Grade 8 learners' perceptions of implementing Technical and Vocational Education in the curriculum

By

Zaheera Asvat

(201111793)

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Supervisor: Prof BM Diale

DECLARATION

I, Zaheera Asvat, declare that "Grade 8 learners' perceptions of implementing Technical and Vocational Education in the curriculum" is my own work. All the sources have been acknowledged and the reference list has been provided. I am aware of the rules against plagiarism and I declare that I have not copied and used any work by someone without acknowledging them.

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Praise be to God the most kind, the most merciful, without whom this would not have been possible.

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ABSTRACT

The purpose of this study was to explore the perceptions of Grade 8 learners on implementing Technical and Vocational Education (TVE) in the curriculum. The aim was to gain insights on how these learners who are in a specialised mathematics and science school perceive the inclusion of technical and vocational education in the Senior Phase of the school curriculum. This study used a qualitative approach that allowed the freedom to ask questions, enabled interaction with the participants and was deemed the most suitable for this study. The case study was conducted in a mathematics and science-focused school in Johannesburg. Framed by Bronfenbrenner's Ecological Systems Theory, a case study was used as a research design, with 20 Grade 8 learners purposefully selected to participate in the study.

Data was collected by means of focus group interviews, collages, and an essay on what Technical Vocational Education is/means to the participants, thus providing their perceptions on the subject and its implementation in the Senior Phase curriculum. Data was analysed by means of thematic content analysis. The data collected from the various sources was analysed through thematic content analysis to identify themes and interpret important concepts. From the analysis data yielded the following themes: (1) Understanding TVE and its introduction into the school curriculum; (2) Misconceptions of learners on TVE; and (3) The need to incorporate TVE into the curriculum.

The results demonstrated that there are various misconceptions about TVE, among others that it is only for 'weak' learners, or learners with learning barriers or disabilities. However, various participants also indicated that TVE in the school curriculum could contribute to building a stronger economy, reducing unemployment and increasing skills development in South Africa.

These results were linked to the literature review of this study and were in line with present articles/knowledge or lack thereof on TVE being a benefit for all types of learners, not just learners with barriers to learning. Recommendations were based on results as well as recommendations made for implementation into the CAPS curriculum to help implement TVE into the Senior Phase curriculum. This would imply

that CAPS policy would need to be revised/amended to accommodate TVE being implemented in the Senior Phase curriculum.

KEY WORDS: Technical Vocational Education, Perceptions, Implementation, Senior Phase, Curriculum, Misconceptions, Economic growth, Unemployment, Job opportunities

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ADEA	Association for the Development of Education in Africa
CAPS	Curriculum Assessment Policy Statements
CBQs	Competence-Based Qualifications
CHE	Council on Higher Education
CHH	Child-headed households
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DoE	Department of Education
DTWD WA	Department of Training and Workforce Development, Western Australia
FET	Further Education and Training
GDE	Gauteng Department of Education
GET	General Education and Training
GNU	Government of National Unity
HET	Higher Education and Training
HRDC SA	Human Resource Development Council of South Africa
IE	International Enterprise
IT	Information technology
ITE	Institutes of Technical Education
JCE	Junior Certificate Examination
LTSM	Learning and Teaching Support Material
NDP	National Development Plan
NQF	(South Africa's) National Qualifications Framework
OECD	Organisation for Economic Co-operation and Development
PEI	Polytechnics and Private Education Institution
SAQA	South African Qualifications Authority
SCP	Singapore Cooperation Programme
SETA	Sector Education and Training Authority
STEM	Science, Technology, Engineering and Mathematics
TAFE	Technical and Further Education
TVE	Technical and Vocational Education

TVET	Technical and Vocational Education and Training
TVETSD	Technical and Vocational Education and Training Skills Development (Swaziland, now Eswatini)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-UNEVOC	United Nations Educational, Scientific and Cultural Organization - International Centre for Technical and Vocational Education and Training
VET	Vocational Education Training
VSE	Vocational Special Education
WQS	Workforce Skills Qualification System

CHAPTER 1: ORIENTATION OF THE STUDY

1.1 INTRODUCTION

South Africa faces various social challenges that need to be dealt with, such as poverty, child-headed households (CHH), unemployment, and learners dropping out of school that lead to a life of crime in many cases (Berrebi, 2011). This has a negative effect on the economy, the education system and many other aspects of society (Statistics SA, 2016). Many learners drop out of school due to unforeseeable circumstances, for example a lack of funds, or they are part of CHH and have to take responsibility for their families. Others might feel at the end of Grade 12 that they do not want to go to university, and often because they do not have the means to do so. Because various types of learners in schools face these and similar challenges, learners drop out as they have little or no means of help to support their families' basic needs or cannot afford to go to university.

Technical and Vocational Education (TVE) is a motivating factor for sustainable development (Paryono, 2017). TVE brings opportunity for an increase in skills development and economic development (Lauglo & Maclean, 2005). Introducing TVE in conjunction with the current curriculum would aid in increasing skills sets and economic development; it would also ensure that no school has an advantage over another. This could further enable learners to be trained at least at 'Level 1 or 2' for a specific vocational or technical skill. Training would address the shortage of skills, high dropout rates, and the extremely high unemployment rates among youth and improve skills development (Funk, 2004). This will also provide an opportunity for learners to obtain not only academic skills, but also vocational and technical skills. Learners who wish to further their studies in Higher Education Institutions may still do so; however, they would have the advantage of already having acquired additional skills in the technical and vocational fields. This chapter will focus on the following aspects of the study: the background, motivation, the problem statement, aim and objectives. It will further explore the research methodology (i.e. the approach, design, sampling and selection of participants, data collection, and data analysis), and will explore trustworthiness, ethical considerations and provides concept clarification.

1.2 BACKGROUND TO THE RESEARCH

During the Apartheid era, TVE was only available to the privileged minority that consisted of white South Africans (Centre for Development and Enterprise, 2012). Many black South Africans never had the opportunity to be part of a skills training programme and many of those who were exposed to it remained unemployed, as the vacancies were taken by “the Whites” (Centre for Development and Enterprise, 2012, p. 3). Post-1994, TVE was phased out and this exclusion left a significant gap in skills development in South Africa. Therefore, the re-introduction of TVE could be the first attempt to redress the educational imbalances of the past and ensure that equal education for all is provided and could serve to close the current skills gap in the country (Department of Basic Education (DBE), 2016).

The realities of poverty, unemployment, inequality, crime and assuming the responsibilities of a household at an early age, have a marked effect on a large portion of South Africa's youth. This has a negative effect on the development of a country, including South Africa (Skinner & Davids, 2006). Many socio-economic challenges drive many of our youth to lives filled with crime, drugs and alcohol abuse, which in turn damages the economy, the growth and personal well-being of the youth (Skinner & Davids, 2006). On the other hand, it is often forgotten how important technically skilled people are. In South Africa, there is a need for carpenters, plumbers, and electricians to help ensure that homes run smoothly and are safe to live in. These occupations can be considered, as well as various other technical skills, such as photography, information technology (IT), and healthcare (which can be taught in the simplest/basic form and further studied to become a nurse or paramedic). The introduction of TVE into the Senior Phase[1] curriculum would therefore change the way people see the importance or status of people who pursue technically skilled jobs and create more respect for people who do this line of work, thereby creating interest and enthusiasm. This would make job opportunities available to TVE trainees, thus creating job opportunities for the youth. No learner should be excluded from this process of skills development.

[1] In the current South African school system, the Senior Phase comprises Grades 7 to 9, i.e. the last year of primary school and the first two years of secondary school.

TVE can play a role in South Africa's reformation if it is instilled in schools and learners from an early age in order to address the shortage of skills development in the country, providing productive learning as well as confronting the issue of minimum work opportunities. TVE can be paired with sponsoring companies that wish to take on such learners. This could be done by contracting with various companies that could form partnerships with the schools on the skills being taught. Once those skills are acquired, these partners could then employ the learners (Zimmermann et. al., 2013). It can be concluded that if TVE is implemented in the Senior Phase school curriculum, it is destined to have a positive outcome for our economy, resulting in decreased youth unemployment and enhancing skills development (Aring, 2011).

There is an urgent need in South Africa to increase access to education for all, which highlights the significance of TVE in the Senior Phase curriculum. Many learners do not reach higher education, nor do they complete matric, as they drop out in Grade 9 or 10 (Statistics SA, 2016); others realise at a later stage that university is not an option for them, whereas it takes others a few years of changing career studies because they are not sure or do not like the course that they have chosen. Using TVE in the Senior Phase curriculum would help to empower learners through their learning experiences, thus creating a productive learning environment. This would not only help to improve the economic development, but it would also benefit our youth and reduce the 36.1% of unemployment statistics recorded in 2014 (Statistics SA, 2016). This could set South Africa onto its next stage of economic development (Aring, 2011), reducing poverty and unequal income distribution, and producing innovative ways in which to create jobs.

The purpose of TVE is to generate various opportunities for the youth to become lifelong learners, attain knowledge and skills, and it is therefore essential to tailor the curriculum to cater for the needs of learners and their societies (Venn, 1964). Partnerships with businesses could help to ensure that these learners have some support from their communities to fulfil their various responsibilities (Finlay, Niven, & Young, 1998). South Africa has a rapidly changing socio-economic environment, which brings about the need to reform education/curriculum to prepare our learners to face the challenges of the 21st century (Sarbib, 2005). In addition, we could further

encourage learners to grow their skills set by considering a path in TVE, thereby teaching learners technical skills and aid in the change of perception that such training is only for learners with bad grades and/or disabilities.

Many other countries, such as Australia, the Netherlands, Canada and Singapore, have implemented TVE for learners from the ages of 14 to 16 (Cook, 2013). Although the above-mentioned are known to be high-income countries, TVE is an ongoing research project that appears to play a role all over the world, as it can benefit all countries in significant ways. Vocational Education in schools has been identified as a link between education and employment (Organisation for Economic Co-operation and Development (OECD), 2010).

Increasing one's skills levels can enhance individual opportunities and lead to greater social wealth (Cook, 2013), which in turn bodes well for the youth and the future of the economy. These improvements create a more resilient, stable and better-quality system (Cook, 2013). Aring (2011) further states that TVE is an important tool for developing young people's skills. At school level we would be encouraging as well as exposing our youth to various types of skills, such as photography, IT, cooking and baking, woodwork, etc. Learners who leave school at Grade 9 or at the end of Grade 12 would have skills that could enable them to generate an income or which they could study further if they wished to do so.

Most learners complete Grade 9 at the age of 15 and would need appropriate skills or a variety of skills to help them through life; TVE could help with this as they would have attained a skill(s) at school (in the Senior Phase) that they could use as their trade or to study further. According to Section 43 of the Basic Conditions of Employment Act (1997), the employment of a child who is under the age of 15 is seen as a criminal offence. However, an individual who is between the ages of 15 to 18 should not be at a workplace or employed somewhere where they could be at risk, nor at a place that could be deemed inappropriate for a child, that is "that places at risk the child's well-being, education, physical or mental health, or spiritual, moral or social development" (Basic Conditions of Employment Act, 1997; Department of Labour, 2012). Technical vocational skills would therefore help rather than harm the youth and increase our skills set.

Furthermore, to address the prevailing socio-economic challenges, such as high unemployment rates and skills shortage, South Africa needs to invest in resourceful job training, which can take place easily through TVE, thus ensuring that we reach as many learners/youth as possible. This could benefit our communities as well as the economy, as TVE could assist in creating new job opportunities, thereby ensuring that learners could be employed based on skills (other than academic skills) and could make an honest living. As mentioned above, this could further benefit learners who do not want to go to university, for example if a learner feels that they are not suitable for university studies, they already have accreditation for a skill that can be used productively. If learners want to go to university, they would already have a skill that could be applicable to their studies, or they might choose to study something completely different. Nevertheless, they would have a skill(s) to fall back on, if need be. TVE is suitable for all learners and should be considered a process of reaching as many learners as possible and teaching them various technical skills. TVE can therefore be seen as a skills development process for all learners.

There is not much research on TVE being introduced into the Grade 8 curriculum (Centre for Development and Enterprise, 2012; De Wet, 1947). A study was therefore conducted to determine how our learners perceive such a programme. Moreover, an investigation needs to be undertaken to explore the importance of introducing TVE at Grade 8 level, as Grade 10 does not fall into the phase of compulsory schooling, and it is between Grades 8 and 9 that most learners leave or drop out of school (DBE, 2016).

1.3 MOTIVATION FOR THE RESEARCH

It is anticipated that the introduction of TVE in the Senior Phase curriculum could alleviate the social challenges of unemployment and poverty and would improve the process of creating a skilled population. The rationale for this research study arose primarily from a previous practicum site where I had seen learners in the Senior Phase, specifically Grades 8 and 9, who were struggling to cope with their adversities while remaining in school. These adversities included money issues, family obligations, and many others. This led me to consider various opportunities for such

learners from special and mainstream schools who have dropped out of school. I subsequently discovered that there is a gap in the literature on this topic and a definite need to provide insight on what Grade 8 learners' perceptions are on introducing TVE in the Grade 8 curriculum.

Although Senior Phase is from Grade 7 to Grade 9, the former falls into the primary school setting, while the latter is the first year of secondary, or "high" school. The fact that the phase falls into two separate levels of schooling that are very often not located on the same premises, could be an advantage, as learners would enter Grade 8 with some skills already acquired in Grade 7.

Technical and Vocational Education would be a "hands-on" subject in schools; it is a solution to further skills development in South Africa. For learners who are forced to leave school after Grade 9 and cannot go to Further Education Training (FET) institutions due to various socio-economic reasons, a background of TVE subjects may be to their advantage. In addition, learners who pursue higher education studies may still find the TVE acquired skills useful to their day-to-day lives. That is why I have chosen this school as these learners are functioning at a high level and could have careers in anything they would like. However, it would also be beneficial towards answering the research question, as many individuals perceive TVE to be only for learners with barriers to learning or learning disorders. It is important that we change this perception and give all learners a chance to be able to develop new skills and talents.

Furthermore, it is important for schools to help all learners to develop new skills in order to aid in job creation/creating job opportunities, exploring new technical skills, and thus increasing the interest in and skills sets in communities. This can be facilitated by implementing TVE into the Senior Phase curriculum. Similarly, the concept of resilience in learners which they can attain from their schools (provided by school counsellors through motivational talks, goal setting, etc.) should also be considered, as TVE is one of the many forms of resilience skills that can be taught to learners at school; it can give learners a feeling of being secure, a sense of belonging, on which they can rely for a better, brighter future (Glover, 2009). An important aspect that could facilitate an overall change in the economy is that of

generating a more positive experience(s) for learners in schools and in the community. This could be achieved by equipping learners with (new) technical skills. If learners could see what they are capable of learning and gain new skills, it could help to further instil interest in TVE in our youth.

It is extremely important to develop our youth's skills to ensure that we as a community and a country can develop and decrease unemployment rates. There needs to be "an alternative way to bring education" (IAB South Africa, 2017) to our youth, as it could also help many to "escape poverty and unemployment" (IAB South Africa, 2017). TVE in the curriculum could open various doors of opportunity and possibilities for learners. It could help stimulate new ideas, jobs, and personal growth/success (IAB South Africa, 2017). TVE could increase career development opportunities (Interskills Training, 2017) and could help to achieve higher levels of productivity, as the youth would be skilled and thus would be able to do jobs faster and with fewer mistakes, ensuring more profitable outcomes (IAB South Africa, 2017). All these factors would contribute to higher economic growth. Mohan, as cited by Chakrabarty (2016), states that at school level it is crucial to have possibilities accessible for skills expansion/courses and these possibilities should be made available in the secondary stage of schooling. This can be trained/taught in a practical manner, improved through field visits, videos or e-learning, industry-driven projects, etc. (Chakrabarty, 2016).

The mainstream school where the study was conducted is situated in a suburb known as Crosby in Johannesburg, Gauteng. Several learners in the school are Indian/African and learn in their first or second language. Most of these learners are high-functioning learners. TVE would be a "hands-on" subject in schools; it would be a solution to help skills development in South Africa. For learners who wish to go to university to become accountants or mathematics teachers, etc., they might still do so, and would merely be acquiring additional skills.

TVE teachers could help learners to realise their full potential by teaching them a variety of skills. It is the above-mentioned aspects, such as the lack of skills development among our youth that have further triggered my interest in conducting a

research study on introducing Technical and Vocational Education into the Grade 8 curriculum.

1.4 THE PROBLEM STATEMENT

In South Africa, many learners drop out of school due to unforeseeable circumstances, such as a lack of funds or their responsibilities for child-headed households, as they must take responsibility for their families. Many learners in the Senior Phase face these challenges and they leave school, as they have little or no means of help or support for their families' basic needs. South Africa also has a high unemployment rate and low skills development among the youth, thus introducing TVE into the school curriculum across all schools, as stated earlier, could ensure that all learners are trained at least at a 'Level 1 or 2' for a specific vocational or technical skill. If learners leave school in Grade 9 or 12, they would have a skill that could enable them to earn money or to study further. The absence of or limited TVE subjects currently makes it difficult for learners to enter FET institutions after leaving school; it limits their choices, makes part-time (after-hours) studies difficult and would be easier to take up further if they were already exposed to various TVE subjects at a school level, as it would help them to find and develop new interests as well as give them a background and the basics of a skill that they love and would like to study further.

TVE in the Senior Phase curriculum appears essential to generate a better future for the youth, to create and improve the world we live in by ensuring that our learners are taught various technical skills at school that could always be of advantage to their lives after school. This could further benefit our communities as well as the economy, as TVE could lead to new job opportunities, since learners could be employed based on their ascribed skills (other than academic skills) and could thus make an honest living. Many TVE subjects or skills could be studied further at universities of technology or vocational schools. TVE would therefore benefit all learners and South Africa's economy by creating skilled individuals.

Historically, TVE is perceived as "an option for losers" (IAB South Africa, 2012). It is this very perception that needs to change, as TVE is a form of education that aims to

prepare youth for employment and create jobs (IAB South Africa, 2012). We need to equip learners with various skills that could create job opportunities for them once they leave school or complete their schooling careers.

In Finland, TVE is very flexible and courses lead to the accreditation and registration of their employees; it is not seen as the option for losers! According to Atkins and Flint (2015), in England, the Netherlands and South Africa, young people tend to consider TVE in a negative light. However, TVE can help learners and South Africa's economic growth as "learning drives economic growth, fuels innovation and creates jobs" (Africa Progress Panel, 2013). Furthermore, TVE can help to equip countries such as South Africa with the skills needed to decrease poverty, improve livelihoods, create healthier environments and build prosperity for the youth that is the future of the country (Africa Progress Panel, 2013).

Therefore, perceptions are important to explore, because "perceptions" are defined as the way in which people regard something, understand it and interpret it (English Oxford Living Dictionaries, 2017), that is, learners' interpretation of TVE, understanding of TVE and what learners perceive it can do for them. This study would be expected to contribute to the knowledge about various ways in which to create skills and job opportunities based on the perceptions of learners in the Senior Phase. By introducing TVE through the curriculum with the support of parents, teachers and learners, South Africa could achieve great things. In the light of the above, the main research question to be investigated in this research study is: ***What are Grade 8 learners' perceptions of Technical and Vocational Education in the curriculum?***

1.4.1 The aim and objectives of this research

The aim of this research was to explore participants' perceptions of Technical and Vocational Education in the Grade 8 curriculum. In addition to this aim, the objectives of this study were to describe and examine the perceptions of participants of Technical and Vocational Education in the Grade 8 curriculum, to provide more skills training, and better learning and future work opportunities for all learners in the Senior Phase.

1.5 RESEARCH METHODOLOGY

1.5.1 Research approach

This study used a qualitative approach to gather all the data from the available sources that is required to answer the research question. Henning (2004) states that qualitative research is a procedure of collecting, interviewing, observing and obtaining a deeper understanding of the question/case at hand. This aids in constructing knowledge, finding a meaningful way of looking at the community, question or case and the data gathered in the research.

A qualitative approach was utilized to explore Grade 8 learners' perceptions of TVE and allow them the opportunity to verbalise their thoughts on the introduction of TVE into the Grade 8 curriculum.

A qualitative approach is applied when there is a gap in information about a topic, when variables are unclear or even unknown, as well as when "a relevant theory base is missing" in any way (Leedy & Ormrod, 2005). McLeod (2001) suggests that qualitative research does not aim at testing a hypothesis; rather it has a "deep tendency to describe, analyse, and interpret the constructive aspects of the social world".

Therefore, this was an appropriate way for me to gain insight, discover the in-depth information regarding the study and to answer the research question. A qualitative approach therefore enabled me to gather, analyse and interpret information on Grade 8 learners' perceptions regarding TVE in the Senior Phase curriculum.

