

A participatory process to improve vocational education in special schools

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DECLARATION

I, Mmamokho Mirriam Solomons, declare that “A participatory process to improve vocational education in special schools” dissertation is my work, and the references used are all acknowledged.



Signature: _____

Date: 31 October 2025

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ABSTRACT

Though there have been measures taken to improve vocational education in special schools, some special schools experience a delay in the allocation of resources for vocational skills, and skills training for special educators to be able to teach the skill subjects to learners experiencing barriers to learning. This is problematic as learners experiencing barriers to learning depend on skills taught to cope with life's demands, and those who require low-intensity support can make a living in the open labour market when they exit the special schools. In this study, I worked collaboratively with five special educators as co-researchers/participants to share their experiences regarding the barriers preventing the successful implementation of vocational education in special schools and explore actions that can bring about positive change in these schools. A critical transformative paradigm within a Participatory Action Learning and Action Research (PALAR) design was viewed as suitable for this research study to answer the following research question: *How can vocational education collaboratively be improved in special schools?* Therefore, the co-researchers and I investigated and answered the research questions within the three cycles. In cycle one, the co-researchers identified the challenges through the symbolic drawing method and discussion groups. In cycle two, the co-researchers utilised the photovoice method whereby they took photos that represented their stories and challenges. Lastly, in cycle 3, the co-researchers created one collage consisting of different pictures summarising the outcome of the study. Data was analysed through thematic content analysis. The analysis revealed three interconnected themes concerning how vocational education can be collaboratively improved in special schools, namely obstacles to enhancing vocational education, existing approaches and methods and opportunities for growth and innovation. The findings suggest that enhancing vocational education in special schools requires a collaborative effort to confront systemic challenges—including limited educator capacity, learner-specific needs, and environmental constraints—that impede equitable outcomes. Although current teaching practices and institutional programs provide a starting point, their effectiveness is often undermined by implementation difficulties and insufficient responsiveness to local contexts. Lasting progress depends on co-created, community-led solutions that harness technological innovation and champion inclusive advocacy, paving the way for vocational pathways that are both meaningful and accessible to every learner.

Key terms: Collaboration, vocational education, special needs learners, special schools, inclusive education

LIST OF ABBREVIATIONS

AL	Action learning
ALS	Action Learning Set
CAPS	Curriculum Assessment Policy Statement
DBST	District-Based Support Team
DCAPS	Differentiated Curriculum and Assessment Policy Statement
DBE	Department of Basic Education
EWP6	Education White Paper 6
FSS	Full-Service School
ID	Intellectual disability
IEP	Individual Educational Plan
IQ	Intelligence Quotient
IT	Information Technology
PALAR	Participatory Action Learning and Action Research
PAR	Participatory Action Research
POPIA	Protection of Personal Information Act
SADTU	South African Democratic Teacher's Union
SGB	School Governing Body
SID	Severe Intellectual Disability
SMT	School Management Team
ZPD	Zone Of Proximal Development

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CHAPTER 1: OVERVIEW OF THE STUDY

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Figure 1.1: Chapter 1 overview

1.1 Introduction

The learners who are enrolled in schools for Severe Intellectual Disability (SID) benefit from receiving a good quality education, in the same way as learners enrolled in mainstream schools. According to Kagan (2023), a learner with special needs is a learner who requires special care services or specific requirements that other learners in mainstream schools do not require. According to Zabek et al. (2023), special care services are frequently offered by a wide range of experts (such as social workers, educational therapists, and nurses) who work in common and distinct ways. The South African Differentiated Curriculum and Assessment Policy Statement (DCAPS) is one of the specific requirements that learners with special needs require (DBE, 2018). Hove and Phasha (2024) assert that this South African curriculum has been developed and differentiated to accommodate learners with special needs.

It is stipulated within the draft policy for the provision of quality education and support for children with SID, that DCAPS implementation and training of special educators will be supervised, as well as funding for those school-based health professionals responsible

for service delivery in special schools (DBE, 2016). School-based health professionals include educational psychologists, speech therapists, occupational therapists, social workers, and nurses (Hayes & Bulat, 2017).

