.ac.za

come with huge expectations about their lecturers pedagogical and socio-economic capital (Mtshali & Singh-Pillay, 2023). Simply put means that they presume that lecturers are well equipped with knowledge of teaching and that they can transform them from unskilled to skilled. However, Terblanche and Bitzer (2018) posit that TVET college lecturers have been working in silos when planning and implementing curriculum, yet they have little conception of it. This leads to a more exacerbated industry misaligned curriculum – further contributing to poor performance in producing quality education in the TVET space. There is a need to consolidate a progressive view on how best can lecturers perform in teaching NC(V) students which may ultimately improve students' performance (Nkwanyane, 2023). This study is interested in this under researched discourse where lecturers and students suggest ways to improve their performance in their colleges.

This study takes note of assertions by Terblanche and Bitzer (2018) who suggest that ongoing professional development to college staff is essential with focus to knowledge and skills required to plan and deliver a responsive vocational and occupational curriculum. Also, Ngoveni (2018) adds that TVET colleges should organise workshops that will help to capacitate lecturers with content knowledge and ensure that attendance policy is available and adhered to. Of course, Garcia and Al-Safadi (2014) support these scholars in that professional development will help lecturers to improve their capacity to train for academic performance that is specific and measurable. Nevertheless, this study is on premise that any suggestion that comes without a solicited contribution from lecturers and students is likely to gain fallacy, hence this current study sought to investigate intervention strategies from both lecturers and students to improve performance.

2. Intervention Strategies to Improve Performance

According to Nevo, Lok and Spiegelman (2018) the principal aim of intervention strategies is to address the needs and issues that cannot be addressed more effectively in another way. Intervention strategies at TVET colleges are vital, and yet remains a dilemma for most students. For an intervention to be effective, the programmes designed should be based on clearly defined objectives, and the programme should be monitored and evaluated (Katamei & Omwono 2015). A study conducted by Buthelezi (2018) revealed that compatibility between curricular reforms, student type enrolled and lecturers' adaptability to the reform could improve performance at TVET colleges. Furthermore, Zides (2015) described intervention strategies as any type of technique, used by the lecturers, to help struggling students catch up and not fall further behind in class. Intervention is good in the sense that students receive, at a minimum, the best average improvement of their results. Even if a new intervention has benefits, it may not work for every student. Outcomes measured may not address issues most important to students' performance. With the intention of identifying the gap in existing intervention programmes, this study discussed students, peers, family, and college intervention programmes that could improve performance of NC (V) programmes at TVET colleges. It is to this end that TVET colleges do not provide students with intervention strategies, and yet it remains a challenge to the majority of TVET students. Concentrating on the intervention programmes at TVET colleges, this study aims to answer merely the following research question:

RQ1: Which intervention strategies could be used to improve performance of NC (V) programmes at TVET Colleges?

3. Theoretical Framework

In order to understand intervention strategies to improve performance of Technical Vocational Education and Training college students, this study used Weiner's (1972) Attribution theory. According to Weiner (1972) attribution theory is about how people try to determine why people do what they do, that is, they interpret causes to an event or behaviour. The reason for the researcher to choose Weiner's (1972) theory as a theoretical framework for this study is that the theory explores internal (students related) and external (peers, family, and college related) factors that could improve performance of NC (V) programmes at TVET colleges. The theory is relevant because it helped the researcher to formulate the research question, research sub questions, methodologies, interpret and discuss data and draw up conclusions. In addition, the theory assisted the researcher in determining student related, peer related, family related and college related factors that could help to improve students' performance at TVET colleges as discussed below.

Student Intervention Programmes

Vaughn, Denton, and Fletcher (2010) described student intervention as an on-going progress monitoring for students to ensure that they are making adequate progress and that instructional practices can be adapted to meet their special needs. It is in this regard that State, Harrison, Kern and Lewis (2017) recommended the use of four possible individual student interventions such as accommodations, de-escalation, organizational skills, and study skills to improve performance in institutions of higher learning. On the other hand, Katamei and Omwono (2015) suggested the use of behaviour modification strategy as an intervention strategy that could help to reduce high failure rate at colleges. According to the scholars, students were sensitized on the importance of having good role models and how to monitor and evaluate their behaviour and set goals. In contrast, a substantial body of researchers recommended the use of self- determination theory (SDT) as an intervention strategy for improving students' performance at TVET colleges (Stewart 2009; Chen & Jang 2010; Barr 2016; Riley 2016; Legault 2017; Hang, Kaur & Nur 2017, Wisniewski, White, Green, Elder, Sohel, Perry, & Shapka 2018).). Furthermore, Machera (2017) mentioned that self-assessment enhances learning in higher education hence the need to implement this teaching intervention strategies to improve performance of NC (V) programmes at TVET colleges.

In addition, a sizeable body of researchers recommended self-directed learning for reducing high failure rate in institutions of higher learning (Francis & Flanigan 2012; Cazan & Schiopca 2014; Mentz & Van Zyl 2016; Stywayi, Chinyamurindi & Shava 2021). As said by the scholars, the theory assists in motivating students to be autonomous, competent and to be kind to other students and their lecturers. On the other hand, De Lange, Van Yperen, Van Der Heijden and Bal (2010); Yoo, Han and Huang (2012); Bodkyn and Stevens (2015); Yong, Jin-Han and Shiau, Wen-Lung (2016) recommended intrinsic and extrinsic learning motivations for the promotion of self-directedness in learning. Furthermore, findings revealed that learning motivation was the driving force behind self-directed learning and therefore enabled students to learn in a self-directed manner (Becirovic 2010; Benvenuti 2013; Premkumar, Pahwa & Banerjee 2013). Moreover, Guglielmino (2013) suggested self-directed learning as it promote individual awareness of self as a self-directed student. Du Toit (2017) too recommended that learning motivation should be present at commencement and during implementation of self-directed learning activities to improve performance at TVET colleges.