1.5.2 Research design

Various research designs are available for studies of this nature. This study used a case-study design. A case study is seen as a precise case, person or event (Creswell, 2013). In this case study a group of Grade 8 learners from a mathematics and science-focused school, in a physical and socio-cultural context, was selected. The case represents a real-life context, namely challenges that South Africa experiences are real and need to be dealt with, and entails in-depth, intensive

analysis (Creswell, 2013). It is a system bound by a place and time, which applies to my research study, as I worked in a school environment. The school in question is a specialised school with a focus on mathematics and science subjects. Admission to the school is by means of a selection process. The school therefore becomes the system, as defined by the qualitative research design.

The focus was thus on Grade 8 learners as it was their perceptions I aimed to explore, because they could relate to TVE directly as it would have an impact on themselves, as well as future Grade 8 learners or others in their position. The best way to understand how they felt was to communicate with them by exploring their perceptions on skills development in the Senior Phase curriculum. This study could therefore make a significant contribution to the knowledge about various ways in which to develop the skills for the youth.

1.5.3 Sampling and selection of participants

Qualitative research uses non-probability sampling (Lund Research Ltd, 2012). Purposive sampling (Neuman, 2011) was used, where a few set questions (such as, semi-structured or open-ended) aimed at a target group, in this case Grade 8 learners in a school, in order to explore their perceptions on introducing TVE into the Grade 8 curriculum. For the purpose of this study, learners, which consisted of a sample of 20 Grade 8 participants, took part in a focus group interview.

The study was introduced during a Life Orientation lesson with a Grade 8 class, where I presented a workshop on TVE. The class consisted of a diverse group of participants, from different socio-economic and cultural backgrounds. All participants spoke English well and were able to engage with me. I introduced the concept of TVE and explained to them how the system works. Thereafter, they had the opportunity to decide if they were interested in participating in this research through questions and answers (interviews) and focus group discussions. Based on this, purposive sampling was used as a method of participant selection in the study. (Creswell, 2009).

1.5.4 Data collection

Data was collected through focus group interviews (Silverman, 2011) with Grade 8 learners whose parents consented to their participation in the study after attending the TVE workshop in the Life Orientation class. This was done on the school premises during school time. Written permission was obtained from the selected school governing body, in the form of a signed written document in which all ethical and technical aspects were explained (see Appendix A). Three (3) focus groups interviews, consisting of either six (6) or seven (7) participants, were undertaken, which lasted for approximately 30 minutes and were conducted in English. The interviews were voice-recorded with the consent of the participants' parents/guardians, and thereafter transcribed. Additional data was collected by means of essays and collages on TVE prepared by the participants.

1.5.4.1 Focus group interviews

The focus group interviews were semi-structured and allowed an easy flow of the discussion amongst participants. "Probing questions" (Malindi, 2010) were added as necessary. This meant that I would use a set of questions to guide the focus group interviews but would have to improvise and use follow-up questions as the focus group interviews would be open-ended. The focus group interviews would be conducted in person and would be positioned in a non-threatening manner, where learners could feel free to provide me with their honest perceptions. This was considered as the most appropriate interview method to use for this study. Through these interviews, insights and an understanding would be gained on the participants' perceptions of TVE in the Grade 8 curriculum.

A date was set prior to conducting the interviews with participants and interview/focus groups. Participants were all from the same class and interviews took place in focus groups, which made it easier to schedule a time for this process to take place. The focus group interviews took place in a classroom, at the school, during school hours, during the Life Orientation period. There were a few disruptions from external elements, such as the school bell, learners passing by in the corridors or passing the classroom. These disruptions hindered participants' concentration, thoughts and attention span (i.e. some forgot what they were saying and questions had to be

repeated) because the bell rang, and learners could not hear, which could have influenced their responses and thus affect the data collection process. It could therefore also have an influence the analysis of the data. In addition, the choice of language was determined by the participants and myself; questions were asked in English and the participants all responded in English. There were no language barriers.

1.5.4.2 Essays

An essay can be seen as a well-researched and logically structured answer to a particular question(s) (Unilearning, 2000). In this case it refers to the participants exploring what TVE is in order to see if they fully understand it. Essays can also be viewed as a critical process involving information or one's ideas relevant to the topic at hand (TVE).

One may use essay writing as a means to help one think, clarify and develop one's ideas and thoughts and understanding of a topic (Unilearning, 2000); in the case the topic being TVE. According to Creme and Lea (1997, p. 115), "'you may not know what you think until you have written it down", thus helping to identify the gaps in knowledge.

Therefore, it was clear from the essays learners wrote that all learners knew what TVE is and had expressed their perception thereof. This was a useful activity to help gain insight into Grade 8 learners' perceptions on TVE being implemented in the Senior Phase curriculum.

1.5.4.3 Collages

A collage is a type of artefact (i.e. a form of media) that can be used to express oneself (Malchiodi, 2005). Its focus is on a more creative basis (Simon & Hicks, 2006), which aids in discovering various aspects, such as the participants' understanding of the topic, in a more artistic manner. Fritz and Beekman (2007) view collages as a form of picture storytelling. Similarly, Watson and McMahon (2010, p. 103) describe the use of collages to be a reflective process in order to identify,

discover/explore and express goals, qualities and images that may be significant to oneself.

In terms of this study, the participants used the collages to express and reflect on their creative views in regard to what TVE is, that is, their understanding of the topic in a more artistic manner. This has aided the data analysis process as I gained an in-depth understanding of participants' perceptions (Henning, Van Rensburg, & Smit, 2004) on TVE and what subjects they deem to be TVE subjects. It also added to the reliability aspect of this study. Participants were encouraged to include pictures and/or words that helped to illustrate their perception and understanding of TVE. The process of developing collages proved to be beneficial to the study. Figure 3.6 (in Chapter 3) provides some examples of the collages created by the participants.

1.5.5 Data analysis

Data analysis is an inductive process, which began the moment I collected data and started to compare data from the various sources to each other in an attempt to identify patterns, which were later coded into themes as the process of data analysis unfolded. Data analysis is an ongoing active process of development that occurs throughout the research process (Palmer & Rowley, 2010). According to Flick (2014), data analysis aims to define, compare, explain and develop a theory. Niewenhuis (2007a) goes on to say that data analysis comprises the participants' attitudes and feelings, their knowledge and experiences, as well as the aspect that is the most important to this study, the understanding of participants' perceptions.

Thematic analysis was employed to analyse data collected from the participants. A thematic analysis uses a procedure of coding and themes. A theme is seen as a pattern which originates from the data that one is interested in (Marks & Yardley, 2004). In addition, I made use of an inductive and deductive coding process to select relevant or irrelevant information within the data collected (Marks & Yardley, 2004). The data was then transcribed, it was analysed and categorized, coded and themes were then created (Marks & Yardley, 2004).

In this study, Sparkes and Smith's (2014) 6-phase model, which represents various phases in the thematic analysis process, was used to analyse the data collected. The steps entailed the following:

1. "A process whereby the involvement of the researcher and participants in the research takes place" (Sparkes & Smith, 2014). During this process, I built trust and rapport with the participants.

2. "Post-data collection = generation of codes after the data has been collected" (Sparkes & Smith, 2014). After the data was collected and transcribed, I compiled codes which were created through looking for words and finding similar sentences (refer to Figure 3.2 in Chapter 3).

3. "Themes are identified within the provided codes, thus finding meaningfulness in the data collected" (Sparkes & Smith, 2014). I created themes for which similar responses from the participants were grouped together (refer to Figures 3.3, 3.4 and 3.5 in Chapter 3).

4. "Requires the researcher to review the themes by recognising a coherent pattern and creating a thematic map from the pattern" (Sparkes & Smith, 2014). Once the themes were identified, I then categorized them according to the most important and least important.

5. "Define and name the themes within the research and find the significance within it so that it can be linked with the information provided in the study. Themes were created and aligned according to the aims and objectives" (Sparkes & Smith, 2014) of the study to answer the research question, while keeping in mind and considering other information provided by various authors and other studies pertaining to TVE in the curriculum.

6. "Report writing which consists of analysing the themes' evidence and providing a clear interpretation of the data" (Sparkes & Smith, 2014).

The report on the data collected in this study was structured in a way that aimed at answering the research question. The phases provided by Sparkes and Smith (2014) therefore provided structural guidelines for the entire process: collecting data, analysing it and reporting the findings of this research.

1.6 TRUSTWORTHINESS

In all research studies, trustworthiness is crucial, as it examines the validity and reliability of the study. According to Henning (2004), "validation allows one to question, check and theoretically interpret the relevant findings of the research". There are four key components of trustworthiness:

1.6.1 **The Truth value**: this refers to the "value of the findings of the study which is determined within the context of the research conducted" (Keele, 2011, p. 49). Similarly, the value of the data collected can be from the participants lived experiences or their perceptions (Keele, 2011).

1.6.2 **Applicability**: is the evaluation of the study's findings to determine whether or not they are valid in the environment within which the data was collected. Is TVE implemented in other countries' senior phase/high school curriculum? Does it work, how does it work and what are the perceptions around adding TVE into the senior phase curriculum? According to Gravetter and Forzano (2009), external validity is vital in the development because it is a means of validating the results from the research conducted.

1.6.3 **Consistency**: this refers to questions of whether the findings/results would be consistent if the same research was conducted in another mathematics and science-focused school; would the perceptions be the same, similar or different (Merriam & Tisdell, 2016).

1.6.4 **Neutrality**: being neutral throughout the study, "having no biases as a researcher before, during or after the study is being conducted. This helps minimize the risk of the findings being unreliable or non-trustworthy" (Krefting, 1991, p. 216).

Furthermore, **trustworthiness** refers to the extent to which the research is ethical, honest and responsible. For this study, the researcher depended on reliable sources (that is, the Grade 8 learners), because they are part of exploring their perceptions of TVE in the Grade 8 curriculum. Honesty from the participants and myself was essential to ensure responsible and ethical interview results. According to Babbie and Mouton (2007), trustworthiness also relates to credibility, conformability and dependability of the study.

Credibility is the quality of being trusted and believed in (Dictionary.com, 2017). I believe that the participants had nothing to gain by being dishonest and have given me honest answers and insights.

Conformability is seen as the constancy or fixedness of my participants that could ensure learners are being reliable and honest (Merriam-Webster, 2017). About **dependability**, I was able to count on the participants as they had nothing to gain by being dishonest (Yourdictionary,com, 2017). Only once these characteristics have been fulfilled, can this research study be deemed valid and reliable.

1.7 ETHICAL CONSIDERATIONS

There are various ethical considerations that need to be taken into account when conducting any study, namely issues such as informed consent, confidentiality, anonymity, sensitivity, and transparency. As a researcher, it was important to note that the participants were of a vulnerable population as they were learners younger than 18 years old. Therefore, there were strict ethical principles that needed to be considered before carrying out the research process.

Among the various ethical considerations, it was important to first obtain approval from the University's Ethical Clearance Committee to be able to conduct this study. Consent had also to be obtained from the school's principal, the Gauteng Department of Education (GDE) and from the parents/guardians of the participants. Regarding ethical procedures of the study, consent forms were crucial. For instance, without the permission and consent of the participants/their parents or guardians, no

interviews could be conducted, recorded, or published on the internet. Thus, to ensure that the interviewees' responses are kept confidential (Terre Blanche, Durrheim, & Painter, 2007), the consent forms were drawn up and signed by all parties, consisting of the school, the parents/guardians of the participants and the participants themselves, prior to commencing the study. Other ethical considerations, according to Resnik (2011), include honesty, objectivity, integrity, respect and, most importantly, confidentiality of the identity of the participants.

Prior to conducting the interviews, I ensured the University's Ethical Clearance Committee's approval (see Appendix B: Ethical Clearance number 2017-064), as well as that of the school's principal (Appendix A), the Gauteng Department of Education's (GDE) approval (Appendix C), and that the consent forms were given to parents/guardians and learners (Appendix D). These documents were read and signed by all parties involved, as explained above, prior to the commencement of interviews. This means that prior to conducting the interviews, I ensured that permission was first granted by the school governing body, the parents/guardians of the Grade 8 learners to be interviewed, and those learners who were able to sign their own consent. For this purpose, I contacted the learners' parents/guardians by means of a letter in which I explained the research and assured parents that the research would in no way harm their child. Arrangements regarding the time, date, venue, etc. were also communicated and requested permission to do so prior to conducting the interviews with the participating learners. All parties were informed of exactly what the research is about and the aims and purposes which it aimed to achieve. Thereafter, I thanked them for taking the time to participate in the upcoming interview.

In addition, it was vital to explain to all parties prior to conducting the research that participation was voluntary and that no harm would come to the participants. Babbie (2010) suggests that participants should have the right to withdraw from the research procedure or could opt not to participate in the research at the beginning or even throughout the research process. Similarly, participants should not be harmed or feel harmed in any way, such as psychological, physical or emotional harm of any form or manner (Babbie, 2010). Consent forms that were given to the participants/their parents or guardians stated the above clearly and provided them with the option of

withdrawing from the research study at any given time of their choice or if they felt it necessary to do so (see Annexure D).

To elaborate, all the ethical considerations, such as the consent forms, etc., were prior to conducting the interviews scheduled for this study. Critical ethical considerations of honesty, objectivity and integrity would be adhered to throughout the interview process. Children below the age of 18 require informed consent (written) of their parents/guardians (see Annexure D), which is obligatory to participate in a study (Moolchan & Mermelstein, 2002); however, in respecting and building rapport with the participants, their assent was also requested/obtained for the child to participate (Rossi, Reynolds, & Nelson, 2003).

Another ethical concept to consider is confidentiality, which is extremely important. If any participant intended to harm him or herself, the researcher or another person would have to be aware of the legalities of such a case, and that the researcher would then, and only then, be obliged to break confidentiality (Mishna, 2004), as well as with whom the research and data collected would be shared. Anonymity is evident in the reported findings, as the participants' names were not used in the transcripts, but they were rather referred to as Participant A, B, C, etc. to protect the identity of the participants.

A further ethical consideration is transparency and deception; it was important to maintain transparency with the participants. As a researcher it was important that a level of respect for the participants was maintained and that information was not withheld, or the participants exploited. Honesty is very important, as this contributes to one's emotions, thoughts, perceptions and attitudes; all being contributing factors to how participants respond and take part in the research process. These are the "core characteristics displayed by the researcher which had to be assumed" (Kvale, 1996, p. 149). This led to the research process being more transparent and stress-free, as the interviews can be viewed as conversations (Kvale, 1996, p. 174).

1.8 CONCEPT CLARIFICATION

1.8.1 Technical and Vocational Education (TVE)

Technical and Vocational Education (TVE) aids in equipping the youth with skills that can help to create various job/employment opportunities (IAB South Africa, 2012). TVE skills, such as the ones mentioned above (hairdressing, IT, cooking, photography, nursing, plumbing, carpentry, etc.), are but a few that can help to create a more skilled community with job opportunities for many more individuals. Similarly, TVE is related to various occupations/employment, their skills and are known as specialised vocational courses (English Oxford Living Dictionaries, 2017), which we need in South Africa to help the economy to grow and to increase skills development among our youth.

This can be achieved by providing individuals with technical skills from an early age, such as in the Senior Phase, as it would be helpful for the learners in terms of skills development, further studies and employment. Furthermore, by implementing TVE in the curriculum, we also aim to change the perception that it is only for learners with bad grades and/or disabilities to a more positive outlook, such as that it is for skills development and help with future study choices as well as various job opportunities. Thus, TVE in a school system can help to change the perceptions of how people regard TVE and the impact that it can have on our society if it is incorporated into the curriculum.

1.8.2 Perceptions

In terms of this study, perceptions are the way in which an aspect or concept is regarded, understood or interpreted (English Oxford Living Dictionaries, 2017). TVE was explored in terms of the Grade 8 learners' perceptions of TVE in the curriculum. It explored their interpretation, understanding and views on TVE being implemented in the Grade 8 curriculum.

1.8.3 Child-headed households (CHH)

Child-headed households (CHH) are homes in which a child has become the head of the household; it requires the child in charge to go out and get a job. Most of the time

this means that learners must leave school or cannot concentrate on their school work/homework as they are too busy taking care of their siblings (Meintjies, Hall, Marera, & Boulle, 2016). However, many of these learners do not have the skills to support their families, which lead to their unemployment and possible criminal activities as a way of surviving. Phillips (2011) states that "support and services should be available to siblings" who are part of CHH; TVE can be the support system that helps these learners to escape poverty and to have a better and brighter future.

1.9 STRUCTURE OF THE STUDY

Chapter 1	Provides an introduction to the study, presents the background and an overview of the research approach, design, methods of data collection and analysis, trustworthiness, ethical considerations and concept clarification.
Chapter 2	Provides an in-depth discussion of the literature and theoretical framework, including legislation and policy statements that support this study.
Chapter 3	Presents the process of data collection, data analysis and interpretation as utilized in this study. It also presents the research findings and discussions thereof in relation to the literature.
Chapter 4	Draws conclusions from the results of the study. It discusses the limitations and strengths of the study. Recommendations are made for future research which could be done in similar or other contexts.

1.10 CONCLUSION

Chapter 1 has provided an overview of this study, the problem statement, the research question, the aim of the study, research approach and design, which was to explore learners' perceptions of introducing Technical Vocational Education in the Grade 8 curriculum in a mathematics and science-focused school. It also explained the objectives, the selected data collection procedures, methods of data analysis, sampling, trustworthiness, ethical considerations and the motivation for the study. In the light of the above, the research methodology has served to found and align the

study, while allowing the researcher to be both objective and subjective within the research process.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Technical and vocational education and training is a means of skills acquisition (Asian Development Bank (ADB), 2009). Skills need to be acquired to enter the world of work and to help the economy grow. Skills, such as carpentry, mechanics, plumbing, information technology (IT), web design, gardening, and many more, can be taught in the Senior Phase (Grades 7 to 9) school curriculum to close the skills gap, promote skills development and alleviate unemployment among our youth.

The impact of TVE in the school curriculum can be explored through discussing Bronfenbrenner's Ecological Systems Theory (Landsberg, 2011), which will be discussed in this chapter. This chapter will go on to explore TVE in pre- and post-1994 in South Africa, the three-stream model, other countries that have implemented TVE into their school curricula and it will briefly touch on the various policy documents.

2.2 THEORY THAT GUIDES THE METATHEORY

2.2.1 Bronfenbrenner's Ecological Systems Theory

Bronfenbrenner's theory is the metatheory that will be used to frame this study, Bronfenbrenner's Ecological Systems model is defined as "a multidimensional model of human development" (Bronfenbrenner, 1979a; Landsberg, 2011, p. 10). This model has various levels/layers of interacting systems that result in "change, growth, and development, such as physical, biological, psychological, social and cultural" (Landsberg, 2011, p. 10). These interacting systems depend on each other to function.

According to Visser (2007), the ecological system continually changes due to the influence of coexisting systems. If there is a change or a disruption in one part of the system, it causes a ripple effect on the other parts of the system. Donald, Lazarus, and Lolwana (2007, p. 209) suggest that in all social problems, "it is the relationship between the levels of the systems, within systems and the active engagement of the individual(s) concerned" that need to be explored, understood and worked on for

interventions to be effective. Thus, to be able to “understand the whole system, we must examine the relationships between its different parts” (Donald et al., 2010, p. 37).

These various nested systems that influence a child’s development are the microsystem, mesosystem, exosystem and the macrosystem, with the additional influence of the chrono-system (Bronfenbrenner, 2005).

The microsystem relates to the immediate system that influences the child’s development, such as his/her parents, family members, and friends, among others (Leonard, 2011). This in turn enables the acquisition of a child’s moral values, goals, choices and self-efficiency. Regarding this study, TVE in the curriculum is seen by many as a waste of time, for learners with disabilities only and/or those with bad grades. These perceptions were gained or passed down from family members, friends, communities, and others. All this influences the child directly, as the child does not think critically for him/herself, but rather relies on the perceptions of others.

The mesosystem relates to the connections and the interconnection in the child’s life (Landsberg, Krüger, & Nel, 2007). It is a set of microsystems that interact with each other continuously (Donald et al., 2010, p. 40). The exosystem involves the wider community, the child is not directly involved as such in the curriculum restructuring, but it has an influence on his/her development (Landsberg, 2011, p. 10). For example, a parent being dismissed from his/her place of work would in turn influence the child’s well-being.

The macrosystem contains “dominant social and economic structures as well as values, beliefs, and practices that influence all other social systems” (Donald et al., 2010, p. 41). This addresses the learners’ created perceptions on TVE based on various values, beliefs, social/community influence, among others.

In addition, the chronosystem is the factor of time and how systems change and adapt over time, as well as the developmental time that in turn affects all interactions between the various systems and therefore influences the individual’s development (Donald et al., 2010, p. 41). Change in the curriculum is unavoidable, inevitable and

continuous, changes and adaptions need to be made to address the changing needs of society linking it to time.

An illustration of the Bronfenbrenner Bio-ecological System Theory follows in Figure 2.1 (Bronfenbrenner, 1979a). It shows how the individual is in the centre of various systems. The figure further demonstrates how information is transferred from each system to the next, how relationships influence the various systems, and they show how each system is a prerequisite for the various other systems.