Unfortunately, the promise mentioned above by the Department of Basic Education (DBE) (2016) has not been fully achieved, as it has been observed that access to appropriate resources required for learners with special needs, including facilities and equipment needed for vocational education, remains a challenge in special schools (Adebisi et al., 2014). Furthermore, special needs educators have not received any training to teach vocational education, which hinders the quality of education meant to prepare the learners with special needs for the outside world (Jauhari et al., 2020). According to Mahlo (as cited by Zwane & Malale, 2018), the researchers discovered that there is a high demand for special educators working in special schools who require vocational training. According to Özbek et al. (2017), researchers revealed that employing special needs educators who are trained in vocational education is of utmost importance to prepare their learners for the world of work. According to Solomon et al. (2024), vocational training for learners with special needs has been prioritised by the government to ensure that they receive equitable access to opportunities, but unfortunately, these authors explain that research shows that although vocational training is beneficial for these learners, they often struggle with employment when they exit special schools.

1.2 Background and rationale

According to Adebisi et al. (2014), the field of special needs education is linked to physician Jean-Marc-Gaspard Itard (1775–1838). His nickname was “the wild boy of Aveyron,” and he taught special needs learners who presented with different disabilities, such as emotional and communication problems, and physical disabilities, as well as vision and hearing problems (Okon & Lovina, 2021). Jean-Marc-Gaspard Itard is one of the first people who attempted to develop special education for intellectually disabled learners in a systematic way (New World Encyclopaedia, 2022). Building on that, inclusive education has emerged over the past 20 years as a primary educational goal globally (Adams et al., 2016). Inclusive education is meant to provide a holistic education to learners with special needs, and allows them to discover their talents and potential (Gyasi et al., 2020). As a result, countries around the world are embracing inclusive education

to ensure that learners with special needs obtain access to education (Adebisi et al., 2014). Hence, the Education White Paper 6 (EWP6) policy, approved in 2001 by the DBE, is meant to bring about change within the total education system, in order to move away from a separate special education system (Makhalemele et al., 2021). Furthermore, the EWP6 specifies the advancement of the inclusive education system to ensure that all learners have equal access to education, regardless of their disabilities (Walton & Engelbrecht, 2022).

Strydom et al. (2012) assert that special schools cater to the needs of learners who might present with psychosocial, neurological, and physical problems. According to Mahlaule et al. (2024), special schools provide support to learners with special needs by differentiating scholastic subjects and vocational class activities into high, average, and low levels, to cater to their diverse learning needs. Adebisi et al. (2014) argue that special schools not only cater to learners presenting with physical, sensory, and emotional challenges, but also to cognitive and learning barriers. Hence, special needs learners require support and special services from the school-based health professionals in scholastic subjects and vocational education. These special services can serve as an important component, as these learners can be provided with assistive devices, such as hearing aids and braille books for the blind (Hayes & Bulat, 2017). These devices can assist the learners to reach their potential according to their capabilities (Juma & Ntulo, 2024). Learners with severe disabilities find support in South Africa's special education facilities, which are part of the inclusive educational system (DBE, 2001). Phala and Hugo (2022) state that those who require moderate support are catered for in mainstream schools. Furthermore, it is clearly stipulated within the White Paper 6 framework policy that educational opportunities are a priority for learners who are faced with barriers to learning (DBE, 2001).

1.3 Problem statement

Learners with special needs can learn optimally and, more importantly, benefit from an exceptional quality of education when special educators have the appropriate skills (Opoku, 2016). According to Solomon et al. (2024), research shows that a lack of skills training for special educators remains a challenge. Trained special educators will equip learners to become independent individuals who will be able to take care of their own

needs when they exit the special school. According to Mahlo (as cited by Zwane & Malale, 2018), a study revealed that most special educators highlighted that they require intensive vocational training, to enable them to provide support to learners experiencing barriers to learning in the classrooms. Therefore, training will allow them to deliver instructions specifically tailored to meet the unique needs of learners, making quality education available to them (Adebisi et al., 2014). Haris and Inga (2023) stress that a key component of quality education in special schools is the professional competence of special educators.

In addition, special educators often report experiencing a lack of instructional resources needed to teach vocational education (Williams et al., 2020). As a result, they are frustrated by conditions that they cannot handle, such as teaching vocational subjects without relevant or sufficient resources. Williams et al. (2020) further state that it is discouraging that the delivery of vocational education is often slow to change, and when change occurs, it is often in unhelpful ways. Adebisi et al. (2014) argue that the main reason for the slow pace of change in vocational education is related to a variety of matters, such as inadequate or lack of access to funding, inadequate physical infrastructure that includes workshops and technological devices, and the failure of the DBE to provide what is necessary. According to Fauzian et al. (2023), there is currently an insufficient provision of services to satisfy the educational rights of learners with special needs. Moreover, DBE's decisions are based on budgetary considerations, and not on evaluating the needs of these learners (Adebisi et al., 2014).