The scholars, Ghasemi, Moonaghi and Heydari (2018) mentioned student-related factors such as individual motivation and interest, mental concentration, participation in extracurricular

activities, and self-directedness in learning, as well as students' sense of satisfaction with learning as contributing to improved performance at higher institutions.

Peer Intervention Programmes

As described by Frantz (2015), peer intervention is a way to empower young people; offer them the opportunity to participate in activities that affect them and to access the information and services that they need to protect their health. Nguyen (2013); Ansell and Insley (2013); Coleman, Sykes, and Groom (2017); Machera (2017); Sukrajh (2018); Govender and Govender (2016) recommended the creation of the environment of peer tutoring as one way of improving performance at TVET colleges. The scholars further said that peer tutoring assist students to enhance communication, participation and collaborate learning. This statement was supported by Tan and Gevera (2020) who believed that peer tutorial programmes bring positive results, joy, hope, and inspiration to students by learning with and through their peers. In addition, Korir and Kipkemboi (2014) suggested that students should be encouraged to choose friends wisely as some have negative influence on their academic performance especially those who do not attend college regularly.

Family Intervention Programmes

As explained by Nilsen, Frich, Norheim and Rossberg (2014), one of the benefits of family intervention strategy is to solve problems and become more independent, develop insight and acceptance, recognize warning signs, improve communication skills, and learn to plan. In support of the above statement, the scholars Rafiq, Fatima, Sohail, Saleem and Khan (2013); Katamei et al. (2015); Martinez (2015); Naite (2021); Ghazali, Mustafa, Rashid and Amzah (2021); Ehrlin and Gustavsson (2018) suggested parental involvement strategy as the best intervention programme that could improve performance at TVET colleges. In addition, Ntekane (2018) mentioned that parental involvement in learning acts as a gel that helps to make learning for students pleasant and encourages them to work even more as they seek to make those closest to them proud. Sefotho, Ferreira and Lushozi (2021) as well emphasized the need for ongoing support in many aspects throughout the various developmental stages of the child's life.

College Intervention Programmes

A substantial body of researchers endorsed the use of social media platforms to improve performance at TVET sectors (Kaplan & Haenlein, 2010; Miller, Costa, Haynes, McDonald, Nicolescu, Sinanan, Spyer, Venkatraman & Wang, 2016; Dzvapatsva, Mitrovic & Dietrich 2014). As mentioned by the researchers, those social media platforms include social networking sites such as Facebook, twitter, my space and Linkedth; media sharing sites such as you tube, Flickr, and tumbler as well as Wikis, blog, syndication of content through Rick Site Summary. On the other hand, Mason, and Tisane (2017) suggested the use of study skills intervention programmes as an intervention strategy that could improve performance at TVET colleges. Echoing similar sentiments, Motevalli, Roslan, Sulaiman, Hamzah, Hassan and Garmjani (2013) presented new study skill training (STT) intervention for students who suffer from test anxiety. The scholars mentioned that this study skills training could be a reliable intervention to assist anxious students to fight test anxiety well.

The scholars, Garcia, and Al-Safadi (2014) led a study on intervention strategies for the improvement of students' academic performance at TVET colleges. The study revealed that there is a need for intervention strategies which requires planning and implementation to

strengthen the motivation of students to study, boost their academic performance and uplift the quality of education at TVET colleges. In addition, study conducted by Caesar, Jawawi, Matzin, Shahrill, Jaidin and Mundia (2016) showed that through careful planning and preparation, problem- based learning (PBL) activities can effectively enhance students' engagements and improve their grasp of geographical content knowledge. Also, Wang, Lee and Hoque (2020) suggested the creation of positive and healthy classroom climate for better learning. Furthermore, Mupa and Chinooneka (2015) recommended the need for TVET colleges to employ qualified lecturers who have knowledge of effective teaching. The scholars further said that college heads should supervise lecturers so that proper teaching, scheming, and planning is done. On the other hand, study conducted by Omboi (2011) recommended that tertiary institutions should create a higher level of involvement of faculty members in any further strategy development and review to avoid hands off approach and lack of ownership on their part to promote pass rate. Furthermore, Kühn and Slabbert (2017) recommended utilising different role players such as social workers and health care workers as the best intervention strategy that could improve performance. The study conducted by Cheng (2012) suggested healthy students' lecturer relationship for improvement of results.

Furthermore, Gumal (2016); Sa'ad, Adamu, and Sadiq (2014) recommended that additional qualified lecturers be provided and be encouraged to undergo professional teaching courses, workshops, and seminars to update themselves. Professional development of lecturers was further emphasised by Park, Kim, Moore and Wyberg (2018) as an intervention strategy that could improve performance at TVET colleges. The study conducted by Fosu and Poku (2014) as well recommended that TVET colleges should recruit high calibre lecturers and improve library facilities for improvement of performance. In addition, Mosebekoa (2018) mentioned that governments should finance TVET colleges for improvement of infrastructure developments and equipment for instructional and learning purposes. Infrastructure planning and lecturer-training capabilities was also stressed by Alda, Boholano and Dayagbil (2020) as intervention strategies that could improve performance at TVET colleges. In addition, Mandillah (2019) added availability of teaching and learning materials as an intervention strategy that could improve performance. Furthermore, Owen (2009) suggested several intervention strategies that department could do to improve on performance at colleges. Those interventions include providing flexible and extended professional development programmes for all staff; providing higher quality online programmes linked to opportunities for face-toface contact and ensuring longer-term contact through interactive processes in all higher institutions. In contrast, Moodley and Singh (2015) recommended that colleges must align their support programmes with modules that have a high failure rate to help students cope. In addition, O'shea, McMahon, Priestly, Bodkin-Andrews, and Harwood (2016) recommended mentoring programmes as a way of improving performance.