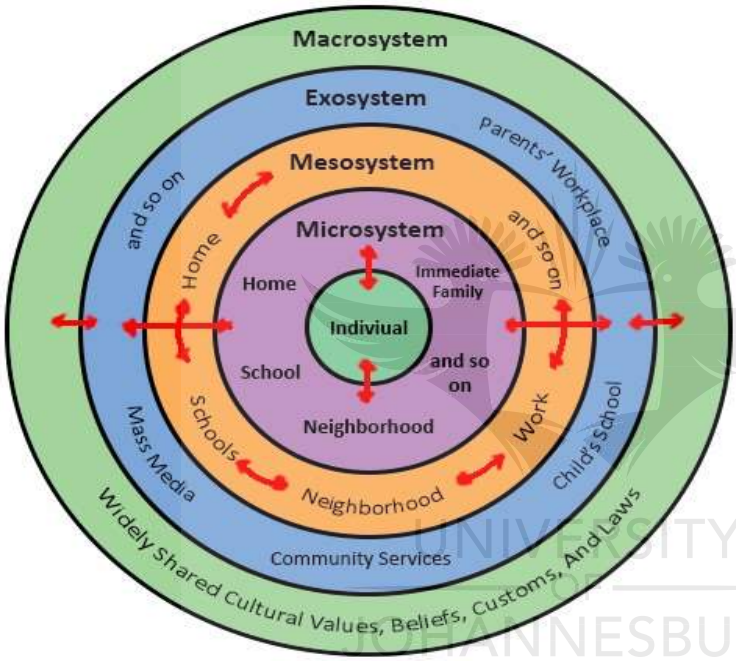


Figure 2.1: Bronfenbrenner's Bio-Ecological Systems Model
(Source: Bronfenbrenner, 1979a)

It is evident from the above figure that all systems are intertwined, they relate to each other, thus showing how important each level is in the developmental process of an individual. The effect on the individual's development may be immediate, direct, or indirect; however, an alteration in any one system influences the outcome of the other systems (ripple effect). Thus, all systems need to work together in order to ensure the best development, as clearly illustrated in the preceding paragraphs.

2.3 TECHNICAL VOCATIONAL EDUCATION (TVE)

Education is generally considered as learning and developing skills, knowledge and analytical concepts, whereas TVE is seen as developing craftsmanship, practical experience and reality-based skills (Zirkle & Martin, 2015). In many countries worldwide, TVE has expanded to be a focal educational framework (UNESCO, 2017b).

TVE can be defined as education for work and has evolved from being focused on principles related to entry-level workers to now include adult training skills, introductory courses for admission to higher educational institutions, as well as post-secondary options and programmes (Zirkle & Martin, 2015). Akoojee, Gewer, and McGrath (2005) view TVE as a post-school-education establishment, which helps one to progress developmentally and helps to develop skills that can assist in developing the country.

TVE can help to equip the youth with skills which aid in creating jobs and employment opportunities (IAB, South Africa, 2012). Skills such as hairdressers, cosmetic artists, dental assistants, electricians, information system analysts, data capturers, truck drivers, carpenters and veterinary assistants are skills that are in demand worldwide (Adkins, 2017; Valdez, 2014). These skills may be attained at vocational training centres or they can be achieved by providing individuals with technical and vocational skills at school level (i.e. Senior Phase).

TVE aims to prepare individuals with knowledge, skills and abilities that are required for a specific occupation(s) in the labour market (European Training Foundation, 2017). Occupations where you can progress with some basic training or on-the-job training can be seen as vocational skills (Valdez, 2014). It may take less time than a traditional four-year university degree to obtain employment with vocational skills and such skills can be acquired in a few months to two years at a TVE college or training centre (Adkins, 2017). According to the UNESCO International Centre for Technical and Vocational Education and Training (2010), TVE focuses on equipping individuals with trades that can be deemed as beneficial in fields which require cognitive and practical abilities. TVE focuses on the development of skills to deliver a quality

service in a specific industry. It is a purposeful task as it promotes employability, strengthens workforces and creates a variety of professions (Adkins, 2017; European Training Foundation, 2017).

TVE's skills concept is increasingly recognised and deemed crucial in enhancing its contributions to social inclusion, decent and sustainable jobs, and the reduction of poverty (Ifundi, 2016). In support of the above statement, the development of job-related skills forms part of the country's strategies for human resources, the reduction of poverty strategies and economic growth, as South Africa has a high unemployment and poverty rate (Ifundi, 2016).

2.4 EXPLORING TVE IN OTHER COUNTRIES

Every country has different manpower and skills needs. All economies, whether developing or developed, will always need people with vocational skills. Akhuemonkhan, Raimi, Patel, and Fadipe (2014) state that TVE is a skill-oriented training which is imperative and that is used to enhance and provide employability and the development of countries. The experiences with TVE in a few selected countries are explored in the following section.

2.4.1 TVE in European countries

2.4.1.1 Finland

Finland's TVE goal is to provide "solid vocational knowledge and skills, which enable students to move into working life" (Stenström & Virolainen, n.d., p. 6). Additionally, the aim of their TVE system is to encourage and support lifelong learning in order to ensure that there is improvement in the skills of the work force (Stenström & Virolainen, n.d., p. 6).

Early TVE in Finland is a three-year full-time study; however, prior TVE exposure can reduce the study time (Teräs, 2017, p. 23). Each qualification comprises on-the-job-training and gives the individual a chance to be eligible for higher education (Teräs, 2017, p. 23). TVE is offered to youth as well as to adults who are already part of the world or work (UNESCO-UNEVOC, 2013a, p. 5).

The Finnish TVE system starts at the Upper Secondary level (that is after the basic education). The Finnish "higher education system comprises two parts: universities and polytechnics, which are for adults' use" (UNESCO-UNEVOC, 2013a, p. 7). Furthermore, TVE in Finland is offered as "School-Based Programmes, Apprenticeship Training, Polytechnic Education, Vocational Special Education (VSE), and Competence-Based Qualifications (CBQs)" (UNESCO-UNEVOC, 2013a, p. 7).

According to Stenström and Virolainen (n.d. p. 7), basic education in Finland is obligatory for all; it is a free nine-year education which prepares learners and makes them eligible for all Upper Secondary level education (a post-compulsory level). The Upper Secondary education level is separated into general education (three-year general education programme that leads to a national matriculation examination) and vocational education (Stenström & Virolainen, n.d., p. 7). During the general education level, learners have the possibility of

> *"... studying for both a vocational qualification and the matriculation examination (a double qualification) at the same time. Both forms provide eligibility for further studies at polytechnics (universities of applied sciences) and universities. Adult education and training are available at all levels*" (Stenström & Virolainen, n.d., p. 7).

It can therefore be seen that the curriculum/school-based TVE is aimed at the youth "whereas the other types of TVE are generally aimed at adults" (Stenström & Virolainen, n.d., p. 19).

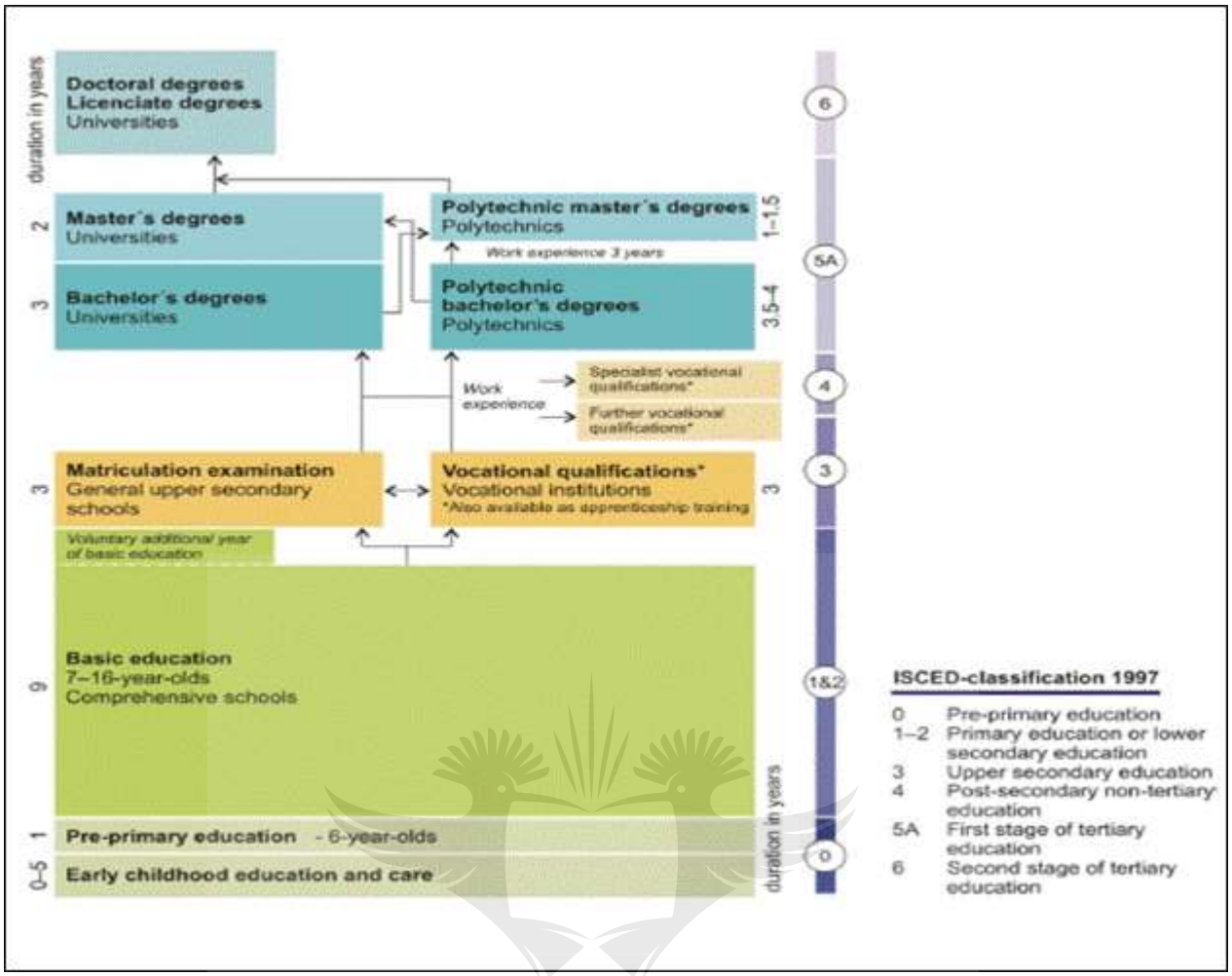


Figure 2.2: Formal education system in Finland

(Source: Stenström & Virolainen, n.d., p. 8)

- **School-based programmes and apprenticeship training**

  Those programmes and training comprise upper secondary programmes and further training. The following table illustrates which programmes and training are provided:

	School-based programmes	Apprenticeship training
Upper Secondary Programmes	Pre-vocational programmes, Programmes leading to upper secondary vocational qualifications, Preparatory training for competence-based qualifications (CBQs)	Preparatory training for competence-based qualifications (CBQs), Programmes leading to upper secondary vocational qualifications
Further Training	Preparatory training for competence-based qualifications, Programmes not leading to a qualifications	Preparatory training for competence-based qualifications (CBQs), Programmes not leading to a qualification

Table extracted from Finnish Board of Education: Information Material 2010.

Figure 2.3: School-based programmes and apprenticeship training in Finland *(Source: UNESCO-UNEVOC, 2013a, p. 8)*

Once the Upper Secondary level of TVE is completed and learners have acquired the relevant skills and knowledge

> *"... required to achieve vocational proficiency and find employment in their chosen field while obtaining extensive basic skills needed in different positions within the field and more specialised skills and professional competence in one sector of the study programme"* (UNESCO-UNEVOC, 2013a, p. 14).

There are "Polytechnic Education, Vocational Special Education (VSE), and Competence-Based Qualifications (CBQs)" (UNESCO-UNEVOC, 2013a, p. 7), which aim to recognise vocational capabilities irrespective of whether they were obtained by working experience, studies or other TVE activities.

2.4.1.2 Germany

In Germany, school starts with primary school education (at the age of 6) which is compulsory for Grades 1-4; thereafter learners are able to follow a pathway (there are many) for secondary schooling education (Misko, 2006). After completion of secondary school, learners have the choice of academic or vocational studies. Upper secondary schools offer further education (i.e. Grades 5-12/13) which are the awarded certifications that make individuals eligible for higher education (Wiborg, 2010).

In addition, the German TVE system is also referred to as the dual training system, which is well-known worldwide. It is the combination of the obtained theory and training implanted in a real-life work environment (The German Vocational Training System, n.d.). Dual training typically lasts between 2-3,5 years, depending on one's chosen job (Handbook Germany, 2018; The German Vocational Training System, n.d.). Winch (2006) states that the Dual System is a great illustration of TVE in secondary and post-secondary education systems.

Germany therefore has two types of TVE training; the first is the dual TVE programme which allows the individual to work and simultaneously attend a vocational training school. The second type of TVE training is that of a school-based vocational training programme (i.e. classroom-based) (Handbook Germany, 2018).

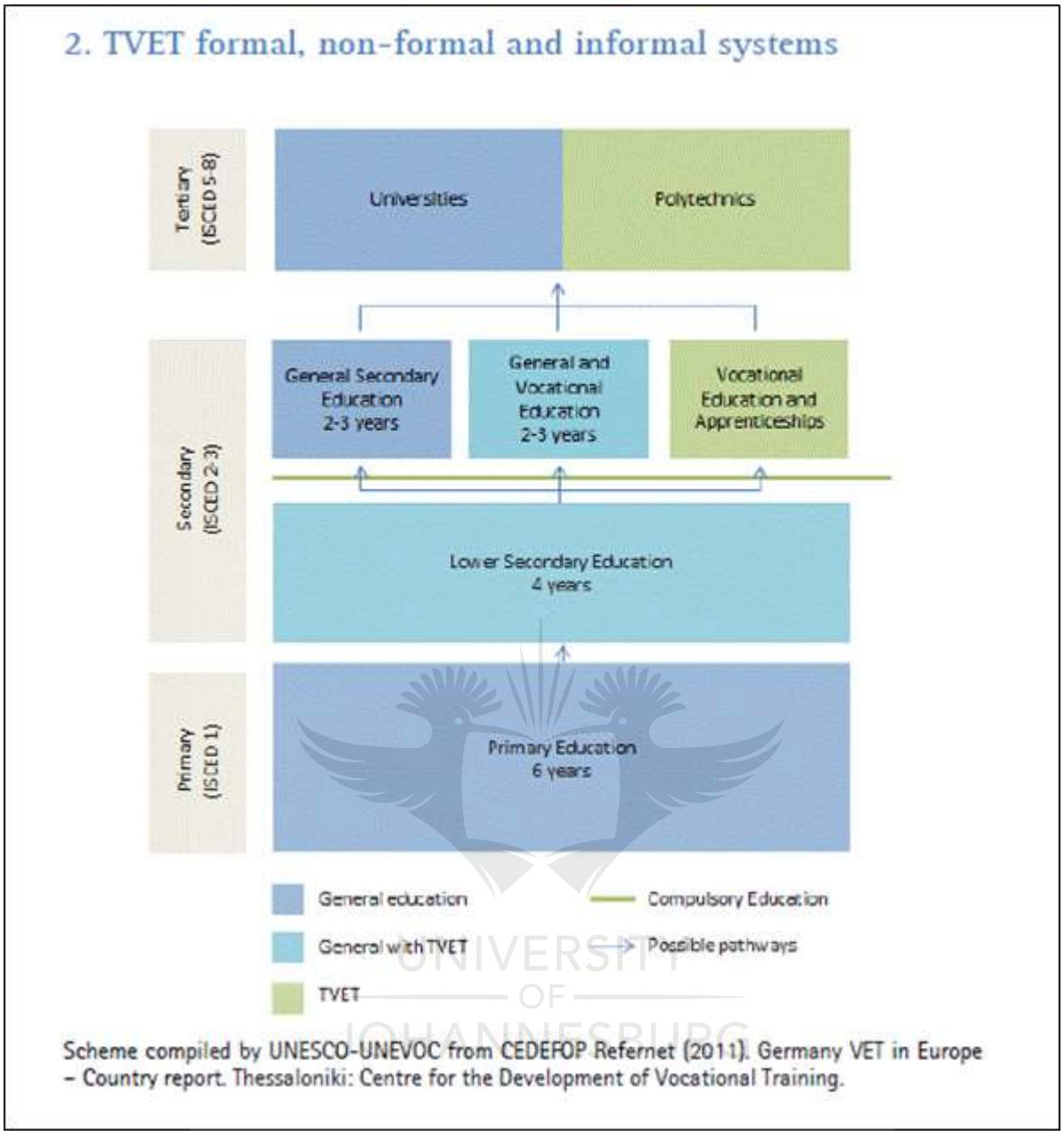


Figure 2.4: Germany "TVET, formal, non-formal and informal systems"
(*Source: UNESCO-UNEVOC, World TVET Database Germany, 2012a, p. 8)*

Vocational education in Germany focuses on a person as a whole and follows the concept of learning-to-learn, "through the development of key faculties individuals are enabled to acquire knowledge throughout life" (Benner, 2003, p. 180).

2.4.1.3 Switzerland

In Switzerland compulsory education ends at Grade 9 which is also known as the 'lower secondary school'. This ensures that learners get a "solid foundation of core

academic skills" (Hoffman & Schwartz, 2015, p. 6), which helps to prepare them for the path going forward. This level of schooling's curriculum is standardised; however, the pace of curriculum delivery would be adjusted according to the learners' needs (Hoffman & Schwartz, 2015). They then have the choice of an 'upper secondary' option of academic or vocational education.

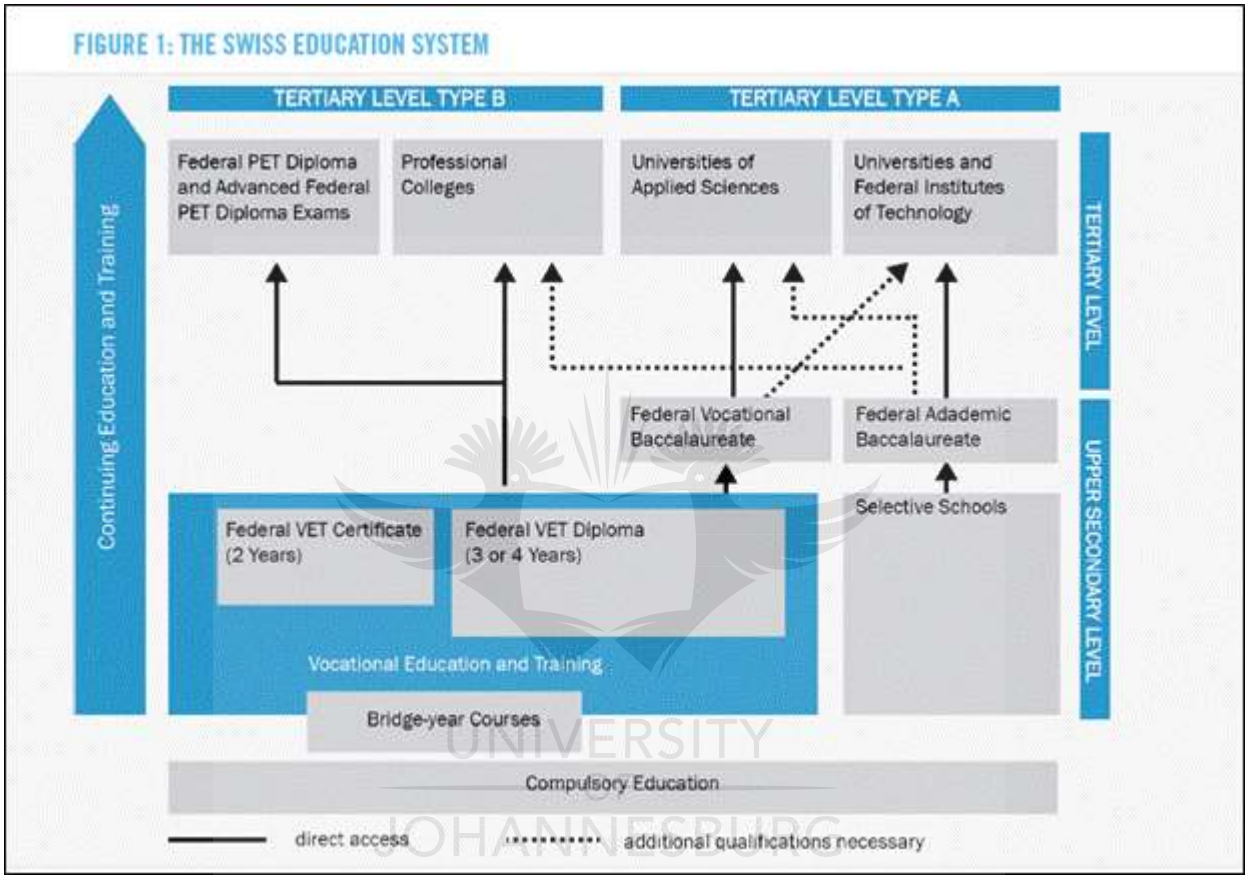


Figure 2.5: Switzerland's education system

(Source: Hoffman & Schwartz, 2015, p. 7)

TVE has various strengths in Switzerland, such as:

- "The system is strongly employer and market driven.
- The partnership between Confederation, cantons and professional organisations works well.
- School and work-based learning is well integrated; workplace training (which Switzerland refers to as in-company training) is not too company-specific.
- Switzerland's VET system is well-resourced and able to include up-to-date equipment.