According to Ellman et al. (2020), life beyond special schools, especially with inadequate vocational education, can become quite challenging for special needs learners and their families. Ellman et al. (2020) further explain that examples of those challenges include, but are not limited to lack of employment, limited participation in the community, and dependence on the family. According to Pasaribu and Harfiani (2021), the challenges faced by special educators in special schools can be resolved by a collaboration between departmental officials, the school management team (SMT), special educators, community members, and parents.

There is still much to be done to improve vocational education, as evidenced by the data in this section detailing the different challenges hindering successful implementation.

Therefore, it was imperative to use a collaborative research approach to allow stakeholders to work together to support improving vocational education in special schools.

In the following section I discuss the research questions that guided this research study.

1.4 Research questions

1.4.1 Primary research question

How can vocational education collaboratively be improved in special schools?

1.4.2 Secondary research questions

The following secondary research questions guide this research study:

- What are the challenges experienced in improving vocational education in special schools?
- What current strategies are in place in special schools to provide vocational education?
- What action can stakeholders take to improve vocational education in special schools?

1.5 Clarification of concepts

1.5.1 Collaboration

Collaboration is defined as the ability of a single person to work well with others in a group; this calls for tenacity, sharing knowledge within the team, appreciating the contributions of others, and settling disputes (Scoular et al., 2020).

1.5.2 Vocational education

Vocational education is defined as a specialised education that includes all the different types of work levels, and the lessons are based on theoretical and practical development to assist special needs learners according to their various talents, potential, and interests (Pasaribu & Harfiani, 2021). These authors further state that vocational education in SID

schools equips learners with entrepreneurial skills and careers in specific fields customised to their abilities.

1.5.3 Special needs learners

According to Li and Mao (2022), learners who struggle with hearing, comprehension, reading, writing, or spelling are referred to as special needs learners. The term “special needs learner” describes the unique educational needs of an individual who has a physical, intellectual, or emotional disability, or who is at high risk of developing one (Merriam-Webster, 2021).

1.5.4 Special schools

A special school is defined as a school that accommodates and provides specialised education to learners with severe barriers, such as learning barriers, physical disability, and behavioural difficulties (Adebisi et al., 2014; Payne-van Staden & Van der Merwe, 2021; Strydom et al., 2012). Anon (2023) outlines that 464 special schools in South Africa are separated from mainstream schools and can either be independent or public schools.

1.5.5 Inclusive education

Inclusive education reflects the importance of valuing diversity and fostering acceptance among learners with special needs (Jardinez & Natividad, 2024). It also serves as a means to address social injustices through the inclusion of learners with special needs from various backgrounds (Korkie et al., 2025).

1.6 Theoretical framework

A theoretical framework functions as a basic evaluation of existing theories, and provides guidelines for emerging arguments in the research study (Vinz & George, 2022). Furthermore, it allows the researcher to link current research with the existing theory, presenting research topics related to established ideas (Vinz & George, 2022). This research study was guided by social constructivism and action learning (AL) Theories.

According to Akpan et al. (2020), it is outlined in the social constructivism theory of Lev Vygotsky that knowledge is what people do collaboratively in a group. Hence, it is also referred to as collaborative learning, that emphasises discussions, interactions, and

sharing of ideas to find the solutions or answers to the research problem (Akpan et al., 2020). For this research, the participants and I drew on this emphasis by becoming life-long learners and sharing different perspectives to suggest actions that can improve vocational education. Akpan et al. (2020) further state that this theory maintains that success in developing knowledge is based on social interaction and not on the individual.

Revans (1984) first proposed the action learning theory and saw it as a process of problem-solving for participants facing diversity and adversity, that includes asking questions and engaging in reflective inquiry to learn from different viewpoints (Ling, 2019). Han et al. (2016) assert that groups of people have been using action learning theory to reflect on and collaboratively develop solutions to identified challenges. Making use of action learning theory as a basis could enable participants to develop through learning and reflection, and suggest strategies to resolve issues (Willocks, 2022) such as limited resources in special schools (Mohd et al., 2023) and vocational education training for educators, to minimise the chances of them looking for another employment elsewhere (Dahalan & Toran, 2023). Therefore, suggestions to bring positive actions in the implementation of vocational education were a success as the co-researchers understood collaboration embedded in action learning theory.