In his study on collaboration between TVET institutions and industries to enhance employability skills, Raihan (2014) recommended that industries should provide contemporary skills by training and establishing networks with TVET institutions for minimizing the gaps. Thomas, Torr, and Walsh (2017) also highlighted the benefit of experiential learning as a way of improving performance at TVET colleges. The study conducted by Ngwato (2020) revealed that poor funding or late payment of NSFAS constitutes the demotivation of students, which results to poor performance. Suhaili and Mohama (2021) addressed the issue of TVET graduates especially in the mastery of the English language. In addition, Mooketsi (2015) conducted a study on factors affecting internet and broadband penetration in higher institutions. The scholar discovered that broadband connectivity should be made a right for

every student and every lecturer to use to access and to create online educational resources. On the other hand, Whittle (2016); Botha (2020); Nyamayedenga and de Jager (2021) recommended professional learning opportunities for pre and in-service teachers to allow collaborative learning to occur as a way of improving performance.

4. Research Methodology

The study employed qualitative research method to collect data from five college campuses in Gauteng province. According to De Franzo (2011) qualitative research approach is an exploratory research method that is used to gain an understanding of the underlying reasons, opinions, and motivations of the problem under observation. This research method seeks to explore a group and does not generalise findings over the whole population (Cohen, Manion & Morrison 2011). One of the disadvantages of qualitative research method as highlighted by Silverman (2013) is that it sometimes leaves out the contextual sensitivities and focuses more on the meanings and the experiences. Data was collected through structured interviews and observation study. As described by Fox (2009) structured interviews are an important data gathering technique involving verbal communication between the researcher and the participant to gain in-depth information about intervention strategies that could improve performance at the college. Also, the researcher conducted observation to discover intervention strategies that could improve performance at the college. As described by Jamshed (2014) observation is a type of qualitative research method which not only include participants' observation, but also covered ethnography and research work in the field. The good part with observations is that it might enable the researcher to access those aspects of a social setting that may not be noticeable to the public. The data that was collected from interviewing the NC (V) lecturers and the campus management was analysed using thematic analysis method. The goal of thematic analysis is to identify the important or interesting themes, or the patterns in the data, and use them to address the research (Maguire & Delahunt, 2017). Data collected from observation study was analysed using a qualitative analysis software tool called ATLAS.ti. As defined by Petrova (2014), ATLAS.ti is a Qualitative Data software package (QDA) that can code several different media types including text, images, videos, and audios. This software is good in the sense that it offers support to the researcher during the data analysis process, whereby texts are analysed and interpreted using coding and annotating activities.

A sample of five-campus management team members and fifteen NC (V) lecturers were selected using convenient sampling method. As defined by (Heinman 2013) a sample refers to a small subset of a population that is intended to represent or stand in for the population. In this study, the population consisted of 20 campus management team members and 145 NC (V) lecturers from five college campuses. The fifteen (10%) of 145 NC (V) lecturers and five out of 20 campus management team from five college campuses participated in the study. Participants were interviewed at their convenient time. As defined by Etikan, Musa and Alkassim (2016) convenient sampling or haphazard sampling or accidental sampling is a type of non-probability sampling where members of the target population meet certain practical criteria such as easy accessibility, geographical proximity or available at a given time or are willing to participate are included for the purpose of the study. Convenient sampling is affordable, easy and the subjects are readily available. Fifteen NC (V) lecturers and 5 campus management who were available at the convenient time were approached and interviewed. The campus management and NC (V) lecturers were included in the study since they were well acquainted with campuses challenges and dynamics.

For ethical reasons, participants were informed that their participation in the study is entirely voluntary and anonymous. Participants were also informed about their rights to withdraw from the study at any stage without any penalty or future disadvantage. In addition, NC (V) lecturers and campus management were advised to read the questions carefully before the interview can start. The interview instrument consisted of nine structured questions and each participant was interviewed for approximately 30 minutes. Observation instrument used by the researcher consisted of ten structured questions. Analysis of data relied on the result acquired from NC (V) lecturers and campus management answers from every single item of the interview. In addition, analysis of data also relied on the result acquired from observation study conducted by the researcher. Feedback from NC (V) lecturers, campus management and observation study done by the researcher was fully summarised to find out more about intervention strategies that could assist to improve performance of NC (V) at TVET colleges.

5. Results and Discussion

The results of this chapter are presented according to Weiner (1972) theoretical framework. The part responded to one research question relating to intervention strategies that could assist in reducing the high failure rate at the college. A total of 15 NC (V) lecturers and 5 campus management responded to the interview and different suggestions were given regarding the topic. To respond to the questions stated in Table 1 below, information was presented for intervention strategies that could assist in reducing high failure rate at the college.

Table 1: Research Questions for Structured Interviews.

1.	Which intervention strategies could be used to reduce high failure rate at the	
college?		
	1.1.	Student related interventions
	1.2.	Peer related interventions
	1.3.	Family related interventions
	1.4.	College related interventions

Lecturers' Response.