- Switzerland's apprenticeship-based VET programmes pay for themselves, in the sense that benefits to most employers outweigh the costs.
- Tertiary VET is strong; there is a broad spectrum of tertiary VET offerings.
- Flexible pathways have been introduced to allow for mobility and avoid the risk of dead-ends.
- Vocational teachers and trainers, examiners and directors are well prepared.
- Quality control is ensured, and national assessment procedures are in place.
- Career guidance and counselling is systematic and professional.
- Evidence is well developed and routinely used to support policy arguments" (OECD, 2009, p. 1).

Hoffman and Schwartz (2015) stated that

> *"... over 70 percent of young Swiss take the vocational route, and only about 25 percent the academic version of upper secondary education"* (Hoffman & Schwartz, 2015, p. 7).

According to Vander Ark (2015), TVE learners move back and forth between work/ work-based courses and school; there are options for further studies and the choices are based on learners' interests. There are 21 areas of specialisation that include IT, retail, administration, etc. (Vander Ark, 2015). Similarly, if learners seek the opportunity to choose from between approximately 240 different occupations such as health, social care, dance, pre-engineering, crafts, banking, insurance IT, etc., then upper secondary vocational education is the option for them to consider (Eddy, 2014; Hoffman & Schwartz, 2015). It can therefore be said that learners who complete the compulsory education levels in Switzerland have the option of choosing between academic and vocational levels of schooling, but the most common route is that of TVE.

2.4.2 TVE in Australasian countries

2.4.2.1 India

According to Agrawal (2013), general education and TVE in India were separated from each other. There is, however, an opportunity to be exposed to TVE by training

the learners in different ways throughout the schooling career. For example, Grades VII to XII (i.e. Grades 7-12) have work education, for Grades IX/9 to X/10 there is pre-vocational education in their classes, and a distinct stream of vocational education is offered to the Grades XI/11 to XII/12 (Agrawal, 2013). Kotamraju (2014) states that India's TVE needs restructuring as it focuses on basic curriculum (work-centred) for unskilled individuals instead of training individuals at a flexible and semi-skilled international level (Kotamraju, 2014; Sirohi, 2012).

India's TVE programmes are aimed at "creating employment opportunities and imparting suitable skills for self-employment, particularly in the rural and unorganized sectors" (Agrawal, 2013, p. 20). Surveys of unemployment and employment levels illustrate that approximately 2% of the population (15-29 years) have received formal TVE and 8% are reported to have obtained non-formal TVE (Agrawal, 2013, p. 20; HRDC SA, 2014).

Thus, India offers further vocational training to individuals after they leave school (i.e. completing anywhere between Grades 7-12) to prepare them or to upgrade their skills further in order to become employable (Goel, n.d.).

2.4.2.2 Singapore

Education and training is vital to Singapore's development sector as traditional trading and service sectors were not enough to sustain the vast number of school leavers (Goel, n.d.; Tucker, 2012; Varaprasad, 2016). Singapore believes that, in order for the country to grow, the quality of skills development and vocational training needs to improve (Singapore Cooperation Programme (SCP), 2018).

There are various diverse education system routes in Singapore for learners to learn at their own pace/develop their skills (International Enterprise (IE): Singapore, 2012). TVE is provided at Institutes of Technical Education (ITE), Polytechnics and Private Education Institutions (PEIs) (International Enterprise (IE): Singapore, 2012). Various programmes are compiled to enhance skills development. Several TVE institutes became part of the school system. However, this was aimed at keeping weak learners in the education system (Varaprasad, 2016). Noonan (2017) indicates that

TVE institutes/colleges provide Vocational Certificates and Diplomas when preparing the youth for employment and higher education level studies (Noonan, 2017).

In addition, Singapore has a qualification framework, the Workforce Skills Qualification System (WQS), which focuses on improvement and helps to create accessibility to life-long learning and skills development programmes, i.e. certifications to upgrade current skills (Yeo, 2014). According to Yeo (2014), the WQS system trains individuals in three types of skills: occupational competencies (focused on the retail industry, merchandising, visual displays, floor managing, etc.), industry competencies (based on customer relations skills, inter-personal skills and marketing), and the foundational competencies (focused on employability skills, basic literacy skills and numeracy skills) (Yeo, 2014).

Singapore's TVE system is regarded as a world-class model (Agrawal, 2013; Seng, 2015). The system has developed over many years from secondary school-based TVE to post-secondary TVE colleges, to currently meeting the needs of a globalised and diversified economy (HRDC SA, 2014).

2.4.2.3 Australia

In Australia, TVE is an important contributing factor to the economy for the development of the State's workforce (Department of Training and Workforce Development, Western Australia (DTWD WA), 2018). This enables individuals to obtain qualifications for numerous skills/categories of employment, which will assist them in the workplace (DTWD WA, 2018; OECD, 2008).

TVE institutions in Australia offer practical courses (in real, simulated work environments) in subjects such as hospitality, marketing, computing, tourism and business, (Educations, 2017). Private colleges, Technical and Further Education (TAFE) Institutes, and numerous other schools and various universities also offer vocational training. According to an article in Educations.com (2017), the educational curriculum is developed in conjunction with their government and industries and combines lectures and tutorials in small classes. Upon completion, learners obtain a Certificate of Recognition. Thereafter, individuals may choose to go to a university

(education programme) or they could look for a job (where their technical skills obtained can be put to practice) (Educations, 2017).

There are various advantages to TVE, such as providing skills to various individuals in order to help their transition into the world of work, to re-join a workplace after a period of time, to improve skills or obtain new ones, as TVE covers a wide range of different courses/qualifications (Studies in Australia, 2018). TVE further covers:

- *"basic life skills, even literacy and numeracy training (such as pre-vocational training or foundation studies);*
- *basic vocational skills for occupations (such as floristry and automotive);*
- *semi-professional vocational training (such as business advertising, and occupational health and safety);*
- *study areas with a practical focus (such as viticulture, music and hospitality)"* (Studies in Australia, 2018).

The Australian TVE system is managed under the Australian Skills Quality Authority and aims to promote a better national consistency (i.e. the way educational institutions are registered, implemented and monitored) (UNESCO-UNEVOC, 2017c).

2.4.3 TVE in African countries

2.4.3.1 Nigeria

According to Okoye and Isaac (2015), TVE in Nigeria is aimed at providing technical knowledge and competencies for "agricultural, industrial, commercial and economic development of the nation" (Okoye & Isaac, 2015, p. 66). However, there is a difference between technical (generalised throughout the country) and vocational education (training in a vocation that can be used to find work after attaining it) in Nigeria (Okoye & Arimonu, 2016). Nigeria intends to provide all the youth with equal access to vocational education (regardless of their academic status) (Khumalo, 2010, pp. 40-41). Apagu and Andural (2009), in Khumalo (2010), further state that Nigerian TVE aims to ensure that the Nigerian youth has equal access to TVE irrespective of one's academic abilities (Khumalo, 2010).

Nigeria's school-based TVE programmes begin at Junior Secondary School level. According to Osidipe (2017):

> *"The Pre-technical and vocational education provided at the Junior Secondary School level has the following purposes:*
>
> *a. Introduction into world of technology and appreciation of technology towards interest arousal and choice of vocation at the end of Junior Secondary School and professionalism later in life*
>
> *b. Acquiring technical skills*
>
> c. *Exposing students to career awareness by exposing usable options in the world of work; and enabling youths to have an intelligent understanding of the increasing complexity of technology*" (Osidipe, 2017, pp. 102-103).

There is a formal, non-formal and informal system in the Nigerian TVE programme; the formal system is school-based (commences after of the lower secondary school level education has been completed, i.e. Junior Secondary School). These programmes are at Junior Secondary School with the purpose of serving as an introduction to the "world of technology" (Osidipe, 2017), which in turn provokes interest and awakes the choice of vocation that the individual would like to pursue later in life (Osidipe, 2017). This phase is pre-vocational as well as academic (Khumalo, 2010); there is provision for these learners in that, once this phase is completed, the individual who leaves school "may go to an apprenticeship system or other vocational training" (Oni in Khumalo, 2010, p. 41). Thereafter there is the Senior Secondary phase, which consists of vocational subjects. Nigeria wants to "prepare its learners for higher education as well as the world of work" (Khumalo, 2010, p. 41).

2.4.3.2 Zimbabwe

In Zimbabwe the education system consists of four (4) distinct phases: seven (7) years of primary, four (4) years of secondary, two (2) years of advanced high school and three (3) years of college or university (for a basic degree or diploma) (Woyo, 2013). TVE in primary and secondary schooling contains various subjects, such as

building studies, fashion, food, metalwork, woodwork, etc. (Mupinga, Burnett, & Redmann, 2005).

The secondary education system is:

> *"... subdivided into three 2-year phases: Zimbabwe Junior Certificate (ZJC), Zimbabwe General Certificate of Ordinary Level (O level), and Zimbabwe Advanced Level Certificate (A Level). The first two levels of secondary education are commonly referred to as secondary school and every secondary school is supposed to offer at least one technical subject to students. In addition to technical subjects, various technical and vocational education courses are offered through vocational skills centres, privately owned institutions, technical colleges, polytechnics, and universities"* (Woyo, 2013, p. 183).

Thus, the TVE system in Zimbabwe can be seen as reflecting a country that incorporates TVE programmes and one that teaches vocational subjects within secondary schooling (Ngwenya, 2017; Mupinga et al., 2005). Furthermore, the Zimbabwe government has recognised a very important aspect of TVE, namely its "orientation towards the world of work" (Woyo, 2013, p. 183), with the curriculum's emphasis on the attainment of employable skills as well as occupational capabilities. With the high levels of unemployment, the government vocationalised secondary education in an attempt for schools to relate education to the world of work (Gustafsson, 1987).

2.4.3.3 Eswatini

In 2002 the government introduced pre-vocational education in 16 secondary schools in Swaziland (now Eswatini) (Khumalo, 2010). The aim was to motivate and prepare learners for countless "employment opportunities while they are still at school" (Khumalo, 2010, p. 2).

Eswatini schools consist of three categories: government-owned schools, government-aided schools and privately-owned schools; however, the pre-vocational programme was only introduced in the government-owned schools (Khumalo, 2010). There is an academic stream that prepares learners for university and a pre-

vocational stream that helps the shift to a world of work, namely with “employment, self-employment or further training at institutions for higher learning” (Khumalo, 2010, p. 28).

According to the then Swaziland government (2006), the school system consists of four cycles, namely pre-primary (below 6 years), primary (Grades 1-7, 6-12 years), junior secondary schooling (13-15 years) and senior secondary schooling (16-17 years) (World Bank, 2006).

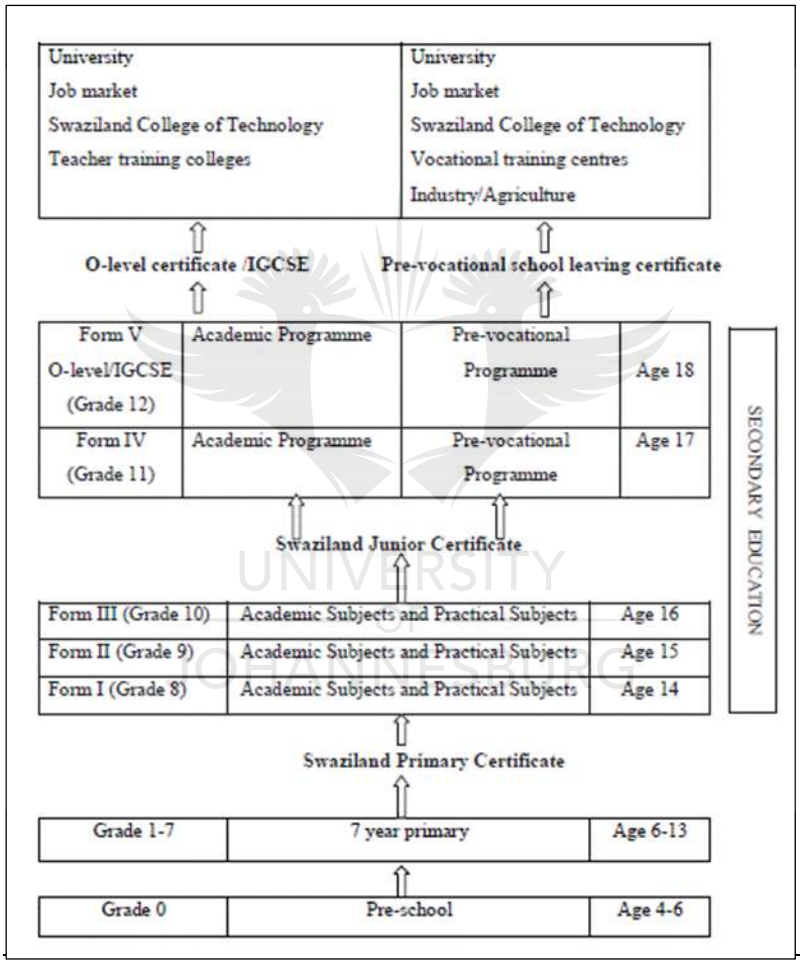


Figure 2.6: The structure of the educational system in Eswatini (then Swaziland)

(Source: Khumalo, 2010, p. 5)

Grade 10 and 11 learners have the option of choosing between an academic stream or a pre-vocational stream. The pre-vocational education stream is offered through various “practical subjects designed to provide pupils with skills, attitudes, practical

and entrepreneurship skills" (Khumalo, 2010, p. 6), which will help learners make their career choices/vocational training pathways.

The pre-vocational curriculum has as its objective to provide learners with 'hands-on' skills (Colcough & Digby, 1978, p. 11). This system was developed to train and prepare learners with skills that could assist them to find jobs when they leave school or would guide them into finding and perusing further vocational training. The Eswatini TVE programme proposed to teach skills at a secondary school level to equip learners for the world of work as well as to increase women's participation in technical subjects (Akoojee et al., 2005).

According to Akoojee et al. (2005), at present the pre-vocational programme consists of four (4) fundamental subjects (English, mathematics, Siswati and science), two (2) central pre-vocational subjects (information technology and entrepreneurship), and one (1) elective (i.e. agriculture, home economics, technical studies or business studies). Apart from the content established in class, learners need to complete a work experience programme, which is then included in the final assessment. (Akoojee et al., 2005).

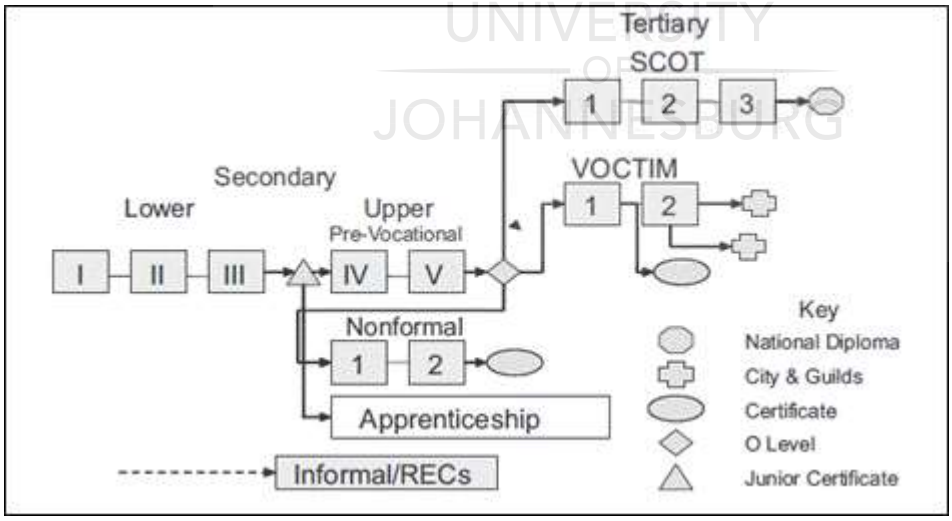


Figure 2.7: Structure of Eswatini's TVETSD Sector

(Source: Marope, 2010)

2.4.3.4 Botswana

Botswana is one of the most economically developed and secure countries in Africa (UNESCO-UNEVOC, 2012c), with its economy specialising in the mining and trade of diamonds. The requirement of a diverse education brought about the need for TVE and skills development, to help decrease unemployment and to promote other skills that are not related to the diamond and mining industry (UNESCO-UNEVOC, 2012b).

Botswana aims to continuously expand their access to high quality technical education and training (UNESCO-UNEVOC, 2012b), with the aim to create employment, decrease inequity and engaging with poverty-stricken individuals (Sivanandam, 2017; UNESCO-UNEVOC, 2012c).

In Botswana there is a ten (10)-year basic education programme. This includes obtaining a Junior Certificate Examination (JCE). The "Junior Secondary (Forms I-III) and the Senior Secondary level (Forms IV-V) both offer vocational courses" (Khumalo, 2010, p. 38). In the three (3) years of Junior Secondary school, learners are required to study agriculture as well as a second practical subject. There are various practical subjects offered, such as business studies, home economics, design and technology, art and computer awareness. Similarly, the Senior Secondary level subjects offered are "agriculture, design and technology, food and nutrition, fashion and fabrics, art and design, accounting, computers and business studies" (Khumalo, 2010, pp. 38-39). However, in secondary schools, vocational subjects "constitute only a minor portion of the curriculum" (Khumalo, 2010, p. 39). Learners can therefore enter TVE programmes after ten or twelve years of academic education (UNESCO-UNEVOC, 2012c).

According to Khumalo (2010, p. 40):

> *"Botswana is one African country where pre-vocational education is well managed and supported by the government.*
> *Pre-vocational education is not just taught in schools just to occupy the pupils, but colleges of education consider performance in vocational subjects when they screen applicants for further training"* (Khumalo, 2010, p. 40).

In addition, the Botswana government feels that there is a need for TVE to partner with various industries to convey quality skills specific to the needs of those industries (Association for the Development of Education in Africa (ADEA), 2015/16; Keetile, 2015). According to *TVET institutions partnership crucial* - Daily News (Keetile, 2015), the Skills Development and Secretary in the Ministry of Education, Mr Matlhare, said there are "12 000 qualified unemployed youth in Botswana due to the fact that there is no training for the labour market" and feels that partnering with industries would improve graduates' employability, increase skills (hands-on) and decrease discrepancies between qualifications and requirements of the shift into the labour market. Similarly, according to Keetile (2015), Botswana Chamber of Mines Chief Executive Officer; Mr Siwawa, agrees that a "dual training model is a good one, as it will allow learners to spend half their time in the classroom and the other half in a practical work situation in the industry" (Keetile, 2015).

However, according to the Botswana Country Report (ADEA, 2015/16), TVE has a poor reputation and is only seen as an option if learners do not qualify for Senior Secondary or higher education. Various previous studies have similarly found that Botswanan's reputation of TVE has not been acceptable due to the perceived poor quality of learners, staff, curriculum and resources (ADEA, 2006, p. 20; 2015/16).

2.5 TVE IN THE SOUTH AFRICAN CONTEXT

In the South African context, TVE may be identified as vocational or occupational in nature, i.e. either working in a job to earn a living, or a job that denotes the main work or business that a person does (occupation) in order to earn a living (Difference between, 2018). This means that the purpose of an individual's education and training is to equip him or her with a skill or skills that will help him/her in the world of work or that will help introduce employment opportunities/entrepreneurial possibilities, after which he/she could qualify for admission into a higher educational institution/college (TVET Colleges, 2017b, pp. 04-05). According to the UNESCO database, in developing countries that search for further growth in education and the creation of employment opportunities, skills development plays a crucial role for such optimum growth (UNESCO, 2017a). Therefore, in an effort to reduce poverty and

increase economic growth to attain the development goals of reducing unemployment rates and increasing skills development, TVE has been implemented and adopted worldwide (UNESCO, 2017a).

South Africa's social, economic and political developmental pathways have been "perversely shaped by policies that built divisions within the country and which advantaged whites both educationally and economically at the expense of other population groups" (Akoojee et al., 2005, p. 99). This means that the building and maintaining of white power created a division between high-skilled white and low-skilled African labour. Resources for education and training were predominantly used towards advancing white progress, a historic situation that has been a constant struggle for the new government in the past decade (Akoojee et al., 2005).