Based on the explanations mentioned above, social constructivism and action learning theory focus on a group of people collaboratively sharing ideas to solve an identified problem to reach a common goal. As a result, the two theories were deemed suitable to guide this research study, as the Participatory Action Learning and Action Research (PALAR) design encouraged the participants to have a collective investigation, acting and finding solutions to the identified problem (MacDonald, 2012; Wood et al., 2023).

In the next section I elaborate on the methodology used in this research study.

1.7 Research methodology

The methodology enabled a smooth flow of the research study, allowing the participants to acquire more information on a research problem (Kivunja & Kuyini, 2017). Research methodology is a means of investigating the process of conducting a research study, in other words, to address an identified research issue. Moreover, research methodology

refers to the actions taken by the researchers to identify and investigate a problem, and the reasoning behind it (Omodan, 2020).

The acquisition of knowledge to improve vocational education was through PALAR. According to Mthiyane et al. (2023), PALAR is not merely a research methodology but a philosophy in which the participants acquire knowledge and share their experiences, regardless of the educational backgrounds they may have obtained.

The research methodology for this study includes the research paradigm, research design, and research methods, which are explained below.

1.7.1 Research paradigm

Research paradigms are described as collective viewpoints and agreements between researcher and the participants on how they can understand a research problem to be addressed (Kumatongo & Muzata, 2021). A critical transformative paradigm was adopted for this research study, as it is based on social justice issues. It aimed to address and bring about change in social and economic problems (Kivunja & Kuyini, 2017). The transformative paradigm was suitable for this research study which is grounded in social and emancipatory philosophy, methodology, and design (Omodan, 2020).

This paradigm might help the participants to develop an understanding of the interpretation of their experiences of challenges that are preventing the full implementation of vocational education, as well as their perceptions on the possible effective strategies to bring about a positive change. The research paradigm is a way that myself and the participants answered the basic questions of epistemology, ontology, methodology, and axiology (Kumatongo & Muzata, 2021). These are explained in the following paragraphs:

Epistemology is based on justification and human knowledge, and how it was developed to enable the participants to acquire more understanding of this research study (Kivunja & Kuyini, 2017). Epistemology is a theory of human knowledge that deals with the dynamics of the research study (Rina et al., 2023). The participants collaboratively shared knowledge to deal with the dynamics of improving vocational education in special schools.

Ontology is focused on the nature of reality to assist the participants to have a clear understanding of the data generated, the importance of the research problem, and how they contributed to achieving the desired solutions (Kivunja & Kuyini, 2017). The ontology is a theory that explains the importance of a concept or research problem to be solved (Rina et al., 2023), such as stakeholders taking actions to improve vocational education in special schools.

Methodology is based on how data will be collected, recorded, and analysed collaboratively (Kivunja & Kuyini, 2017). According to Mertens (2015), this paradigm was combined with the assumption about social change, as this research study was carried out only through the interaction of the participants. The methodology paradigm encouraged awareness among the participants in the process of tackling social issues, and this made it possible for them to work cooperatively and deal with the issue at hand. This interaction is sometimes referred to as hermeneutics and dialectical, to receive different perspectives for better interpretation (hermeneutics), which was compared through collaborative discussion and reflection amongst the participants (dialectical).

Axiology refers to the ethical issues the researcher considered during the planning of the research proposal. The focus was on the perceptions of right and wrong conduct concerning this research (Kivunja & Kuyini, 2017). Axiology is the concept of right and wrong, fair and unfair, and good and bad that can be applied to everyday life (Rina et al., 2023). It addresses the question: what is the nature of ethics or ethical behaviour? Therefore, I took into consideration respect for the human morals of every participant who was part of this research.

1.7.2 Research design

The research design in this study is PALAR, to answer research questions collaboratively. PALAR is an integration of lifelong action learning (AL) and participatory action research (PAR), making it an effective structure (Wood, 2020). Wood (2020) further states that AL is a cyclic method of knowledge acquisition, enabling the participants to collaboratively share their philosophies and find solutions to the identified problem. On the other hand, PAR aims to address the systems that sustain inequalities brought about by negative societal structures (Cornish et al., 2023; Wood, 2020). The PAR approach is a collaborative process to foster practical knowledge in the service of human goals. In this