The NC (V) lecturers responded to RQ as follows:

Which intervention strategies could be utilised to improve the teaching and learning of NC (V) programmes at the college? The application of Weiner's theory (1972) helped NC (V) lecturers to suggest intervention strategies that could assist in reducing the high failure rate at the college. Most of them mentioned the same thing related to intervention strategies that could improve performance at TVET college. They include:

Student intervention programmes:

"The college should stick to the college attendance policy. Some staff members come very late, and they miss their first periods. Students who arrive on time also end up coming late because others come late. The 80% class attendance should be adhered to because it will help management in monitoring attendance of staff members and students".

"Intake of students to be taken into cognisance, the college should have rigid and strong orientation plan for new students. In some instances, management enrol students just to fill in the numbers. Some students are meant for skills programmes, they cannot cope in ministerial programmes".

"The type of students that we enrol at the college are not serious about their work. They dodge classes, come late, and do not do their work. College should invite motivational speakers to motivate students who are not committed to their work".

"Majority of staff members communicate with students using different languages. Just a handful of staff members communicate in English. Those who use English as a means of communication are not liked by most students and their colleagues. They say they think they are smart compared to others. English as a medium of instruction to be emphasised".

Peer intervention strategies:

"The college should pay completed or intelligent students to assist those who are performing bad with their studies".

Family intervention strategies:

"The college should invite family members to attend extra mural activities on a weekend. Family members should be called if the student is not performing well or if the student is not coming to class every day. Family members should also be involved in all college activities as they form part of college stakeholders.... They should be invited to attend meetings".

College intervention strategies:

"The college should have improved workshops, machineries, resources, and library and photocopy machines for students".

"College to have extra classes, afternoon studies for students, Saturday classes and programme to assist students with communication skills".

"Majority of students struggle to buy data to complete their college work. College should have internet and extra study materials for students".

"Intake of students to be taken into cognisance, the college admit for the sake of filling up the numbers. The college should have rigid and strong orientation of new students".

"Most of the time students are on strike due to unpaid allowances and we are unable to complete the syllabi. NSFAS allowances to be paid on time to avoid strikes".

"English as a medium of instruction to be used by all in the college. Practicing improves on their communication skills".

"College management to develop lecturers who are under qualified, do not have artisanship, assessors, and moderator".

With reference to the above findings, the college should consider implementing intervention strategies to improve performance of NC (V) programmes. Lecturers suggested student intervention strategies such as adherence to college attendance policy, rigid and firm intake, and orientation of new students. This statement concurs with Ngoveni (2018) who said that TVET colleges should ensure that attendance policy is available and adhered to. The TVET lecturers also suggested that the college should take into cognisance the type of students they enrol. invite motivational speakers to encourage students who are not committed to their work. A study conducted by Buthelezi (2018) also revealed that the type of student enrolled play a vital role in improving academic performance at TVET colleges.

In addition, lecturers suggested that college should consider appointing peer tutors to assist students who are struggling with their work. The creation of the environment of peer tutoring

as one way of improving performance at TVET colleges was too highlighted by (Govender & Govender 2016). It was also suggested that family members be involved in all college activities to motivate students. This statement was supported by Ntekane (2018) who said that parental involvement in learning acts as a gel that helps to make learning for students pleasant and encourages them to work even more as they seek to make those closest to them proud.

Furthermore, it was highlighted that college should have improved workshops, machineries, resources, library, and photocopy machines for both students and lecturers. Mosebekoa (2018) too mentioned that governments should finance TVET colleges for improvement of infrastructure developments and equipment for instructional and learning purposes. In addition, lecturers proposed that college should consider offering extra classes, afternoon studies and Saturday classes. This statement was supported by Moodley and Singh (2015) along with Mtshal (2023) who recommended that colleges must align their support programmes with modules that have a high failure rate to help students cope. Lecturers also suggested that college should have internet and extra study materials for all students. In addition, they said intake of new students should be taken into cognisance by having rigid and strong orientation programmes. Lecturers also mentioned that NSFAS allowances should be paid on time to avoid strikes as they delay effective teaching and learning. The study conducted by Ngwato (2020) too revealed that poor funding or late payment of NSFAS constitutes the demotivation of students, which results to poor performance. Furthermore, lecturers suggested the introduction of programmes that might assist students with communication skills and all college stakeholders should communicate in English. It was further said that college management should develop lecturers who are under qualified, train staff for artisanship, assessors, and moderators. This statement concurs with Park et al. (2018) who mentioned that professional development of lecturers could improve performance at TVET colleges.

Campus management response.

The campus management also responded to RQ as follows:

Which intervention strategies could be utilised to improve the teaching and learning of NC (V) programmes at the college? The application of Weiner's theory (1972) also helped campus management to suggest intervention strategies that might assist in reducing high failure rate at the college.

Student intervention strategies:

"The type of students that we enrol at TVET colleges are not serious about their work. Most of them come to college under the influence of "Nyaope" and do not complete their work on time" They should be referred to rehabilitation centres".

"Lecturers are being given extra job of dealing with students who are emotionally, verbally, and physically abused not focusing on teaching and learning. At the end of the term, we blame lecturers for poor performance. The college should appoint psychologists and nurses in all delivery sides to assist such kind of students".

"All college policies should be adhered to. This includes but not limited to Admission policy, attendance policy, and language policy".

"Extra mural activities to be taken very seriously and all students to be given an opportunity to participate in one or more sporting games".

"Students and staff members should be encouraged to speak English because practice makes perfect. English is the only means of communication at the institution".

Peer intervention strategies:

"The college should consider peer mentoring programmes as a way of improving performance. Most students are free to express themselves amongst other students and peer tutoring will be of great benefit".