According to Cosser, McGarth, Badroodien, and Maja (2003), in a TVE report by the Human Resource Development Council of South Africa (HRDC SA) (HRDC SA, 2014), learners are divided into academic and vocational schools for 12 years, whereas in some other countries TVE only starts once the individual has completed his/her compulsory schooling. In these instances, TVE takes place in colleges for full-time students (HRDC SA, 2014). Some colleges provide both the youth and adults with academic and vocation programmes. Cosser et al. (2003, p. 2), in a TVE report by the HRDC SA, specify that these differences reflect how TVE is "shaped by, embedded in, and contributes to national cultures" (HRDC SA, 2014, pp. 14-15). According to Akoojee et al. (2005), policy makers in South Africa are aware of the urgency to reduce high unemployment, redress racial inequalities and resolve poverty issues in society. In attempting to redress the above stated issues, various skills programmes can be implemented, for example Akoojee et al. (2005) mention apprenticeships and learnership programmes that could produce large numbers of skilled youth in a relatively short time.

2.5.1 Pre-1994 TVE in South Africa

South Africa's TVE system and its performance are "profoundly shaped by the history of South Africa's colonisation by the British and the subsequent enshrinement of racism at the centre of social and economic policies under apartheid" (Akoojee et al.,

2005, p. 99). This means that preference was given to the white population (i.e. educationally, economically, etc.), which resulted in them being highly skilled, whereas the African populations were left in the low skills range (Akoojee et al, 2005). This put limitations on the ability of the other races to gain various skills and training needed for development and, in turn, for employment (Barnes, 2004). The quality of education before 1994 differed based on one's race, which was the outcome/influenced by the Apartheid regime (Arfo, 2015). Apartheid was the main reason for skills shortages, a lack of equal education for all and of skill development in South Africa (Badroodien, 2003). However, in 1994, when the democratically elected government took over, public policies were reviewed and amended to redress the above-mentioned issues in South Africa (Ngcwangu, 2014).

Similarly, Pali Lehohla (2016), the Statistician-General of Statistics South Africa, stated that President Mandela referred to education as a major issue in the country which needs to be resolved (Kekana, 2016). The statistics that were presented at this meeting indicated that whites and Indian/Asians were improving about their educational levels/occupation, while Blacks' and Coloureds' state of improvement was very minimal (Kekana, 2016).

Various policies, such as the 1995 White Paper on Education and Training, the National Education Policy Act No. 27 of 1996, the South African Schools Act No. 84 of 1996, the Education White Paper 3 of 1997, all aim at redressing "educational inequalities among those sections of our people who have suffered particular disadvantages and the principle of 'equity' so that all citizens have the same quality of learning opportunities" (Department of Education (DoE), 1995, pp. 21-22). The South African Schools Act further aims to "advance the democratic transformation of society (and) contribute to the eradication of poverty and the economic well-being of society" (DoE, 1996). It should be clear that improving the quality of education in all schools is the most important challenge (Badat, 2009).

2.5.2 Post-1994 TVE in South Africa

After the first democratic elections in April 1994, reforming the education system had become a priority for the Government of National Unity (GNU), as it was a crucial

step towards redressing the inequalities of Apartheid. Significant progress has been made in the various policies, such as education legislation, policy development and curriculum reform.

South Africa's National Qualifications Framework (NQF) identifies three comprehensive bands of education: General Education and Training (GET), Further Education and Training (FET), and Higher Education and Training (HET) (Centre for Education Innovations, 2014). Given that South Africa faces various challenges regarding poverty, unemployment, and inequality, McGrath (2012) argues that the South African TVE system "needs to be strengthened in order to provide access for all", that is the youth and adults alike (McGrath, 2012, p. 627).

The purpose of a TVE system is geared towards generating opportunities for young people and adults to acquire lifelong learning skills, knowledge and values (McGrath & Akoojee, 2010). The "curriculum therefore needs to address the needs of the learners, industry, and the community or society" (McGrath & Akoojee, 2010, p. 261). Continuous change in policies and curriculum is therefore unavoidable (Marishane, 2002).

In 1996, possibilities for merging an uneven FET sector were explored and examined (DoE, 1998). The Green Paper for Further Education and Training (FET) was published (DoE, 1998), followed by The White Paper on FET (DoE, 1998), which all culminated in the Further Education and Training Act No. 98 of 1998 (DoE, 1998). All these policies were put in place to redress the effects of the Apartheid education system.

Although there have been various advances (since 1994), there is continuous consideration to aspects such as gender, class, racial and other inequalities about equal access to/success in education for all which need to be addressed (Rasool & Mahembe, 2014). TVE within the school context can help redress these injustices of the Apartheid education system.

2.5.3 The 3-Stream model

In redressing the skills shortage in South Africa, the Department of Basic Education (DBE) introduced a 3-stream model (DBE, 2016). The Department believed the 3-stream model would provide various options for leaners which, in turn, would benefit the skills development of diverse needs and skills.

The 3-stream model consists of the academic, technical vocational and technical occupational stream. According to Gina (2018), TVE colleges had tried to produce artisans, but the foundation starts with schooling. The relationship between the DBE and industries resulted in assistance in developing the curriculum. Industries were looking into sponsoring funds for the activities of the subjects related to preparing learners for the world of work (Gina, 2018).

The DBE said that the new 3-stream model was an attempt to resolve the needs of the public and the government. This is similarly related to issues considered in the National Development Plan (NDP) (NDP, 2011). The DBE was reviewing this system from various (best) countries in the world in the hope that South Africa could move in the same direction. In partnership, the DBE and Germany had been corresponding to create a support system to help with implementing the 3-stream model (Gina, 2016).

2.5.3.1 Academic Stream

This stream refers to the current schooling system (Baumann, 2016) and is dedicated to learners who meet the requirements of a higher education institution(s) (Mlambo, 2016). The aim is to maintain the standard of academics (in a schooling system) as well as focusing on providing an education that would help learners to meet the requirements of academic institutions such as universities as well as other higher education institutions (Masondo, 2016).

In the academic stream, the DBE is said to rationalise schools which offered the same subjects as well as improvements in subject selection by learners (Gina, 2016).

2.5.3.2 Technical Vocational Stream

This stream focuses on accommodating learners who would like to study a trade that would lead them to become artisans (Baumann, 2016). The DBE had also introduced new subjects, namely technical mathematics and technical science (i.e. applied mathematics and applied science). These are relevant in supporting the areas of specialisation (Gina, 2016), which consist of automotive, fitting and machining, and welding, under mechanical technology. Under electrical technology were power systems, digital electronics and electronics, with woodworking, construction and civil services (Gina, 2016).

The DBE's Director-General, Mathanzima Mweli (in Gina, 2016) stated that:

> *"... there was a target of 10 000 artisans per year, but they were currently struggling to meet this target. He was, however, positive that they would be able to meet the target of 30 000 by 2030"* (Gina, 2016).

2.5.3.3 Technical Occupation Stream

This stream focuses on learners who would like to go straight into the world of work after their matric year. According to Baumann (2016), learners are trained in skills that could grant them employment after matric (Baumann, 2016).

The following skills are included in assisting these learners to find employment after matric: woodwork, glasswork, arts and crafts, hairdressing, panel beating, spray-painting, welding, etc. (Mlambo, 2016). These are included with the basic compulsory subjects such as languages (first and additional), life orientation and, of course, mathematics (Mlambo, 2016), to help with the transition into the world of work after matric.

In addition, the DBE's Director-General (in Gina, 2016) mentioned:

> *"... that the Department had to develop Learning and Teaching Support Material (LTSM) for the new subjects and new areas of specialisation"* (Gina, 2016).

Furthermore, this stream accommodates learners with special needs in education and aims to enhance inclusivity in schools (NDP, 2011).

2.6 APPLICABLE LEGISLATION

According to UNESCO (UNESCO-UNEVOC, 2014), the South African education system aims to improve learner mobility and progression, which in turn satisfy human resource needs. It further focuses on providing individuals with transitional to high-level skills that help in creating a foundation for higher education and to help along the shift from a schooling environment to the world of work (UNESCO-UNEVOC, 2014).

It is evident from the various countries discussed above that TVE systems are implemented, recognised, measured and graded by databases such as UNESCO. However, TVE is not a flawless concept; frameworks need to be combined in order to create a supportable standard of education in order to expand growth in these countries, including the implementation of a TVE system in the South African education system, by borrowing strategies from other countries in order to facilitate the implementation of TVE in the Senior Phase.

There are various laws and legislation already in place that could assist in the transition of TVE into the Senior Phase curriculum. These are explored hereunder.

2.6.1 Child Labour Act

In South Africa it is a criminal offence to employ a child under 15 years of age, except in circumstances where if you have a licence or appropriate documentation, for example the film industry, where you need the required approval from the Department of Labour to employ children in the performing arts. The Child Labour Act (Department of Labour, 2012) states that if the occupation is not harming the individual, it is permissible.

This is based on legislation in Section 43 of the Basic Conditions of Employment Act No. 75 of 1997 (Department of Labour, 2012). In Section 43 of the Basic Conditions of Employment Act it is stated that children between 15-18 years “may not be

employed to do work inappropriate for their age or work that places them at risk" or violates the Constitutional rights of the child (Department of Labour, 2012). The implementation of TVE could be incorporated into this legislation and learners could start putting their skills to use to help them and the economy grow.

About learners using their newly acquired TVE skills (at a school level, if implemented), they can work to earn pocket money for themselves, learning responsibility and developing a work ethic and experience. Learners could also decide to further their training after school by obtaining a degree/diploma in the TVE subject(s) learnt at school.

2.6.2 Skills Development Act

The purpose of this act is to "develop the skills of the South African workforce" (South African Qualifications Authority (SAQA), 1999). TVE in the school curriculum can help to generate skills in our youth, which in turn can help to grow the economy. Numerous of the required skills outlined in this Act can be implemented by TVE in a school setting, specifically in Grades 7 to 9.

The Skills Development Act (1999) states that it aims to develop skills by improving efficiency in the workplace, increase the levels of assets in education and training in the labour market and improve the return on that asset, as well as to promote self-employment (SAQA, 1999). By implementing TVE in the Grades 7 to 9 curricula, we could help the labour market to accomplish these goals, as we would be developing these trade skills from a younger age.

It is imperative to encourage employers to "provide opportunities for new entrants to the labour market to gain work experience" (SAQA, 1999), which can be accomplished by TVE learners doing practical hours in order to complete their TVE subject course, or learners who have already completed the TVE subject(s) course, to start applying these skills to help our economy grow and gain work experience. Similarly, TVE in the Senior Phase curriculum can be used to help improve the "employment prospects of persons previously disadvantaged by unfair discrimination and to redress those disadvantages through training and education" (SAQA, 1999).

There are 50 accredited public TVE Colleges in South Africa, spread over more than 264 campuses in both rural and urban areas. Various public TVET Colleges are subsidised by the state by approximately R8 billion per year (TVET Colleges, 2017a). This can be used to benefit learners in Grades 7 to 9 by using the students registered at these campuses to help train/teach learners and teachers about different TVE subjects, thus helping to ensure quality learning, to assist "employers to find qualified employees; and to provide and regulate employment services" (SAQA, 1999).

The Skills Development Act (1999) states that:

"*(2) Those purposes are to be achieved through-*

(a) an institutional and financial framework comprising-

(i) the National Skills Authority;

(ii) the National Skills Fund;

(iii) a skills development levy-financing scheme as contemplated in the Skills Development Levies Act;

(iv) SETAs;

(v) provincial offices of the Department;

(vi) labour centres of the Department;

(vii) accredited trade test centres;

(viii) skills development institutes;

(ix) the Quality Council for Trades and Occupations;

(x) a skills development forum for each province;

(xi) a national artisan moderation body; and

(xii) *Productivity South Africa"* (SAQA, 1999).

It therefore aims to encourage numerous and growing partnerships between the public and private sectors of the economy to provide learning opportunities in and for the workplace (SAQA, 1999). This could aid in reaching a wider audience if TVE is implemented in the Senior Phase curriculum. For example, if TVE is introduced in schools, learners with urban/rural backgrounds can be provided with access to leaning and gaining various technical skills that can help them further their studies or enter the workplace.

2.6.3 Scarce skills

Many people believe that TVE is only for learners who are academically weak or for those who have disabilities. This negative perception of TVE needs to be altered, as the greatest and most noticeable deficiencies in human resource development are in the categories of vocational education and technical skills (Department of Higher Education and Training (DHET), 2016; Scarce Skills, 2016).

The Minister of Labour has outlined the Department's interpretation of skill shortages as "an absolute or relative demand: current or in future; for skilled, qualified and experienced people" to meet specific needs in the labour market (Scarce Skills, 2007). According to the Minister's speech, critical skills refer to specific skills needed in a specific market or profession (i.e. communication skills, general management skills, teamwork skills, customer handling skills, among others). The Minister went on to say that there is a difference between complete or "absolute and relative shortage of skills; absolute refers to appropriately skilled people who are not available in the labour market (this may include new/emerging occupations, a lack of qualified people or not enough people registered in career categories to meet the new demands)" (Scarce Skills, 2007). Relative scarcity refers to appropriately skilled people accessible "in the labour market, but they might not have the requisite level of work experience" (Scarce Skills, 2007), might not be located within a "specific geographical location and equity considerations" (English Oxford Living Dictionaries, 2018; Scarce Skills, 2007).

Some areas of the economy have a lack of suitably skilled people or are anticipated to grow rapidly in the foreseeable future. The DHET keeps track of these and publishes an annual list of occupations that are in high demand; these are mostly in the STEM (Science, Technology, Engineering and Mathematics) fields (Business Tech, 2017; Scarce Skills, 2016). However, there are scarcities in numerous fields, such as education (from early childhood development to university level), accounting and auditing, law, medicine (doctors, nurses and medical technicians), agriculture, artisans (jewellers, sculptors, carpenters, landscapers), information technology, and management (many qualifications ultimately lead to this level) (Scarce Skills, 2016).

Other examples include software developer, web developer, technologist, assistant manager, consultant/recruiter/supervisor, salesperson, etc. (Business Tech, 2017). In addition, the DHET (2016) has also indicated various skills needed, such as painter, moulder, pressure welder, metal fabricator, toolmaker, continuous stationery lithography technician, lithographic printing technician, reinforced plastic and composite production worker, packaging manufacturing machine setter, truck driver, etc. (DHET, 2016). These skills need to be promoted, groomed and developed to enhance skill development among the youth in South Africa.

The top 10 scarce skills are “electrical engineer, civil engineer, mechanical engineer, quantity surveyor, programme or project manager, finance manager, physical and engineering science technicians, industrial and production engineers, electricians, and chemical engineers” (Scarce Skills, 2016). Some other occupations in high demand are agricultural engineers, air traffic controllers, architects, auditors, boilermakers, bricklayers, carpenters, database designers and administrators, financial analysts, nurses, librarians, plumbers, retail buyers, welders, philosophers, historians and political scientists, software applications, web and multimedia developers, system analysts, etc. (Business Tech, 2017; Scarce Skills, 2017).

Therefore, if TVE is implemented in the Senior Phase curriculum, it can be used to decrease the skills shortage lists and thus help to create skilled individuals, which in turn would help the economy grow.

2.6.4 Post-school education training in South Africa

Post-school education is important in order to help our economy grow. Learners who leave/complete school tend to explore possible jobs or careers; with the implementation of TVE in the Senior Phase curriculum we can help reach a wider audience, as more youth will be inclined to try out the TVE subjects and could enjoy a subject(s) and possibly want to further it after school, or if they wish to enter the world of work, they would have a skill(s) in which to pursue a career/job.

The DHET aims to build and “expand an effective, integrated post school system” (DHET, 2013). Instead of only focusing on the post-school system, we could look at

this also being achieved in a school setting. By implementing TVE in the curriculum, it can help learners to prepare for the post-school system by already having learnt a trade/technical skill that can be studied further or that can be used to earn money.

Similarly, some institutions are controlled by provincial governments/municipalities to train their own personnel (this could also be applied in a school setting). The DHET (through Quality Councils) is accountable for assuring the quality of such training provisions and ensuring that qualifications offered are registered, “these processes can similarly be applied in a school setting too” (DHET, 2013). If schools team up with these post-school institutions, it could make the transition easier and more effective as we would be helping to create skilled youth who are responsible and life-long learners.

The White Paper for post-school Education and Training (DHET, 2013) indicates strategies that can help to improve education and training systems, following the established formal school system to meet South Africa’s ever-changing needs. In addition, one of the objectives of this policy is to guide the DHET and institutions to contribute to “building a developmental state with a vibrant democracy and a flourishing economy” (Council on Higher Education (CHE), 2014). The focal purposes of the policy are:

- A “post-school system that can assist in building a fair, equitable, non-racial, non-sexist and democratic South Africa” (CHE, 2014; Education International, 2009), which could be adapted in a school setting by implementing TVE in the curriculum, so that by the time learners leave school they are familiar with the concepts of a democratic South Africa as all learners will be exposed to TVE subjects, thus teaching them technical skills that they can always use;
- “A single, coordinated post-school education and training system;
- Expanded access, improved quality and increased diversity of provision” (CHE, 2014; Education International, 2009), if TVE is implemented in the curriculum, it is possible to achieve these goals as it will reach a vast number of the youth;
- “A stronger and more cooperative relationship between education and training institutions and the workplace;

- A post-school education and training system that is responsive to the needs of individual citizens, employers in both the public and private sectors, as well as broader societal and developmental objectives" (CHE, 2014; Education International, 2009). By implementing TVE in the Senior Phase, we can help to produce learners with the same values and possibly achieve the post-school goals to a certain extent, which in turn can help the quality of learning after school and increase skills in youth (CHE, 2014; Education International, 2009).

Therefore, by implementing TVE in the curriculum for Grades 7 to 9 learners, we are not only reaching a vast number of youth, but we are also helping to create skilled workers, giving learners the opportunity to try new things which they could be good at and may want to study further after school. This, in turn, can help the economy to grow, reduce unemployment rates and increase our rate of skilled workers, as many more people could learn a technical skill that could help them in the future.

2.7 CONCLUSION

A literature review was conducted to explore various aspects of technical vocational education in other countries, to see why it is important to explore the learners' perceptions of implementing TVE in the curriculum, as well as looking into certain policy documents in order to link them to creating a better education and training system that includes TVE in the Senior Phase (Grades 7 to 9) curriculum. By incorporating TVE into the curriculum, it can help to increase South Africa's skilled workers rates, help decrease unemployment rates and in turn help the economy to grow.

Chapter 3 will focus on the findings and discussions based on the themes derived from this study.

CHAPTER 3: FINDINGS AND DISCUSSION

3.1 INTRODUCTION

This chapter presents the findings of the study, which is aimed at exploring Grade 8 learners' perceptions of introducing TVE in the curriculum. The data gathered from the participants was analysed and explored, which is discussed in the following sections, linked to the literature review in Chapter 2 and correlated to the themes that were identified. Chapter 3 presents and explores the study's findings, which consists of data collected from 20 Grade 8 participants. These participants formed three (3) focus groups of 6 or 7 learners in each focus group. A Life Orientation lesson was used to present a workshop on TVE for the participants to better understand what TVE is. The focus group interviews lasted for approximately 30 minutes and were conducted in English. Additional data was collected by means of essays completed at home, as well as participants working in their focus groups at school (in a Life Orientation period) to make TVE collages. Each focus group's interviews, essays and collages were analysed by observing the similarities and differences among their answers.

3.2 PROCESS OF DATA COLLECTION AND ANALYSIS

The chosen site for the above-mentioned research was located in a suburb known as Crosby in Johannesburg, Gauteng. Many of the learners in the school are of Indian and African descent and are learning in their first or second language. Most of these learners are academically high-functioning learners from diverse backgrounds.

The total number of participants in the study was 20 Grade 8 learners, comprising a Grade 8 class. The participants were aged between 13 and 14 years. The participants comprised a Life Orientation class which consisted of both male and female learners of diverse socio-economic and cultural backgrounds.

As stated earlier, data was collected through focus group interviews with the Grade 8 participants. Their parents and/or guardians and the school consented to their participation in the study, after attending the TVE workshop in the Life Orientation class. The focus group interviews were done on the school premises during school time. The interviews were voice-recorded with the consent of the participants'

parents/guardians, and thereafter transcribed. Additional data was collected by means of essays and collages on TVE designed by the participants.

The focus group interviews were semi-structured and made use of probing questions (Malindi, 2010), where necessary. This means that a set of questions was used to guide the focus group interviews; because the questions in the focus group interviews were open-ended, they frequently elicited follow-up questions. The focus group interviews were conducted in person and positioned in a non-threatening manner, where participants could feel free to provide their honest perceptions, thus making the interview method the most suitable for this study.

A date was set prior to the interviews with participants and interview/focus groups were conducted. Participants were all from the same class, interviews took place within focus groups, thus it was a bit easier to schedule a time for this process to take place. The focus group interviews took place in a classroom, at the school, during school hours, during the Life Orientation period. There were a few disruptions from external elements, such as the school bell, learners passing by in the corridors or passing the classroom. These disruptions hindered participants' concentration, thoughts and attention span (sometimes some forgot what they were saying or questions had to be repeated) because the bell rang, and participants could not hear, which could have influenced their responses and could have had an impact on the data process (and to an extent influenced the analysis of the data). In addition, the chosen language of instruction and discussion was English.