study, it aimed to combine action and observation, theory and practice, in collaboration with others, in the search for workable answers to urgent problems facing individuals, and, more broadly, the well-being of each individual and their community (Nelson, 2014). The PAR approach is concerned with everyday challenges the community faces, and promotes inclusivity of the participants in finding solutions (Nyman et al., 2022). PALAR promotes the full participation of the participants through the following fundamental key features – relationships, reflection, and recognition – which encouraged a genuinely participatory approach to knowledge creation, and useful social and educational advancements (Kearney et al., 2013). PALAR enabled the participants to engage in educational transformation that leads to changes such as becoming lifelong learners (Wood et al., 2023). PALAR enabled a research topic to be collaboratively identified, fostered collaborative decision-making on the best means to solve the problem, the implementation of the solution, and the evaluation of the solution, and then deciding on what further action should be taken, based on the participants' critical reflection of the process (McIntyre, 2008; Piggot-Irvine, 2012; Reason & Bradbury, 2008). The PALAR process began by establishing an action learning group to work on solving identified challenges that had an impact on the participants (Wood et al., 2023). Therefore, the PALAR design was suitable for this research study to allow the established action learning group, who will be referred to as co-researchers after signing the consent forms, to collaboratively gather different perceptions about the improvement of vocational education in a new SID school.

1.7.3 Research methods

1.7.3.1 Site and recruitment of co-researchers

The school selected is in the Gauteng province and is categorised as a SID school. The school allows learners with severe intellectual disabilities access to the vocational curriculum and instruction (Solomon, 2023). Therefore, the school actively enrolls learners with SID. The school has special educators with the required training and resources needed to support learners living with SID. Educators in the classroom are expected to provide support. The school also works in conjunction with what is known as a Full-Service School (FSS), where referrals are made when deemed necessary.

An independent person, who is an office administrator at the SID school, was responsible for the recruitment of the participants. An open invitation was sent to potential co-researchers to attend the first meeting, where they received the information about the study and got to know each other better, by 'breaking the ice'. I explained the study to the independent person and then we set up a meeting where I explained the questions for seeking clarity which might be asked by the possible co-researchers. After the participants had agreed to participate in the study, they were then called 'co-researchers,' and the independent person asked them to complete and sign the consent forms.

The participants for this study were selected using purposive sampling, which is part of the non-probability sampling method. Purposive sampling is a sampling method that seeks to find participants who have similar experiences with a central phenomenon to find solutions to the identified challenges (Kalu, 2019). The purposive sampling method is used in exceptional situations, whereby the researcher carries out sampling with an aim in mind (Maree & Pietersen, 2016). The sample chosen will work collaboratively to find solution to improve vocational education in SID schools. The number of participants who were purposively sampled was 5.

Considering the statement mentioned above, the researcher focused on potential co-researchers who all met the following requirements for this research study:

- Four special educators teaching vocational education at the participating SID school.
- One SMT member working at the participating SID school.

Table 1.1 below outlines an overview of the co-researchers and the reasons for inclusion.

Co-researchers	Gender	Vocational subject taught	Reasons for inclusion
C1	M	Woodwork	Teaches vocational education in a special school
C2	M	Arts and craft	Teaches vocational education in a special school

C3	F	Needlework	Teaches vocational education in a special school
C4	M	Agriculture	Teaches vocational education in a special school
C5	M	Woodwork	Department Head and teaches vocational education in a special school

Table 1.1: An overview of co-researchers (participants) and the basis for inclusion

Source: Author's own construct

1.7.3.2 Data generation process

Data **generation** is the process of collecting data from related sources to solve a research study problem (Taherdoost, 2021).

Considering this statement, I worked with the co-researchers to comprehend the issue and stated different viewpoints on the issue (Tracy, 2019). This was done through the PALAR design. Tracy (2019) further states that the PALAR design encouraged transformation regarding the identified problem, brought about by combining theoretical knowledge from myself and practical knowledge from the co-researchers, leading to collective ownership of the research study. Furthermore, the PALAR framework allowed me and the co-researchers to participate in a cyclical process to collectively resolve the identified issues through a spiral of planning a change, acting on that change, observing and reflecting on the process and the consequences of that change, and lastly, repetition (Kemmis & McTaggart, in Tracy, 2019).

The start-up workshop, the development of action learning set (ALS), and the celebration of research project achievements and milestones are three key components of PALAR, and these encouraged the co-researchers to commit to the research (Wood & Zuber-Skerritt, 2013a). Wood and Zuber-Skerritt (2013a) further state that these components promote relationship-building, self-introspection, and acknowledgment, which might lead to the development of new knowledge and successful results.