Family intervention strategies:

'The college should involve family members such as parents, siblings' aunts and so forth in all college activities. Most students become excited when they see their family members and they work hard to impress them".

College intervention strategies:

"Most of the campuses have old and dilapidated buildings. The college should change infra-structure facilities and have well-resourced libraries. In some campuses, students' study under the trees as they do not have a place to study. All students should have access to internet and WIFI connectivity at the college".

"Effective teaching and learning are disturbed in most instances. NSFAS allowances to be paid on time to avoid strikes".

"The NC (V) programme was introduced in 2007. Lecturers were moved from NATED programme to teach NC (V) programmes without being developed. Lecturers should be developed on a continuous base as we are now moving with advanced technology".

'Bridge the gap between college and industries and all NC(V) L2-L4 students to be exposed to industries to see that theory is related to what they do in industries to become committed to learn''.

"Some of the staff members communicate with students using different languages and the examination is written in English. All college stakeholders should communicate in English as the only medium of instruction".

It may again be seen from the findings that the college indeed need intervention strategies for the improvement of performance in NC (V) programmes. Campus management as well revealed different intervention strategies related to students, peers, family members and the college. Those intervention strategies include behaviour change intervention as mentioned by Katamei and Omwono (2015). The campus management also stated peer by peer intervention as supported by Tan and Gevera (2020) who believed that peer tutorial programmes bring positive results, joy, hope, and inspiration to students by learning with and through their peers. Parental or family members involvement was mentioned as its needed for ongoing support in many aspects throughout the various developmental stages of the child's life (Sefotho, Ferreira & Lushozi 2021).

Improved infra-structure facilities, availability of library and access to internet or WIFI for all students. The internet or WIFI connectivity was emphasised by Mooketsi (2015) who said that broadband connectivity should be made a right for every student and every lecturer to use, to access and to create online educational resources. They also suggested support interventions for students who are not doing well in classes. Furthermore, campus management suggested partnership with industries to close all the existing gaps. Campus management also said that lecturers should be trained to do practical component and all NC (V) L2-L4 students be exposed to industries. It was further mentioned that the college should consider appointing psychologists or nurses to assist students with psychosocial problems. The utilising of different role players such as social workers and health care workers was too recommended by Kühn and Slabbert (2017) as the best intervention strategy that could improve performance. Furthermore, campus management highlighted that all college stakeholders should communicate in English as a medium of instruction. Suhaili and Mohama (2021) as well addressed the issue of TVET graduates especially in the mastery of the English language.

Observation study by the researcher

The researcher also responded to RQ as follows:

Which intervention strategies could be utilised to improve the teaching and learning of NC (V) programmes at the college? The application of Weiner's theory (1972) also helped researcher to suggest intervention strategies that might assist in reducing the high failure rate within the college.

The researcher observed that not all students attend all seven periods. This could be as a result that they did not register for all seven subjects, or they decided not to attend other subjects. The researcher also observed that most students stay outside in smaller groups, communicate with each other using different languages. Furthermore, the researcher observed that family members were not involved in campus activities.

Furthermore, the researcher perceived that the college need to improve infrastructure facilities and have students' accommodation in all campuses. In addition, the researcher observed that all campuses to have teaching aids in the classrooms. Furthermore, the college should have well-equipped resource and media centres. It is to this end that the college should appoint remedial lecturers, nurses, and psychologist in all its campuses to assist both students and lecturers with psychological and physical well-being. The researcher also mentioned the need for WIFI or internet connectivity for all students as another intervention strategy that could improve performance of NC (V) programmes at TVET colleges. English as a medium of instruction to be used by all campus stake holders inside and outside the classroom.

6. Conclusion

It may be concluded from this study that student intervention programmes such as of adherence to college attendance policy, rigid and firm intake and orientation of new students be considered to improve performance of NC (V) programmes at TVET colleges. The study also suggested peer intervention programme such as peer- peer mentorship and family intervention programmes such as parental involvement as other ways of improving performance. The NC (V) lecturers and college management also suggested college intervention strategies that could improve performance. Those interventions include going extra miles by way of offering extra classes, afternoon, and Saturday classes. Communication skill programmes was also suggested as an intervention strategy that could assist students with communication difficulties. English as a medium of instruction to be emphasised. Furthermore, it was said that the college need an improved infra-structure facilities, resource and media centres, fully equipped workshops, teaching aids in the classrooms and student's accommodation. The study also suggested the need for WIFI or internet connectivity for all students. Furthermore, the study put forward the need to have rigid orientation and recruitment plan for new students and monitoring tool to be used to monitor class attendance daily. The college should as well consider appointing remedial lecturers, nurses, and psychologists to assist students with psychological and physical well-being. In addition, the college should consider inviting motivational speakers to motivate students on issues that hinder performance. It is further suggested that the college should consider sending both lecturers and students to industries to link theory learnt in classrooms with practical. The above deliberated plans should be thoughtfully considered to assist the college to improve performance of NC (V) programmes. Recommendations stated above encourages for future research on intervention strategies that could improve performance of NC (V) programmes at TVET colleges. This will assist majority of students when choosing intervention programmes that could improve their performance at TVET colleges.

Acknowledgement

The authors wishes to express their gratitude to the TVET college lecturers and campus management who helped to make this research possible and to the reviewers for their constructive and helpful criticism.