Once all aspects of the data collection process were completed, an open and axial coding of the interview data was conducted and themes were developed from the transcriptions. This is essential for conclusions of the data, as indicated by Nieuwenhuis (2007b). The use of open coding was analysed thoroughly, word for word, line by line, and sentence by sentence, throughout the coding process to identify important words and phrases to help support the TVE skills development process in schools, as well as assisting in answering the research question. Furthermore, the "process of data analysis demonstrates one's ability to capture one's understanding of the data in writing" (Henning, 2004, p. 101). Transcriptions

were compiled through the Langdridge (2004) process, as I became familiar with the data that was obtained throughout the research process.

The data collected was examined though a process called the thematic analysis process. This process makes use of coding and themes. A theme is seen as a explicit pattern found in the data that one is examining (Marks & Yardley, 2004). In addition, an inductive and deductive coding process was used to select relevant or irrelevant information within the data collected (Marks & Yardley, 2004). As mentioned above, the data was then transcribed, analysed, categorized, coded and themes were created (Marks & Yardley, 2004).

To maintain confidentiality and anonymity, participants are referred to as Focus Group 1/2/3 Participant 1, 2, 3, 4 (Focus Group 1 Participant 1, i.e. FG1-P1) for the purposes of this report on the findings of the study.

Table 3.1: The participants' profiles

Focus group interview 1 – Grade 8 participants		
Code	**Gender**	**Age**
FG1-P1	Male	14
FG1-P2	Male	14
FG1-P3	Female	14
FG1-P4	Male	14
FG1-P5	Female	14
FG1-P6	Female	14

Focus group interview 2 – Grade 8 participants		
Code	**Gender**	**Age**
FG2-P1	Female	13
FG2-P2	Female	14
FG2-P3	Female	14
FG2-P4	Female	14
FG2-P5	Male	14
FG2-P6	Female	14
FG2-P7	Female	14
FG2-P8	Female	14

Focus group interview 3 – Grade 8 participants		
Code	**Gender**	**Age**
FG3-P1	Male	14
FG3-P2	Female	13
FG3-P3	Female	14
FG3-P4	Male	14
FG3-P5	Male	14
FG3-P6	Male	14

3.3 PRESENTATION AND OVERVIEW OF THE FINDINGS

Three main themes emerged from analysing the data from various data collection methods, such as the focus group interviews, essays and the collages. These were used to capture participants' perceptions about TVE in the schooling system, which were then transcribed. The themes derived from the data were (1) Understanding TVE and its introduction into the school curriculum; (2) Misconceptions of learners about TVE and its role in economic growth and employment; and (3) The need to incorporate TVE into the curriculum, which are indicated in Figure 3.1 below:

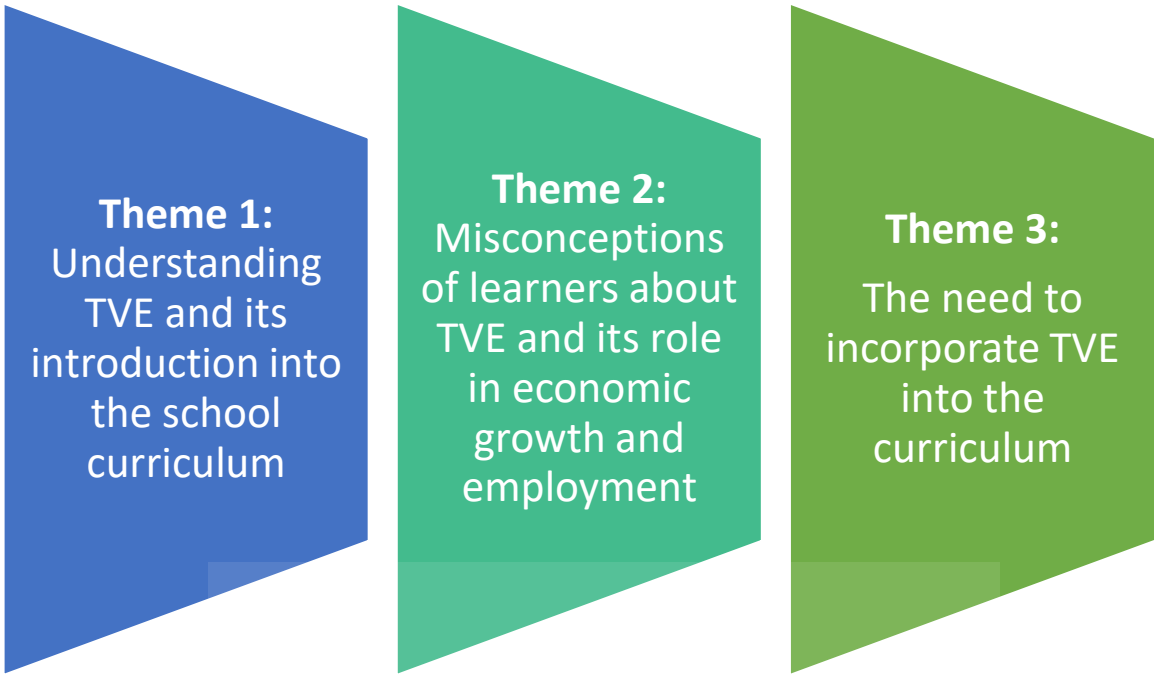


Figure 3.1: Emerging themes

The emerging themes relate directly to the following research question:

What are Grade 8 learners' perceptions of Technical and Vocational Education in the curriculum?

The three themes mentioned above all link to the perception of TVE by the participants.

The following images of the focus group interview summaries indicate how the themes were created. The focus group interviews were studied carefully. It was scrutinised line by line, and words, sentences and perceptions that stood out and that were repeated by the various participants were then written down, thus showing the perception similarities shared by the participants.

Figure 3.2: Creating themes

The same process was applied to the essays and collages that participants provided as a source of data collection, as can be seen in the following images.

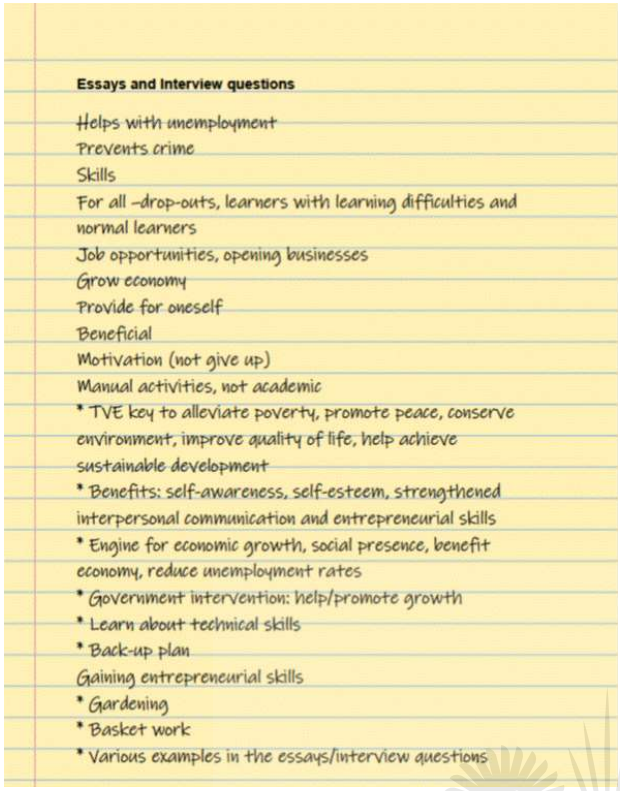


Figure 3.3: Results of essays and interview questions

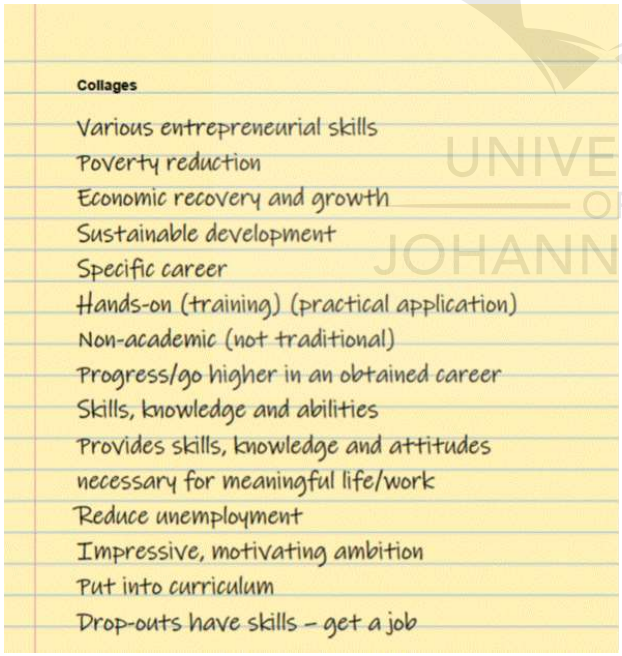


Figure 3.4: Summarised results obtained from the collages prepared by participants

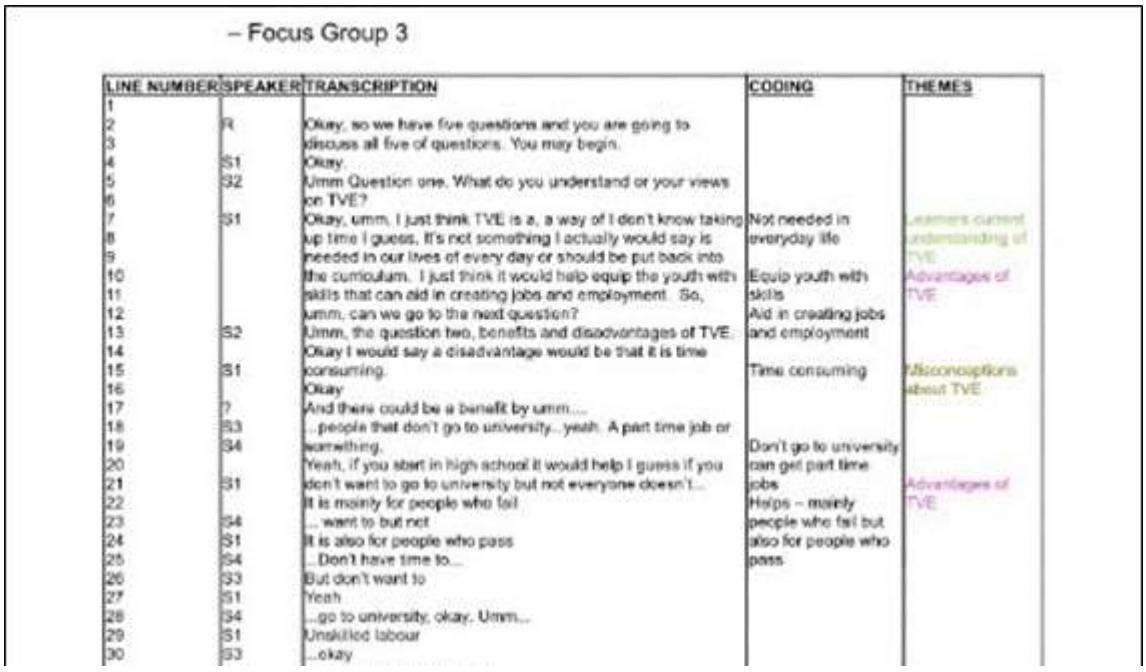
From the figures above, the key words found were then used to formulate themes as indicated in the examples below:

- Focus Group 1

LINE NUMBER	SPEAKER	TRANSCRIPTION	CODING	THEMES
1				
2	R	Okay. So, you all are going to answer these five questions.		
3		You are going to have a discussion about TVE. Don't worry		
4		about the phone. You guys just have your discussion. Okay,		
5		go.		
6	S1	Okay so what is your view on TVE?		
7		Anybody...view on TVE, okay, so my view on TVE is that	Equips youth with	
8		Technical Vocational Education helps equip the youth with	skills	Learners current
9		skills umm that can aid in creating jobs and employment. So,	Creates jobs	understanding of
10		it creates jobs and and and employment so what it is related	Employment	TVE
11		to various occupations, employment, its skills and its		
12		specialised in vocational courses. And so umm TVE in a	Help change	
13		school system can help change the perceptions of people	perceptions and	Advantages of
14		regarding TVE and the impact that it can have on your	society	TVE
15		society if it its implemented, if it is implemented in into the		
16		curriculum. So that is that is the view on TVE. What do you		
17		guys think is TVE?	Helps people	
18	S2	TVE helps people and it motivates people to to do better. It	Motivates people	
19	S3	gives them a chance to learn slower. It gives them a chance	Chance to learn	
20		to learn, to learn slower if like they are struggling, and they	slower – if struggling	
21		can like develop in their own time.	Develop in their own	Advantages of
22	S4	It helps them with skills that they might need.	time	TVE
23	S1	Yes definitely.	Helps with needed	
24	S5	...make them comfortable with what they are learning.	skills	
25	S1	Yes. So yes, so we, we mmm the first question is definitely	Comfortable with	
26		umm the view on TVE, so we have basically answered	learning	
27		everything that is about TVE. So, two.		Advantages of
28		Okay so benefits of TVE and disadvantages. Can anybody	Helps people	TVE
29		tell me what the benefits of TVE is?	achieve, get a job	
30	?	It helps people achieve... yeah (background noise).	Gives you valuable	

- Focus Group 2

LINE NUMBER	SPEAKER	TRANSCRIPTION	CODING	THEMES
1				
2	R	Okay, so		
3		(background noise)		
4		we are going to have a discussion on TVE. You have the 5		
5		questions don't worry about the phone recording, I want you		
6		to discuss these questions. Go		
7	S1	Okay... (clears throat)		
8	All	(Whispers) who is speaking, you speaking		
9	S1	It says what do you understand or what is your view on TVE?		
10		So, what I understand and what my view is on TVE is that		
11		it's the skills that are provided to umm learners or like...	Provided skills	Learners current
12		Unprivileged...	for underprivileged	understanding of
13	S2	...unprivileged whatever, umm it's the skills in a certain	learners	TVE
14	S1	occupation (doors closing in background) that they are		
15		equipped with so that in in the event that they have to drop		
16		out of school at any time they have something to fall back on	Fall back on	
17		like a career or something. It's like for example I will give an		Learners current
18		example to...		understanding of
19		...cooking		TVE
20	?	Yeah cooking or like home economics...		
21	S2	Home economics, exactly...		
22	S1	This will decrease, what is it called?		
23	S3	Unemployment	Decrease	
24	S2	Yes, this will decrease the unemployment	unemployment	Advantages of
25	S1	So, its jobs...		TVE
26	S2	...job creation (noise in background)		
27	S3	Yeah and umm (pause) and I also think that that that that		
28	S1	crazy		
29	R	It's a good thing.... Yeah		
30	S1	It is a good thing yes, like for example can I give my	Gardening skills	



– Focus Group 3

LINE NUMBER	SPEAKER	TRANSCRIPTION	CODING	THEMES
1				
2	R	Okay, so we have five questions and you are going to		
3		discuss all five of questions. You may begin.		
4	S1	Okay.		
5	S2	Umm Question one. What do you understand or your views		
6		on TVE?		
7	S1	Okay, umm, I just think TVE is a, a way of I don't know taking	Not needed in	Learners current
8		up time I guess. It's not something I actually would say is	everyday life	understanding of
9		needed in our lives of every day or should be put back into		TVE
10		the curriculum. I just think it would help equip the youth with	Equip youth with	Advantages of
11		skills that can aid in creating jobs and employment. So,	skills	TVE
12		umm, can we go to the next question?	Aid in creating jobs	
13	S2	Umm, the question two, benefits and disadvantages of TVE.	and employment	
14		Okay I would say a disadvantage would be that it is time		
15	S1	consuming.	Time consuming	Misconceptions
16		Okay		about TVE
17	?	And there could be a benefit by umm....		
18	S3	...people that don't go to university...yeah. A part time job or		
19	S4	something.	Don't go to university	
20		Yeah, if you start in high school it would help I guess if you	can get part time	
21	S1	don't want to go to university but not everyone doesn't...	jobs	Advantages of
22		It is mainly for people who fail	Helps – mainly	TVE
23	S4	... want to but not	people who fail but	
24	S1	It is also for people who pass	also for people who	
25	S4	...Don't have time to...	pass	
26	S3	But don't want to		
27	S1	Yeah		
28	S4	...go to university, okay. Umm...		
29	S1	Unskilled labour		
30	S3	...okay		

Figure 3.5: Illustration of data analysis process

Thereafter, 'Participants' current understanding of TVE' and the 'Advantages of TVE' (as viewed by the interviewees) were combined into Theme 1: 'Understanding TVE and its introduction into the school curriculum'.

The second combination was 'Why TVE should be incorporated into the curriculum', 'Reasons why learners believe TVE should be taken seriously' and the 'impact on society', which formed Theme 2: 'Misconceptions about TVE and its role in economic growth and employment'.

Theme 3 was formulated as 'The need to incorporate TVE into the curriculum'.

Figure 3.5 depicts how the participants' views and comments were captured and analysed. This made it easier to view the similarities between the different methods of data collection. Furthermore, similarities and differences were identified when comparing the answers of all participants.

3.4 DISCUSSION OF THE FINDINGS

Throughout this section the findings are discussed and the Grade 8 learners' perceptions on TVE in a school curriculum are explored in detail. The findings

explored in this chapter are based on the researcher's comprehension of the gathered information and are supported by literature in Chapter 2.

The information gathered was based on semi-structured interviews, which meant that there were pre-determined questions with probing where necessary, to explore Grade 8 learners' perception of TVE in the curriculum. It was observed that because of the initial TVE explanation workshop which was attended by the participants, they seemed less nervous to participate in the study as they seemed to have grasped the concept of TVE. This made it easier for participants to answer questions related to TVE being implemented in the Senior Phase curriculum.

The researcher is aware that the generated results may not be the same for all schools, therefore it cannot be generalised, but rather gives an overview of the Grade 8 learners' perceptions of TVE in the curriculum, specifically in this mathematics and science-focused school. However, their perceptions were worth observing as the same perceptions could potentially be observed in other similar settings.

Triangulation and a comprehensive analysis from the focus group interviews, each participant's semi-structured essay, as well as the TVE collages, suggest that participants do understand TVE and were able to give their perceptions regarding incorporating TVE in the school curriculum.

3.4.1 Theme1: Understanding TVE and its introduction into the school curriculum

Bronfenbrenner's theory on human development states that the individual/learner is influenced by the various systems and relationships in their lives (Leonard, 2011). This therefore influences their perceptions from those passed on from family/community to a more individualised perception.

3.4.1.1 Evidence from Focus Group interviews

Throughout the focus group interviews it was noted that the participants did not all share and/or have the same understanding of TVE; however, many of them did share similar views on its introduction into the curriculum.

In Focus Group 1's interview, Participant 1 (FG1-P1) explained that TVE "*helps equip the youth with skills that can aid in creating jobs and employment*" (Lines 7-8). FG-1-P6 stated that "*you can use those skills to get a job*" (Line 170). This indicated these participants perceptions' of TVE being implemented in the Senior Phase curriculum in a positive manner; with these statements it can be seen that they would use the TVE skills learnt in school to help grow their skill set.

In Focus Group 2, participants' perception of TVE was captured as something for the underprivileged, skills in a certain occupation, a means of job creation, and as being equipped in a specific technical or vocational subject (FG2-P1, FG2-P2, FG2-P3, FG2-P4). Funk (2004) states that the aim of TVE is to reduce the shortage of skills, and increase skills development among youth, high drop-out rates, and the extremely high unemployment rates. It appears that the learners have understood and come to the same conclusions.

Similarly, FG1-P6's understanding of TVE was that he could (with the help of TVE in the school curriculum) start his own gardening business and "*I can be a gardener and do the gardens and the gardens of people*" (Line 203-204), "*you started just by doing the gardening alone but now it's spreading … because you are teaching more people*" (Lines 234-237).

FG2-P1 and FG2-P2 believed "*that it's the skills that are provided to umm… learners or like underprivileged*" (Lines 10-13). FG2-P1 and FG2-P2 went on to say: "*it's skills in a certain occupation that they are equipped with so that in the event that they have to drop out of school at any time they have something to fall back on like a career or something, … for example … cooking or like home economics*" (Lines 13-20). FG2-P4 added that "*it's kind of a backup to people that don't understand in school"* (Line 37).

TVE helps to achieve higher levels of productivity, as the youth will be skilled, able to do jobs faster and with fewer mistakes, ensuring more profitable outcomes (IAB South Africa, 2012). FG1-P3 and FG1-P5 also felt that *"TVE helps people and it motivates people to do better. It gives them a chance to learn slower if they are ...*

like ... struggling and they can like develop in their own time" (Line 17-20), FG1-P4 added, *"it helps them with skills that they might need"* (Line 21) and that *"makes them comfortable with what they are learning"* (Line 23). FG2-P1, FG2-P2, FG2-P3 all indicated that TVE will help decrease unemployment. FG3-P1 and my discussion concluded that TVE can help equip the youth with skills for job creation, one can work their way up to be their own boss/own their own business one day by using the technical or vocational skills that they were taught. FG1-P1 noted that *"TVE in a school system can help change the perceptions of people regarding TVE and the impact that it can have on your society if it is implemented into the curriculum"* (Lines 11-14). This was a powerful statement, as it related directly to the research question.