References

- Alda, R., Boholano, H., & Dayagbil, F. (2020). Teacher Education Institutions in the Philippines towards Education 4.0. *International Journal of Learning, Teaching and Educational Research*, 19(8), 137-154.
- Ansell, D. I., & Insley, S. E. (2013). Youth peer-to-peer support: A review of the literature. *Youth MOVE National*, Ed.
- Barr, J. E. (2016). Self-Determination Theory and the Educational Motivations of the Recently Incarcerated.
- Becirovic Emkic, M. (2010). Motivation-the driving force for our actions: A study of the importance of learning experiences, learner beliefs, self-determination and personal goals for motivation and attitudes in English language learning.
- Benvenuti, S. A. (2013). Facilitating the development of self-directed learning skills in information systems students (Doctoral dissertation)
- Bodkyn, C., & Stevens, F. (2015). Self-directed learning, intrinsic motivation, and student performance. The Caribbean Teaching Scholar, 5(2).
- Botha, C. (2020). The impact of the apprenticeship of observation on pre-service teachers' perceptions of teaching. *Journal of Education (University of KwaZulu-Natal)*, (81), 50-64.
- Buthelezi, Z. (2018). Lecturer experiences of TVET College challenges in the post-apartheid era: a case of unintended consequences of educational reform in South Africa. *Journal of Vocational Education & Training*, 70(3), 364-383.
- Caesar, M. I. M., Jawawi, R., Matzin, R., Shahrill, M., Jaidin, J. H., & Mundia, L. (2016). The Benefits of Adopting a Problem-Based Learning Approach on Students' Learning Developments in Secondary Geography Lessons. International Education Studies, 9(2), 51-65.
- Cazan, A. M., & Schiopca, B. A. (2014). Self-directed learning, personality traits and academic achievement. Procedia-Social and Behavioral Sciences, 127, 640-644.
- Chen, K. C., & Jang, S. J. (2010). Motivation in online learning: Testing a model of self-determination theory. Computers in Human Behavior, 26(4), 741-752
- Cheng, J. (2012). The effect for student behaviour, the journal of human resource and adult learning, vol 8 Num 2, Dec 2012.
- Cohen, L., Manion, L. & Morrison, K. (2011). Research Methods in Education. (6th Ed.). New York: Routledge
- Coleman, N., Sykes, W., & Groom, C. (2017). Peer support and children and young people's mental health. *Independent Social Research. London, UK: Department of Education*.
- DeFranzo, S.E. (2011). What's the difference between qualitative and quantitative research. Retrieved from: snap surveys. Com.
- De Lange, A. H., Van Yperen, N. W., Van Der Heijden, B. I., & Bal, P. M. (2010). Dominant achievement goals of older workers and their relationship with motivation-related outcomes. Journal of vocational behavior, 77(1), 118-125.

- Du Toit-Brits, C. (2017). Embedding motivation in the self-directedness of first-year teacher students. South African Journal of Higher Education, 31(1), 50-65.
- Dzvapatsva, G.P., Mitrovic, Z. & Dietrich, A.D. (2014). Use of social media platforms for improving academic performance at Further Education and Training colleges. South African Journal of Information Management, 16(1):1-7.
- Ehrlin, A., & Gustavsson, H. O. (2018). El Sistema as an Opportunity for Collaboration between School and Home-Parents' Perspectives on an El Sistema-Inspired Activity. *International Journal of Learning, Teaching and Educational Research*, 17(8).
- Etikan I, Musa S, A. & Alkassim M, R. (2016) Comparison of convenience sampling and purposive sampling. American journal of theoretical and applied statistics. Vol 5 No. 1, 2016 pp1-4
- Fosu, F. F., & Poku, K. (2014). Exploring the factors that influence students' choice of higher education in Ghana. *European Journal of Business and Management*, 6(28), 209-220.
- Fox, N. (2009). Using interviews in a research project. The NIHR RDS for the East Midlands/Yorkshire & the Humber.
- Francis, A., & Flanigan, A. (2012). Self-Directed Learning and Higher Education Practices: Implications for Student Performance and Engagement. MountainRise, 7(3).
- Frantz, J. M. (2015). A peer-led approach to promoting health education in schools: The views of peers. South African Journal of Education, 35(1).
- Garcia, R. A., & Al-Safadi, L. A. (2014). Intervention Strategies for the Improvement of Students' Academic Performance in Data Structure Course. *International Journal of Information and Education Technology*, 4(5), 383.
- Ghasemi, M. R., Moonaghi, H. K., & Heydari, A. (2018). Student-related factors affecting academic engagement: A qualitative study exploring the experiences of Iranian undergraduate nursing students. *Electronic physician*, 10(7), 7078.
- Ghazali, M., Mustafa, Z., Rashid, R. A. A., & Amzah, F. (2021). Parental Involvement in Young Children's learning of Numeracy. *International Journal of Learning, Teaching and Educational Research*, 20(1), 199-222.
- Govender, T. P., & Govender, D. W. (2016). Peer-to-peer programming versus individualized programming: The real world. The Independent Journal of Teaching and Learning, 11(1), 56-68.
- Guglielmino, L. M. (2013). The case for promoting self-directed learning in formal educational institutions. SA-eDUC, 10(2).
- Gumal, E. A. A. (2016). Factors affecting the teaching of public high school mathematics teachers in the Province of Lanao del Sur and Maguindanao. *International Journal of Learning, Teaching and Educational Research*, 15(4).
- Hang, B.T.T., Kaur, A. & Nur, A.H.B. (2017). A Self-Determination Theory Based Motivational Model on Intentions to Drop out of Vocational Schools in Vietnam. Malaysian Journal of Learning and Instruction, 14(1):1-21.
- Heinman, G. (2013). Basic statistics for the Behavioral Sciences, Buffalo state college, https://books.google.co.za/books?
- Jamshed, S. (2014). Qualitative research method- interviewing and observation, Basic Clin Pharm. September 2014- November 2014, Vol 5 Issue 4: 87-88
- Kaminski, K. (2010). A Self-determination theory-based exercise intervention in a group of adult exercisers: a contextual evaluation.
- Kaplan, A.M. & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. Business horizons, 53(1):59-68.
- Katamei, J.M & Omwono, G. (2015). Intervention strategies to improve students' academic performance in public secondary school in Arid and semi-Arid lands in Kenya. *Int'l J. Soc. Sci. Stud.*, *3*, 107.