TVE can therefore help to open various doors of opportunity and possibilities for learners; it can help stimulate new ideas, jobs, and personal growth/success (IAB South Africa, 2012). In addition, other participants see TVE as: FG1-P4 *"it helps people achieve"* (Line 29), FG1-P5 *"it helps you get a job"* (Line 30), FG1-P4 *"gives you valuable life skills"* (Line 31), FG1-P6 it can also help one with gaining *"self-awareness and self-esteem. It basically makes you feel better about yourself. … not only about school work, you are learning other skills as well"* (Lines 34-36). Likewise, FG1-P3 *"it gives you a chance to have a good life"* (Line 109). FG1-P2 says that it "*gives you that chance to ... gives you a second chance",* meaning that if one's academic marks are not up to standard that learners at least have TVE skills *"to fall back on"* (FG2-P1). Participants' perceptions imply that TVE should be included in the senior phase curriculum.

FG1-P1 and FG1-P6 went on to say that *"TVE [can] help them through their life, to build the steps like the ladder towards success"* (Lines 129-131). FG2-P4 stated that TVE *"gives you valuable skills"*; however, FG1-P3 says that *"if they are struggling with something as well TVE can also help them"* (Lines 138-139). FG1-P1 and FG1-P6 as well as various other participants in the other focus group interviews indicated that *"TVE is an option for everybody"* (Lines 145-146), but FG1-P6 felt that *"it can be for disabled people, anybody, just helps them put a ... and anchors you to the ground and grows you up"* (Lines 150-153), FG1-P6 *"it helps to have those skills"* (Line 166), and as FG1-P1 said, *"it gives you a lot of skills and things you can do by hand"* (Lines 182-183), which can be supported by the information given in Chapters 1 and 2.

In changing the perceptions about and understanding of TVE, Aring (2011) states that TVE is one of the most important tools for developing young people's skills. FG3-P1 did not share this view, as he felt that "*it's not something I actually would say is needed in our lives of everyday or should be put back into the curriculum*" (Lines 7-9). Clearly, TVE means something different to and is understood differently by each participant; this could be that perceptions of TVE were imposed on learners by previous generations, or that some learners feel that TVE is not needed or that it is not understood fully by all.

3.4.1.2 Evidence from essays and collages

Throughout the essays and the collages there was sufficient evidence that these Grade 8 learners' perception of TVE included aspects such as TVE being a skill, that it would help decrease unemployment rates, that it creates various job opportunities, that it can help the economy to grow, that it includes motivation, beneficial, manual/hands-on activities which stray away from the traditional academic route, and that it could help reduce poverty and create a sense of sustainable development.

Participants also stated that it provides individuals with the skills, knowledge and attitudes to have a meaningful life and career, TVE helps with progression in one's career, (to go further) it is impressive, motivating and ambitious, and could prevent crime. Various types of entrepreneurial skills (such as: cookery, woodwork, bookkeeping, health care, computer/IT, first aid, fashion design, and others) were demonstrated in the collages, indicating that participants understood and knew what TVE is.

When exploring the essays, the following statements stood out in regard to evidence on the above listed perceptions of TVE:

> *"specific skills which create a job"*
> *"job opportunities"*
> *"helps equip the youth with skills that can aid in creating jobs and employment"*

"serves as motivation and there will be less crime"

"as they have jobs it will prevent them from committing crime"

"TVE also serves as a pool of motivation"

"huge benefit to our economy because it will entail local productivity"

"more wages and salaries and more tax to pay leading to economic growth"

"education is considered the key to success, technical vocational education is the key that can alleviate poverty, promote peace, conserve the environment, improve quality of life for all and help achieve sustainable development"

Figure 3.6: Examples of participants' collages

The essays and collages provided me with evidence that indicates participants' understanding of TVE, which supports and triangulates with the focus group interviews.

3.4.1.3 Supporting literature

TVE helps to equip the youth with skills that can aid in creating jobs and employment (IAB South Africa, 2012). TVE skills, such as hairdressing, IT, cooking, photography, nursing, plumbing, carpentry, etc., are but a few that can help to create a more skilled community with job opportunities for many more individuals. TVE is a source of skills acquisition (ADB, 2009) and is historically defined as “education for work”. It has evolved from being focused on principles related to entry-level workers to now include adult training skills, preparatory courses for admission to higher educational institutions, post-secondary options and programmes (Zirkle & Martin, 2015).

TVE can be used to promote employability, strengthen one’s workforce, and create a variety of professions (Adkins, 2017; European Training Foundation, 2017), through implementing TVE in the school curriculum, as it would reach many more individuals and it would be more beneficial to the economy. TVE could set South Africa onto its next stage of economic development (Aring, 2011), reducing poverty, unequal income distribution, and producing innovative ways in which to create jobs. These are aspects that deem it favourable to implement TVE into the Senior Phase curriculum as it can help to contribute to the above-mentioned aspects in South Africa.

There are many views on TVE, such as it being able to provide skills to various individuals to help the transition into the world of work, to re-join a workplace after a period of absence, improve skills in the chosen field or move into a new one, as TVE covers a wide range of different courses and qualifications (Studies in Australia, 2018). These are all skills/areas from which learners in a school setting can benefit.

According to UNESCO-UNEVOC (2014), the South African education system aims to enhance learner mobility and progression, which in turn satisfy human resource needs. Its core mission is to provide individuals with intermediate to high-level skills that aid in laying a foundation for higher education, and to ease the transition from a schooling environment to the world of work (UNESCO-UNEVOC, 2014). These can

all be viewed as beneficial for South Africa's economy as well as for skills development opportunities.

It is therefore evident from the above data that many of the participants understand what TVE is and have various views that match the literature discussed in this research, as it emphasises the fact that TVE can help our economy to grow and instil various skills in our youth, thus making it worth looking into.

3.4.2 Theme 2: Misconceptions of learners about TVE and its role in economic growth and employment

It was clear that the participants had various misconceptions about TVE and its value. Participants shared their misconceptions about TVE, which are mentioned below. Various misconceptions are derived from previous knowledge or generational views (the Microsystem) that were passed down from misconceptions about TVE and its role in economic growth and employment from families and others, which then influence what participants feel and how they perceive something, once again supporting Bronfenbrenner's bio-ecological theory on human development of all systems being intertwined (Landsberg, 2011).

3.4.2.1 Evidence from Focus Group interviews

According to participants, there are several misconceptions about TVE, such as that TVE is only for learners who fail or who are unable to perform well academically, for learners whose parents cannot afford fees; FG2-P2 *"maybe it's some parents can't afford to pay school fees"* (Line 128), FG3-P1 *"it is time consuming"* (Lines 14-15), FG3-P1*"needs also ... someone that is really committed"* (Lines 36-37). FG2-P2 felt that one may *"not be as skilled as requirements for the job"*, i.e. not skilled enough, FG2-P5 believes that it is *"not such a professional career"*. FG2-P3 feels that there are so many people doing it *"then end up with a whole lot of people doing the same thing"*, which would not be ideal or economical. This corroborates the misconceptions about TVE.

On the other hand, some participants felt that TVE might not be the correct way of teaching them skills or qualifications that are needed in the world of work, as there

may be a lack of or inefficient knowledge; FG2-P2, *"get a job because they maybe not be as skilled as requirements for the job, maybe it takes too much time"* (Lines 80-82), FG1-P6 *"most jobs now they need, they want you to have quali ... certain qualifications … and if you don't have that it is hard for you to get equipped"* (Lines 64-68), FG1-P1 *"unemployment"* (Line 45).

Similarly, FG3-P1 stated that TVE is *"for those people that are failing, it's an option for them to have a skill so that after school if they cannot afford to go to university, if they cannot get the good marks that they need to get into university that they already then have a skill that they can find a job with"* (Lines 85-89). This is a very common misconception that needs to be rectified. TVE should be promoted as skills development courses for all, not just for learners who seem to need it. However, both views should be considered when considering the participants' perceptions about TVE in the curriculum. Furthermore, the misconceptions made regarding TVE only being for learners who are failing, have learning barriers and/or disabilities or drop out of school, that it is seen as a mere backup plan (by turning them into entrepreneurs) for those learners, the lack of TVE information and knowledge among the youth or imposed views from generation to generation, can be linked to the misconceptions about TVE and its role in economic growth and employment, or the limitations that participants have with regard to TVE.

TVE in a school system (i.e. the Senior Phase curriculum) can go a long way to change these misconceptions and perceptions of individuals regarding TVE and the impact that it can have on our skills development and economic growth if it is incorporated correctly into the curriculum.

3.4.2.2 Evidence from essays and collages

There is still a misconception that TVE is used as a back-up plan if one fails or does not make it to university. Several learners also indicated that it would benefit learners who drop out and only a few initially indicated that it should be for all learners:

> *"even if students have learning difficulties this will boost their confidence and they will be able to get a job"*

"few students who do not have an interest in a school work, these courses help them to develop themselves for a skill which they could use as a trade in their lives"

Other learners argued that TVE is:

"an opportunity for a student to qualify for further studies at a university of technology"
"comes into the school system and will motivate learners about not giving up"
"TVE helps equip the youth not only with vocational skills, but with a broad range of knowledge, skills and attitudes that are necessary for meaningful participation in work and life"

These views are consistent with the focus group interviews conducted, and the data has been triangulated with all forms of data collection.

3.4.2.3 Supporting literature

In reforming our education system to prepare learners to face the challenges of the 21st century (Sarbib, 2005), we need to encourage, support, and teach learners that technical skills are not only for learners with bad grades and/or disabilities. This is also evident as, according to IAB South Africa (2012), TVE is perceived as "an option for losers" (IAB South Africa, 2012). It is this very perception that needs to change, as TVE is a form of education that aims to prepare the youth for employment and create jobs (IAB South Africa, 2012). It can be noted from the above and Atkins and Flint (2015) that South Africa's youth generally tends to consider TVE as a negative aspect.

In addition, TVE should be seen as more than just for learners who leave school or who are failing; TVE should be seen as diverse and inclusive to all: FG2-P1 *"it should be for everybody"* (Line 167), as this could be seen as the first step towards ensuring that the educational imbalances are eliminated through the provision of equal education for all, and could serve to close the current skills gap in the country (DBE, 2016).

3.4.3 Theme 3: The need to incorporate TVE into the curriculum

Theme 3 indicated the need to incorporate TVE into the curriculum. Participants had different views; some felt that TVE should be included into the curriculum while others were not certain. Bronfenbrenner indicated that a ripple effect occurs when things change in an individual's system. By implementing TVE into the Senior Phase curriculum, while the participants would have nothing to do with the initiation or policy inclusion of TVE in the curriculum, whatever happens would affect them directly, thus supporting the bio-ecological theory of human development by Bronfenbrenner (Donald et al., 2010, p. 41).

3.4.3.1 Evidence from Focus Group interviews

TVE should be incorporated into the curriculum to help expand our skills and productivity, and participants had the following reasons why TVE should be incorporated into the curriculum: FG1-P1 *"so that we can help learners that [are] actually weak at present like not everyone is equipped to actually know everything"* (Lines 76-77). FG2-P1, FG2-P2 and FG2-P3 agreed as they indicated that it can help people. FG1-P6 views it as a booster: *"we can put it in the curriculum to … it can give them a boost, give them a chance in life, give them a future. Help them to succeed in life"* (Lines 80-85), FG1-P6 *"build them, build their structure and help them to succeed"* (Line 87). FG2-P1, FG2-P2 and FG2-P3 touched on the TVE subjects, ones that are enjoyable and likeable, as this would be a nice aspect to have in the curriculum.

Including TVE in the curriculum, according to FG1-P1 *"will also give more knowledge of things that aren't normally at school"* (Lines 96-97), FG1-P6 to *"explore more things"* (Line 100), FG1-P1 *"you can gain skills to do more things with your hands and stuff"* (Lines 101-102). FG1-SP2 stated that *"it motivates you a lot"* (Line 106), FG2-P5 *"to help people"* (Line 121), FG2-P2 *"some learners may not enjoy the subjects they normally do at school and they want to do more because it's what they like"* (Lines 124-125). Thus, TVE subjects could help them to find that balance or interest in school. FG2-P1 views TVE as beneficial, *"if children had to drop out of school"* (Lines 134-135), then they would at least have skills which they could use to

help them find a job. FG3-P1 and my discussion lead to talking about TVE being a means of skills development, skills for job creation; it also touched on the concerns of success and how it would be incorporated into the curriculum as it would be a huge benefit for learners and the economy if it was in the curriculum.

According to other participants, TVE should be taken seriously and implemented in the Senior Phase curriculum as it could be used to teach a wide variety of people skills and could possibly help them to start their own businesses: FG1-P6 "*because you are teaching more people"* (Line 237), FG1-P1 *"I could maybe start a garden business"* (Line 202), FG1-SP4 *"you can use those skills to get a job"* (Line 170). FG2-P1 *"like if they equip gardening skills or something that like working with flowers"* (Lines 31-32), FG2-P1 and FG2-P2 *"they may like hairdressing, hairstyling or ... or baking, designing … or home economics"* (Lines 144-147), then learners could use these skills in the future, by studying further, by getting a job in that field or even by starting their own businesses. This indicates a basis that TVE is not just for 'losers'; it can be a great 'booster' for learners who want to become young entrepreneurs.

Thus, TVE should be taken seriously and implemented in the Senior Phase curriculum as it could help to revamp our skills acquisition among the youth, help the economy to grow and overall provoke a sense of life-long learning individuals.

In addition, many of the participants had questions regarding TVE, such as FG1-P1 *"is it only for people who fail or is it an option for others?"* (Line 121) (this is the perception of many that TVE is only for learners who fail, which needs to be reconstructed into a more positive and inclusive perspective), FG3-P1 *"how do you get this project going? Like from a school? How?"* (Lines 276-277). There are various unanswered question around the implementation of TVE in the Senior Phase curriculum.

FG3-P1 inquired about various other questions such as *"is TVE only in South Africa?"* (Line 260), *"when you study TVE afters ... are you the boss of yourself or do you have a boss for you?"* (Lines 171-172). Questions such as these suggest that further research needs to be done on how exactly TVE would work in schools; would

learners be able to start their own businesses/would they only be able to work for someone, etc., FG3-P1 *"do we have companies that are actually like also trying to contribute to this project?"* (Lines 27-299). Similarly, to answer these questions, further research should be conducted to determine which companies would participate in the TVE programme and which would be willing to help or sponsor training or let learners do practical hours at their companies.

TVE in the curriculum can have a great impact on society as it would help to develop skilled youth; it can help *"people that are not doing well in school"* (Lines 124-125), FG1-P1 *"people who are actually doing quite well in life, they can boost it even more to be like even better you know and maybe when they get even more better they could help the other people"* (Lines 133-136). Another participant explains how her grandmother uses a TVE skill to make money by rendering a service to people all over the world. The perception that individuals have about TVE needs to be updated and upgraded; it needs to be seen as a skilful way of training our youth, improving our skills development, growing our economy and decreasing our unemployment rates.

The discussion between the researcher and FG3- P1 also touched on aspects such as TVE being an option for all: *"I like that because what we are trying to do is to steer away from only an option for people who are doing bad. We want it to also be an option for those who are doing good … who are passing in school, who do have other options"* (Lines 108-112). This indicated that FG3-P1 was curious about TVE and broadening his perception of what he thinks TVE should be.

Some participants indicated that they believe TVE has an impact on society in the following manner: FG3-P1 *"skills … help our economy grow"* (Lines 214-215), FG3-P1 *"and if we do it this way and maybe ten people get jobs … that way more people have jobs, more people have money to buy things and the economy then grows from there"* (Lines 227-229). These participants thus emphasised that TVE could help with skills development among the youth, which in turn would possibly help the economy to grow, which supports the literature gathered in this study.

3.4.3.2 Evidence from essays and collages

The above-mentioned reasons for implementing TVE into the Senior Phase curriculum were further triangulated with the essays and the collages, where various participants indicated that TVE should be incorporated into the curriculum.

In addition, participants stated that TVE was the key to alleviating poverty and crime, as it would help to promote an improved way of life by instilling various skills in learners, which in turn would increase one's *"self-awareness, self-esteem, strengthen interpersonal, communication and entrepreneurial skill".*

TVE should therefore be implemented in the schools' curriculum in order for all to benefit to the highest degree.

3.4.3.3 Supporting literature

Every country has different levels of manpower and skills needs. All economies, including developing and developed countries, will always need people with vocational skills. TVE can be seen in some of the countries mentioned below (a short recap from Chapters 1 and 2 to help emphasise the findings).

Other countries that have implemented TVE had the following to say: India's TVE programmes include creating "basic work-centred" (Kotamraju, 2014; Sirohi, 2012). Singapore believes that for economic and social progress, TVE is vital for human resource development and that it is imperative to raise the quality of skills development and vocational training in a country in order to grow (SCP, 2018). By implementing TVE in the school curriculum, we are trying to change the belief that TVE is only for weaker learners.

Botswana's need for TVE and skills development was introduced by the government in order to diversify the education system, decrease unemployment and introduce new skills development systems (UNESCO-UNEVOC, 2012c). This is aimed at achieving the country's national goals to increase the percentage of skilled workers (Sivanandam, 2017). Canada's education system provides learners with excellent learning prospects as well as essential skills to enter the labour market. These are

aligned with the labour market needs for different populations and age groups (UNESCO-UNEVOC, 2017b). In Australia, TVE is important to Western Australia's economy for the development of the State's workforce (DTWD WA, 2018). This system enables students to gain qualifications for various skills for different levels of employment to equip them for the demands of the workplace (Educations, 2018; OECD, 2008).

By looking at the above-mentioned countries and the process, impact and outcomes that TVE has on their societies, it helps to support the perceptions stated by the Grade 8 participants, some of whom raised various issues or questions for further research.

Academic education is generally considered as the learning and developing of various skills, knowledge and analytical concepts, whereas TVE develops craftsmanship, practical experience and reality-based skills. However, the difference in the education training definition cannot be a distinct one, as each phase of education and training intertwines with the other.

Chapter 2 supports these quotes, as it states that TVE aims to equip people of all ages with skills, competencies, knowledge and useful know-how required in specific occupations or, more generally, in the labour market (European Training Foundation, 2017). Occupations where you can learn with some basic training or on-the-job training can be seen as vocational skills (Valdez, 2014). However, if TVE is implemented in the school curriculum, more youth will be able to benefit from this type of skills acquisition. There is also an increasing need for recognition of TVE skills which are crucial to enhance contributions to decent employment, poverty reduction and social inclusion (Ifundi, 2016). The development of job-related skills forms part of the country’s human resource strategies, economic growth and poverty-reduction strategies, which are vital in South Africa, as we have high unemployment and poverty levels (Ifundi, 2016).

It is evident from the above that there are various reasons why TVE should be incorporated into the curriculum, such as that it can help to open various doors of opportunity and possibilities for learners, help stimulate new ideas, jobs, and

personal growth and success (IAB South Africa, 2017). TVE can increase career development opportunities (Interskills Training, 2017) and can help to achieve higher levels of productivity, as the youth will be skilled and thus be able to do jobs faster and with fewer mistakes, ensuring more profitable outcomes (IAB South Africa, 2017).

In addition, Aring (2011) further states that TVE is one of the most important tools for developing young people's skills. South Africa needs to invest in resourceful job training which can take place easily through TVE in the Senior Phase curriculum. TVE can create various opportunities for the youth to acquire knowledge, skills, and values for lifelong learning, and the curriculum needs to address the needs of learners and their societies (Venn, 1964).

This could set South Africa onto its next stage of economic development (Aring, 2011), reducing poverty and unequal income distribution, and producing innovative ways in which to create jobs. TVE prepares learners to face challenges and adversities and to be resilient. The importance of Vocational Education in schools has been identified as the link between education and employment (OECD, 2010). The link between education and employment is a vital one to make, as it facilitates the transition from school to the world of work. TVE is the first step towards ensuring that the educational imbalances are redressed and equal education for all is provided and could serve to close the current skills gap in the country (DBE, 2016).

3.5 CONCLUSION

This chapter explores the findings of the study, through an in-depth study of the raw data. Patterns were identified, and the findings were coded and categorized into themes intended to answer the research question. Data was analysed and explored, which was supported by literature from Chapter 2, as well as by quotes from the interviews with the participants. Furthermore, the data sets were triangulated, and three main themes arose:

1. Understanding TVE and its introduction into the school curriculum;

2. Misconceptions of learners about TVE and its role in economic growth and employment; and
3. The need to incorporate TVE into the curriculum;

which linked to answering the research question:

What are Grade 8 learners' perceptions of Technical and Vocational Education in the curriculum?

Chapter 4 provides a summary of the study, its limitations, implications and recommendations for future research.