- Korir, D. K., & Kipkemboi, F. (2014). The impact of school environment and peer influences on students' academic performance in Vihiga County, Kenya. International Journal of Humanities and Social Science, 4(5).
- Kühn, J., & Slabbert, I. (2017). The effects of a father's alcohol misuse on the wellbeing of his family: views of social workers. Social Work, 53(3), 409-422.
- Legault, L. (2017). Self-Determination Theory. Encyclopedia of Personality and Individual Differences, 2 (June), 1–10.
- Machera, R. P. (2017). Teaching Intervention Strategies That Enhance Learning in Higher Education. *Universal Journal of Educational Research*, 5(5), 733-743.
- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. AISHE-J: The All-Ireland Journal of Teaching and Learning in Higher Education, 9(3).
- Mandillah, L. (2019). Kenyan curriculum reforms and mother tongue education: Issues, challenges, and implementation strategies. *Education as Change*, 23(1), 1-18.
- Martinez, A. (2015). Parent involvement and its effects on student academic achievement (Doctoral dissertation).
- Mason, H.D. & Tisane, D. (2017). First-year students' experiences of a study skills intervention programme: a qualitative study. Journal for New Generation Sciences, 15(1):344-364.
- McPherson, C. B., & Foncha, J. W. (2022). Investigating appropriate teaching strategies used by TVET college lecturers to overcome challenges in teaching and learning. *European Journal of Economics*, 6(1).
- Mentz, E., & Van Zyl, S. (2016). Introducing cooperative learning: students' attitudes towards learning and the implications for self-directed learning. *Journal of education*, (64), 79-110.
- Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S. & Wang, X. (2016). How the world changed social media: 286, UCL press
- Moodley, P., & Singh, R. J. (2015). Addressing student dropout rates at South African universities. *Alternation (Durban)*.
- Mooketsi, T. R. (2015). Factors affecting internet and broadband penetration in South African ordinary schools (Doctoral dissertation).
- Mosebekoa, M. J. (2018). The technical and vocational education and training as the basis for societal development: the comparative study of the Republic of South Africa and Lesotho (Doctoral dissertation, Bloemfontein: Central University of Technology, Free State).
- Motevalli, S., Roslan, S.B., Sulaiman, T., Hamzah, S.G., Hassan, N.C. & Garmjani, M.G. (2013). New study skills training intervention for students who suffer from test anxiety. Asian Social Science, 9(7):85
- Mtshal, T. I. (2023). Students Metacognitive Challenge in the Interpretation of Mechanical Drawings in Engineering Graphics and Design. *Journal of Positive Psychology and Wellbeing*, 7(4), 189-203.
- Mtshali, T. I., & Singh-Pillay, A. (2023). Pedagogical Capital Strategies for Civil Technology Skills-Based Activities. *International Journal of Learning, Teaching and Educational Research*, 22(5), 389-409.
- Mtshali, T. I., & Ramaligela, S. M. (2021). The Alignment of Civil Engineering Tools and Equipment Between TVET Colleges and Industries: The Preparation of Industrial Contemporary Skills Required for the 4IR Era. In New Models for Technical and Vocational Education and Training (pp. 29-48). IGI Global.
- Mupa, P, & Chinooneka, T. I. (2015). Factors Contributing to Ineffective Teaching and Learning in Primary Schools: Why Are Schools in Decadence? Journal of Education and Practice, 6(19), 125-132.

- Naite, I. (2021, March). Impact of Parental Involvement on Children's Academic Performance at Crescent International School, Bangkok, Thailand. In *IOP Conference Series: Earth and Environmental Science* (Vol. 690, No. 1, p. 012064). IOP Publishing.
- Nevo, D., Lok, J. J., & Spiegelman, D. (2018). Analysis of Learn-As-You-Go"(LAGO) Studies. ArXiv preprint arXiv: 1808.06310
- Nilsen, L., Frich, J. C., Friis, S., Norheim, I., & RØSSBERG, J. I. (2014). Participants' perceived benefits of family intervention following a first episode of psychosis: a qualitative study. Early intervention in psychiatry, 10(2).
- Ngoveni, M. A. (2018). Factors linked to poor performance for NC (V) Level 2 mathematics students (Doctoral dissertation, University of Pretoria).
- Nyamayedenga, M. S., & de Jager, L. (2021). Enhancing knowledge-building through communicative language teaching. *Journal of Education (University of KwaZulu-Natal)*, (83), 146-161.
- Nguyen, M. (2013). Peer tutoring as a strategy to promote academic success. *Duke University*. *Research Brief.*
- Ngwato, S. E. (2020). Factors which contribute to poor academic achievement in TVET colleges: A case study (Doctoral dissertation).
- Nkwanyane, T. P. (2023). Understanding the Demand for Industrial skills through the National Certificate (Vocational) Building and Civil Engineering Programme. *International Journal of Learning, Teaching and Educational Research*, 22(5), 674-687.
- Ntekane, A. (2018). Parental involvement in education. Research Gate, 1, 1-5.
- Omboi, B. M. (2011). Factors affecting the implementation of strategic plans in government tertiary institutions: A survey of selected technical training institutes.
- O'shea, S., McMahon, S., Priestly, A., Bodkin-Andrews, G., & Harwood, V. (2016). 'We are history in the making, and we are walking together to change things for the better': Exploring the flows and ripples of learning in a mentoring programme for indigenous young people. *Education as Change*, 20(1), 59-84.
- Owen, S. (2009). School-based professional development building morale, professionalism, and productive teacher learning practices. The Journal of Educational Enquiry, 4(2).
- Park, M. S., Kim, Y. R., Moore, T. J., & Wyberg, T. (2018). Professional Development Framework for Secondary Mathematics Teachers. *International Journal of Learning, Teaching and Educational Research*, 17(10).
- Petrova, V. (2014). Intro to ATLAS.ti: Qualitative data analysis software. Htttp//Julius.csscr.washington.edu/pdf/aatlasti.pdf
- Premkumar, K., Pahwa, P., Banerjee, A., Baptiste, K., Bhatt, H., & Lim, H. J. (2013). Does medical training promote or deter self-directed learning? A longitudinal mixed-methods study. Academic Medicine, 88(11), 1754-1764.
- Raihan, A. (2014). Collaboration between TVET institutions and industries in Bangladesh to enhance employability skills. *International Journal of Engineering and Technical Research (IJETR)*, 2(10), 50-55.
- Rafiq, H. M. W., Fatima, T., Sohail, M. M., Saleem, M., & Khan, M. A. (2013). Parental involvement and academic achievement: A study on secondary school students of Lahore, Pakistan. *International Journal of Humanities and Social Science*, 3(8), 209-223.
- Riley, G. (2016). The role of self-determination theory and cognitive evaluation theory in home education. Cogent Education, 3(1), 1163651.
- Sa'ad, T. U., Adamu, A., & Sadiq, A. M. (2014). The causes of poor performance in mathematics among public senior secondary school students in Azare metropolis of Bauchi State, Nigeria. *Journal of Research & Method in Education*, 4(6), 32.

- Sefotho, M. M., Ferreira, R., & Lushozi, B. B. (2021). The quest for ongoing support by parents of learners with intellectual disabilities. *Journal of Education (University of KwaZulu-Natal)*, (85), 93-110.
- Silverman, D. (2013). Doing qualitative research: A practical handbook. SAGE publications limited.
- State, T. M., Harrison, J. R., Kern, L., & Lewis, T. J. (2017). Feasibility and Acceptability of Classroom-Based Interventions for Students with Emotional/Behavioral Challenges at the High School Level. Journal of Positive Behavior Interventions, 19(1), 26-36.
- Stewart, A. (2009). Self-determination theory in motivation to adopt Physical activity in older adults: a community-based approach.
- Stywayi, Z., Chinyamurindi, W., & Shava, H. (2021). Determinants of career development self-efficacy: The role of self-directed learning among students at a rural campus in South Africa. *Journal of Education (University of KwaZulu-Natal)*, (85), 188-201.
- Suhaili, M. S., & Mohama, M. (2021). English Language Competency in Enhancing Technical and Vocational Education Training (TVET) Graduates' Marketability in the Malaysian Workplace: A Literature Review. *Creative Education*, 12(8), 1858-1866.
- Sukrajh, V. (2018). The use of peer teaching to promote active learning amongst senior medical students (Doctoral dissertation, Stellenbosch: Stellenbosch University).
- Tan, J. B., & Gevera, E. B. (2020). Peer Tutorial: Championing students at risk. *International Journal of Learning, Teaching and Educational Research*, 19(5).
- Terblanche, T., & Bitzer, E. (2018). Leading curricula change in South African technical and vocational education and training colleges. *Journal of Vocational, Adult and Continuing Education and Training*, 1(1), 104-125.
- Thomas, D. T., Torr, B. M., & Walsh, E. T. (2017). Experiential learning: Benefits for Hispanic and first-generation college students. *International Journal of Learning, Teaching and Educational Research*, 16(5).
- Vaughn, S., Denton, C. A., & Fletcher, J. M. (2010). Why intensive interventions are necessary for students with severe reading difficulties. Psychology in the schools, 47(5), 432-444.
- Wang, Q., Lee, K. C. S., & Hoque, K. E. (2020). The Effect of Classroom Climate on Academic Motivation Mediated by Academic Self-Efficacy in a Higher Education Institute in China. *International Journal of Learning, Teaching and Educational Research*, 19(8).
- Weiner, B. (1972). Attribution theory, achievement motivation, and the educational process. Review of educational research, 42(2), 203-215.
- Wisniewski, T., White, C., Green, C., Elder, A. F., Sohel, S., Perry, N. E., & Shapka, J. D. (2018). Supporting students through role redefinition: A self-determination theory perspective. *Education as Change*, 22(1), 1-23.
- Whittle, R. (2016). Understanding factors that influence academic performance in senior secondary VCE Physical Education. (Doctoral dissertation, RMIT University).
- Yong, Jin-Han and Shiau, Wen-Lung, "an exploratory study of it fit motivation in a cloud-computing classroom" (2016). Pacis 2016 proceedings.
- Yoo, S. J., Han, S. H., & Huang, W. (2012). The roles of intrinsic motivators and extrinsic motivators in promoting e-learning in the workplace: A case from South Korea. Computers in Human Behavior, 28(3), 942-950.
- Zides, M. (2015). Successful Academic Intervention Strategies.