CHAPTER 4: SUMMARY OF FINDINGS, LIMITATIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

The purpose of this chapter is to provide a summary of the research procedures and the research findings that resulted from the research question:

What are Grade 8 learners' perceptions of Technical and Vocational Education in the curriculum?

In addition, recommendations, limitations and the strengths and contributions of this study will be discussed in this chapter.

4.2 SUMMARY AND IMPLICATIONS OF FINDINGS

As stated above, the focus of this study was to explore Grade 8 learners' perceptions about TVE in the Senior Phase curriculum, in a mathematics and science-focused school context, as it is expected to have a significant impact on the learners, their school and the surrounding community. A qualitative research approach was used to investigate and explore the perceptions of Grade 8 learners regarding TVE in the Senior Phase curriculum. A purposive sample of 20 Grade 8 learners (i.e. a small class) was used in order to explore the research question in-depth. Three types of data were collected: a focus group (with 6 or 7 learners each making up three (3) focus groups), essays and collages. Themes and findings were identified and analysed using the thematic analysis process, as stated in previous chapters. Ethical procedures and measures of credibility (by constant reflection on whether the study measured what was intended and was enhanced by means of triangulation of data collected), trustworthiness, confirmability (researcher's perceptions were not imposed on the participants, rather, focus was placed on the participants' perceptions) and dependability were adhered to in order to ensure consistency in this study.

It was interesting to hear the views on TVE coming from more high-functioning participants. This school was chosen in view of the research topic and the apparent need to change the perception from a negative one, such as that TVE is only for

‘losers’, to a more positive perception, as the participants were all high-functioning learners. The following aims explain how the objectives were met.

The aim of the study was to explore Grade 8 learners’ perceptions of TVE in the curriculum. Learners’ perceptions were explored by means of interviews and then coded and themed. There were various views on what TVE means in terms of being in the curriculum and for which type of learners. Many felt TVE is a great way to generate skills as well as to help learners create various careers that could turn into jobs. Other participants viewed it as a waste of time, time consuming and only for ‘losers’ or learners who are struggling at school or have a disability. These perceptions link to what literature also states regarding the concept of TVE. Learners’ and society’s misconceptions of TVE are often created by a lack of knowledge and the inability to view individuals’ capabilities in a specific context.

In an attempt to describe Grade 8 learners’ perceptions of TVE in the Senior Phase curriculum, it was clear that learners had different views but when these views were categorized, they seemed to come from two similar directions, the first being that of TVE being for losers, learners with bad grades, slow learners, drop-outs, or learners with disabilities. The second was that of TVE being inclusive, a great way to create jobs and skilled individuals.

Learners’ negative perceptions were shaped by what they had heard from society, their community or were based on what their families told them about TVE. These perceptions were based on the Apartheid era and the injustices caused to many individuals in previous years. However, in today’s time we need to reconstruct this view that individuals have regarding TVE being only for losers and transform it into the view that it is a creative and innovate way to help redress the past, give everyone the same opportunities and generate a skilled youth, create jobs and decrease unemployment in South Africa.

Subsequently, in order to reduce, and eventually erase, the negative perceptions that individuals have of TVE, their attitudes and perceptions need to be transformed. According to Farrell (2009), this could be done by modifying the way things are done in society and the way we associate social relationships as well as changing attitudes

(Farrell, 2009, pp. 65-67). This simply means that we need to correlate it with a new and more positive outlook on TVE. This entails addressing the stigma surrounding these learners in society by integrating them in a way that 'normalises' TVE, rather than highlighting the differences thereof or making it only an option for learners with special needs and/or disabilities.

The above emphasises the consequence of having a perception regarding TVE and offers a solution to address the attitudes of people and, in turn, that of society. The term 'inclusive education' is clear: it aims at providing services that will include all learners and not exclude them. It is therefore important to understand that the "negative attitudes of school staff and others can hinder the vision and application of inclusion. Negative attitudes about the capabilities of learners could reduce expectations of their progress and development by showing that we believe in their capabilities and that we are willing as educators to support and shape their talents" (Farrell, 2012, p. 81). Sen (1992, p. 40) goes on to say that a 'capability approach' views one's capabilities as opportunities and freedoms that one will have to achieve. With regard to TVE, it can also be seen as exploring learners' capabilities, which in turn would provide them with various opportunities. This has a ripple effect on them internally and externally, as well as an effect on the community and economy around them. Examining the participants' perceptions about TVE in the curriculum was accomplished by interpreting the data gathered and finding the links between what the participants said and what literature says.

It is evident from the data collected that all the participants of this study had a good basic understanding of TVE. Various perceptions were identified, thus indicating that the study was successfully fulfilled in answering the research question:
What are Grade 8 learners' perceptions of Technical Vocational Education in the curriculum?

All participants' perceptions were important to consider for the research question to be answered in a way that would ensure the satisfactory completion of this study.

Three themes were extracted, namely:

1. Understanding TVE and its introduction into the school curriculum;
2. Misconceptions of learners about TVE and its role in economic growth and employment; and
3. The need to incorporate TVE into the curriculum.

The first theme relates directly to the research question.

After triangulating the data sets, it was evident that participants agreed and had the following general perceptions on TVE in the curriculum:

- TVE in the school curriculum can help change people's perceptions of TVE and the impact it can have on society;
- It helps with skills development in youth and reaching a wider range of people;
- It can help create jobs;
- It can be an alternative to normed university studies; and
- It should be an option for everyone to help them succeed and help our economy to grow.

In addition, aspects such as the negative attitude towards TVE and the perception that TVE is only an option for learners with special needs and/or disabilities need to be altered. This can be achieved by implementing TVE in the curriculum and showing society that TVE can be for everyone instead of just for learners with special needs and/or disabilities.

This correlated with the literature described in Chapter 2, as it discusses various perceptions of TVE as well as the inclusion of TVE in the curriculum and covers parts of the 'gaps' in the information/research around TVE being in the curriculum. The findings further concluded that the three (3) data sets used were a positive experience for the participants; they enjoyed it and it allowed them to explore their perceptions through different methods. It opened ways for them to be critical, and challenged and broadened their perceptions of TVE.

4.3 RECOMMENDATIONS BASED ON THE FINDINGS

Through the exploration of the themes that were deduced from the data collection, it is evident that there are some negative perceptions surrounding TVE. These negative perceptions could have been passed down from previous generations as they were not just the participants' perceptions. Leonard (2011) states that it resonates from the interaction of the broader system, namely the community and the parents, which fall in line with Bronfenbrenner's (1979a) ecological system mentioned earlier in the research study.

From the above-mentioned findings, the following recommendations are made in order to help implement TVE in the curriculum:

- Teachers would need training in TVE subjects;
- These training sessions or training workshops could be implemented by the Department of Basic Education in collaboration with various teachers who already have knowledge or the 'know-how' of a TVE subject(s);
- Learners should be informed about TVE and what it entails, before they start making choices of which TVE courses to follow;
- TVE implementation could be incorporated into legislation and policy statements; and
- Further research should be initiated and completed to explore various other aspects of TVE.

This list of recommendations is not the only recommendations that could facilitate the implementation of TVE in the curriculum but are mere suggestions of where to begin.

4.4 LIMITATIONS OF THIS RESEARCH

A core challenge identified was that of familiarity; when a participant is familiar with the researcher, they might be more open, or they could withhold information or even over-compensate by providing information that they think the researcher wants to hear that does not necessarily portray their beliefs.

This research was conducted with Grade 8 learners in a mathematics and science-focused mainstream school in Johannesburg, which consisted of 20 participants.

Exposing all Senior Phase learners to the study would have broadened the findings and exposed participants to their perceptions of TVE in the Senior Phase curriculum from Grade 7 to 9.

4.5 STRENGTHS AND CONTRIBUTIONS OF THIS RESEARCH STUDY

This study explored the perceptions of Grade 8 learners on including TVE into the Senior Phase curriculum. This was important to explore, as it would have an impact on learners in this grade and age category. According to the findings, implementing TVE in the curriculum could be beneficial for the learners, the community and their families, as the learners would be acquiring new skills which could be used for further studies or to create jobs or even to get jobs, thus helping the economy to grow and skills shortages to decrease.

The main argument of this study was aimed at exploring Grade 8 learners' perceptions regarding TVE in the Senior Phase curriculum, with the intention to create skilled youth by means of innovative ways in which to do so. It was evident that many learners believe in the TVE system; however, some are not sure, and others need more information/specifics to understand TVE properly. It also raised various questions as to the how, the when, and the specific details of how TVE would work in a curriculum, the process, etc., which could serve as the basis for further research to be conducted.

Another aspect that could add to future research is that little is known among participants about TVE, as it is mostly seen in our country as skills that are obtained after leaving school. There is a lack of evidence showing how TVE is implemented or should be implemented in the Senior Phase curriculum in a mathematics and science-focused school and how TVE can help learners in a school setting, before they reach universities, universities of technology or leave school to enter the world of work. Therefore, this study was needed to explore Grade 8 learners' perceptions in regard to TVE in the Senior Phase curriculum at a mathematics and science-focused school. The DHET (2013) aims to aid in constructing a fair, non-racial, non-sexist, unbiased, and democratic South Africa, which can also be seen as aspiring goals of

the Department of Basic Education (2014) (DBE, 2018; DHET, 2013). These shared goals could be used to help implement TVE in the school curriculum.

Lastly, the three (3) sets of data collection, namely focus group interviews, essays and the collages, would be strengths due to them allowing the data to be triangulated. This increased the credibility of the research findings and confirmed that there were similarities throughout the data sets. In addition, the ethical considerations were adhered to during the research study to protect the interests of the participants and provide them with a level of anonymity, confidentiality and trustworthiness.

4.6 RECOMMENDATIONS FOR FURTHER RESEARCH

The following recommendations are made for further research:

- Research should be undertaken regarding support programmes developed by District-Based Support Teams or School-Based Support Teams and the extent to which they are implemented in schools where TVE subjects will be learnt/trained.
- Further research could determine the necessary resources and skills that teachers would need to acquire in order to teach TVE subjects:
    - The process, criteria and evaluation of getting TVE implemented into the curriculum;
    - Various aspects of TVE in the curriculum, such as qualification status, business owner statutes, companies that would partner with schools in order to help with training, practical hours, etc. (all finer details of TVE in a school setting, such as how exactly TVE in schools would work, would learners be able to start their own business/would they only be able to work for someone else, etc.).
- Research could determine which companies would form part of the TVE programme or would be willing to help, sponsor training or let learners do practical hours at their companies; and concerns on TVE's impact on society would also need to be researched further.

This research study has the potential to initiate further research of other Grade 7/8/9 learners in various mainstream schools with a bigger sample group in different areas/communities to help implement TVE in the Senior Phase curriculum.

The South African curriculum (i.e. Curriculum Assessment Policy Statements - CAPS) could look at what other countries have done to implement TVE in their curriculum which could assist the implementation process in South Africa's curriculum, for example, introducing some sort of TVE/preliminary TVE in earlier grades which would, in turn, grow into a proper, more intense or more involved TVE which is associated with choices in Grades 7 to 9.

According to the Department of Basic Education (2012), CAPS is:

> *"A National Curriculum and Assessment Policy Statement is a single, comprehesive* [sic]*, and concise policy document, which has replaced the Subject and Learning Area Statements, Learning Programme Guidelines and Subject Assessment Guidelines for all the subjects listed in the National Curriculum Statement Grades R – 12"* (DBE, 2012; 2018).
>
> *"The* National Curriculum Statement Grades R-12 *represents a policy statement for learning and teaching in South African schools and comprises the following:*

- *"Curriculum and Assessment Policy Statements for each approved school subject as listed in the policy document* National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12;
- *"The policy document* National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12 *which describes the number of subjects to be offered by learners in each grade and the promotion requirements to be obtained; and*
- *"The policy document* National Protocol for Assessment Grades R – 12 *which standardises the recording and reporting processes for Grades R – 12 within the framework"* (DBE, 2012; 2018).

The Department of Basic Education could consider including TVE subjects, and recording and reporting process for each TVE subject to show promotion, as is done for the language, mathematics, and other non-TVE subjects, thus including TVE subjects, requirements and promotions for each subject the same way as that of non-TVE subjects. This would help to make TVE inclusive for all learners from all backgrounds, races, and genders.

4.7 CONCLUSION

This chapter provided a summary of the study's findings and made recommendations based on the research findings as well as for future research. It further highlighted some limitations of the study, while the strengths and contributions of the study were acknowledged.

This study contributed to exploring, examining and determining the perceptions of Grade 8 learners of TVE in the Senior Phase curriculum. Although there has been little progress in TVE being implemented into the Senior Phase curriculum in South Africa, more needs be done at an elementary level. The level of support from all associated stakeholders could be advantageous to a learner who is still developing and, even more importantly, to a community that is yet to embrace learners without bad grades and/or disabilities who display interests in TVE as a career choice. Therefore, the significance of the interaction of all Bio-ecological systems (Bronfenbrenner, 1994) is essential to help shift the perception of TVE and to help implement TVE in the Senior Phase curriculum, as one person's positive perception can help to implement great change.

There were three themes identified from the findings that showed the importance of one's perception; the alteration and change of that perception is important to learn and grow. The data sets helped to demonstrate a deeper understand of TVE that the participants had, and it also indicated that TVE is seen as a negative aspect among some people as this perception has often been passed down from generation to generation.

Furthermore, I hope that this minor dissertation may contribute to helping the various stakeholders (i.e. Department of Basic Education, schools, etc.), especially within the South African context, in implementing TVE in the Senior Phase curriculum, and that further research is conducted, as this research could be a good starting point for further research. I believe that our youth and our economy can benefit tremendously from the inclusion of TVE in the curriculum, and that it can help to contribute to the aim of creating quality education and skills development that is accessible and diverse for all learners.

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APPENDIX A: INFORMED CONSENT FROM THE SCHOOL

INFORMED CONSENT - FROM THE SCHOOL

Project Title:

Grade eight learners' perceptions of implementing Technical and Vocational Education in the curriculum.

Investigator/Researcher:

Miss. Z. Asvat

Date: 02 Mach 2017

Research details:

This research is based on Grade eight learners' perceptions of implementing Technical and Vocational Education (TVE) in the curriculum. It is a Qualitative research study which makes use of the Case Study research methodology (that is. Grade eight learners' perceptions). The Research Design includes a questionnaire and focus-groups. This is done in order to achieve purposeful sampling. It will not place learners at risk nor will it disadvantage them in anyway.

I would really appreciate the help of your child in order to complete my research on the Grade eight learners' perceptions of implementing TVE in the curriculum.

Schools Approval:

UJ Metropolitan Academy has given Ms Asvat permission to complete her research project at this school.

Ms Asvat will share her research findings with the school.

No learner will be forced to participate. No learner will be allowed to participate unless the parent signed the consent form.

Should any further information be required, please contact the principal on 011 837 7616.

PRINCIPAL: M. Westerberg

APPENDIX B: ETHICAL CLEARANCE

NHREC Registration Number REC-110613-036

UNIVERSITY OF JOHANNESBURG

ETHICS CLEARANCE

Dear Z Asvat

Ethical Clearance Number: 2017-064

Grade eight learners' perceptions of implementing Technical Vocational Education in the curriculum

Ethical clearance for this study is granted subject to the following conditions:

- If there are major revisions to the research proposal based on recommendations from the Faculty Higher Degrees Committee, a new application for ethical clearance must be submitted.
- If the research question changes significantly so as to alter the nature of the study, it remains the duty of the student to submit a new application.
- It remains the student's responsibility to ensure that all ethical forms and documents related to the research are kept in a safe and secure facility and are available on demand.
- Please quote the reference number above in all future communications and documents.

The Faculty of Education Research Ethics Committee has decided to

☒ Grant ethical clearance for the proposed research.
☐ Provisionally grant ethical clearance for the proposed research
☐ Recommend revision and resubmission of the ethical clearance documents

Sincerely,

Prof Geoffrey Lautenbach
Chair: FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE
2 August 2017

APPENDIX C: GDE APPROVAL

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	07 March 2017
Validity of Research Approval:	06 February 2017 – 29 September 2017 2017/18
Name of Researcher:	Asvat Z
Address of Researcher:	P O Box 15069
	West Acres
	Nelspruit, 1211
Telephone Number:	082 678 6297
Email address:	zasvat@yahoo.com
Research Topic:	Grade eight learners' perception of implementing Technical and Vocational Education in the Curriculum
Number and type of schools:	One Secondary School
District/s/HO	Johannesburg North

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

08/03/2017

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

Making education a societal priority

Office of the Director: Education Research and Knowledge Management
7th Floor 17 Simmonds Street, Johannesburg, 2001
Tel. (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

*

1. The District/Head Office Senior Managers concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.
2. The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.
3. A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.
4. A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.
5. The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.
6. Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage
7. Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.
8. Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education
9. It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.
10. The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.
11. The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.
12. On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.
13. The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.
14. Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.

The Gauteng Department of Education wishes you well in this important undertaking, and looks forward to examining the findings of your research study.

Kind regards

.....

Ms Faith Tshabalala
CES: Education Research and Knowledge Management

DATE: 08/03/2017

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

APPENDIX D: CONSENT FROM PARENTS/GUARDIANS

INFORMED CONSENT/ASSENT FORM

Project Title:

Grade eight learners' perceptions of implementing Technical and Vocational Education in the curriculum.

Investigator/Researcher:

Miss. Z. Asvat

Date: 02 Mach 2017

Research details:

This research is based on Grade eight learners' perceptions of implementing Technical and Vocational Education (TVE) in the curriculum. In South Africa there are various social challenges to be dealt with and adversities to overcome. With the help of TVE we aim to aid learners with these challenges. This research will not harm or disadvantage any child who participates and each child will have to receive the consent of their parents/guardians prior to the data collection process.

I would really appreciate the help of your child in order to complete my research on the Grade eight learners' perceptions of implementing TVE in the curriculum.

Please mark the appropriate checkboxes. I hereby:

☐ Agree to be involved in the above research project as a participant.
☐ Agree to be involved in the above research project as an observer to protect the rights of:
- ☐ Children younger than 18 years of age,
- ☐ Children younger than 18 years of age that might be vulnerable*; and/or
- ☐ Children younger than 18 years of age who are part of a child headed family.

☐ Agree that my child, may participate in the above research project.
☐ Agree that my staff may be involved in the above research project as participants.

☐ I have read the research information sheet pertaining to this research project (or had it explained to me) and I understand the nature of the research and my role in it. I have had the opportunity to ask questions about my involvement in this study. I understand that my personal details (and any identifying data) will be kept strictly confidential. I understand that I may withdraw my consent and participation in this study at any time with no penalty.

☐ Please allow me to review the report prior to publication. I supply my details below for this purpose:
☐ Please allow me to review the report after publication. I supply my details below for this purpose:
☐ I would like to retain a copy of this signed document as proof of the contractual agreement between myself and the researcher

Name: .....

Phone or Cell number: .....

e-mail address: .....

Signature:

If applicable:
☐ I willingly provide my consent/assent for using audio recording of my/the participant's contributions.
☐ I willingly provide my consent/assent for using video recording of my/the participant's contributions.
☐ I willingly provide my consent/assent for the use of photographs in this study.

Signature (and date): .....

Signature of person taking the consent (and date): .....

* Vulnerable participants refer to individuals susceptible to exploitation or at risk of being exposed to harm (physical, mental, psychological, emotional and/or spiritual).

APPENDIX E: INTERVIEW QUESTIONS

TECHNICAL VOCATIONAL EDUCATION

WHAT IS TVE?

Technical Vocational Education (TVE) helps equip the youth with skills that can aid in creating jobs and employment (Iab. South Africa, 2012). TVE is related to various occupations/employment, its skills and is specialised vocational courses (Perception, 2017) which we need in South Africa to help our economy grow. This can be achieved by providing individuals with technical skills. Thus, TVE in a school system can help change the perceptions of people regarding TVE and **the impact that it can have on our society if it is implemented into the curriculum.**

WHAT I NEED TO DO?

- Make a A3 poster on the various types of TVE or technical skills that can be put into the school curriculum (that is, for learners to take as a subject throughout Grade 8 & 9
- Write a short essay on what TVE means to you, mention what it is, how it could help/benefit learners who drop out of school in Grade 9, how it can help or benefit our economy and your overall perception of what TVE means to you.

WHEN IS THIS DUE?

Anytime next week but before the 30 May 2017, please ☺

Thank you for your participation in my research project it is much appreciated

☺☺☺☺☺☺☺☺☺☺☺☺☺

Miss Asvat

INTERVIEW QUESTIONS

The following questions will be used in the interview with Grade eight learners in order to answer my research question of: *"What are Grade eight learners' perceptions of implementing Technical and Vocational Education in the curriculum?"*

1. Please explain what your view of TVE is.
2. Please tell me about the organizations/departments that support learners at risk in this school.
3. I would like to know more about your perceptions of TVE and introducing it into the Grade eight curriculum. Do you think TVE is only beneficial for learners with learning difficulties or can it be of great advantage to learners who do not have learning difficulties? What are your views on this?