In this study, the co-researchers were engaged in the ALS during the following 3 cycles:

Cycle 1

Cycle 1 consisted of three sessions. The first session was a brainstorming session (start-up workshop). The co-researchers were organised; an ethical agreement was established, and a needs analysis was conducted. The symbolic drawing method was used in cycle 1 to collect data. Research indicates that drawings drawn by the co-researchers may assist with the process of creating new knowledge (Gameiro et al., 2018). Therefore, these drawings allowed them to reflect and discuss the meaning and the knowledge gained (Brailas, 2020).

During these sessions, the co-researchers drew pictures of the challenges they are experiencing to improve vocational education in this SID school. The sessions thereafter were discussion sessions. The AL group discussion found its root in the secondary research question – What are the challenges experienced to improve vocational education in special schools?

Cycle 2

Cycle 2 consisted of four sessions. During this cycle, the co-researchers reflected on the proceedings that occurred in the sessions during the first cycle. In doing so, they continued to grow through collaboration as they brainstormed and shared ideas. These sessions were held regularly. The data was collected using the photovoice method in this cycle. The photovoice method is a participatory method whereby the co-researchers utilised photos that represented their stories and challenges (Nykiforuk et al., 2016), regarding the strategies employed in special schools to provide vocational education. Smith et al. (2021) argue that photovoice is a participatory action research, which requires co-researchers to utilise cameras to take pictures representing their stories.

This method improved the chance for me to understand the exact meaning of the point of view of the co-researchers, which might have been difficult through verbal communication (Bandaiko & Arku, 2023). I explained to the co-researchers what a photovoice is and how it will be used during data collection. Co-researchers were permitted to take photos representing their stories using their phones.

In these sessions, the following secondary research question was discussed/addressed:

- What current strategies exist at special schools to provide vocational education?

After that, the co-researchers reflected on the discussions that took place during cycle 1 and cycle 2 to determine the next steps in cycle 3.

Cycle 3

Cycle 3 consisted of five sessions. Co-researchers reflected on findings that surfaced during discussions in cycle 1 and cycle 2. They worked together to discuss/address the final secondary research question:

- What action can stakeholders take to improve vocational education in special schools?

During these sessions, co-researchers addressed the secondary research question through discussions, analysis, and reflections. The co-researchers made one collage consisting of different pictures summarising the outcome of the study. They pasted different items that are part of the solution to solve the identified challenges. For example, they would paste pictures of wool if it is recognised as a challenge to improve vocational education in special schools. In doing so, the co-researchers would have identified and developed ways (guidelines) for stakeholders to improve vocational education in SID schools. According to Culshaw (2019), collages allowed co-researchers in this research to think visually rather than linguistically, and the thoughts occur across different media instead of using words and phrases with strict grammatical requirements. Moreover, the ability to transmit new ideas, or the same ideas differently, is made possible by this arts-based strategy. Data was collected using a collage in this cycle.

In this study, data was generated by utilising informative discussions between the co-researchers. This occurred throughout the research process in the AL meetings, combined with recorded meetings (transcriptions), and collective actions (learning by doing) (Ahmed, 2019; Neethling, 2015).

1.7.3.3 Role of the researcher

In all studies, it is crucial to describe the researcher's role for precision and identification of purpose. First, I went into a concerted partnership with the co-researchers when collecting and analysing data (Creswell, 2007) to build an understanding between myself and them.

Second, as Nieuwenhuis (2016) suggests, the necessary information was communicated to co-researchers before the study commenced and they were invited to a central venue within a reasonable time. This allowed me to address all the questions and concerns that might have arisen. The information in the consent forms was explained and, through their understanding, they were requested to sign the consent forms.

After inviting the co-researchers to attend the meetings, I ensured that the invitation contained all the necessary information about the event, for example, date, time, and venue, in addition to ensuring that the venue was central so that they were not unnecessarily inconvenienced by travel. The venue was convenient, as it was where the co-researchers are working. I scheduled the meetings so that they did not infringe on work time thus considering the responsibilities and duties of the co-researchers. We created a WhatsApp group for easy communication. Finally, the collected data after the meetings was analysed according to the agreed data analysis method.

1.7.3.4 Data analysis

Data analysis is referred to as an ongoing process, and therefore data collection, data processing, data analysis, and reporting are integrated, and not just a few consecutive steps (Nieuwenhuis, 2016). In PALAR, the analysis of data is a continuous process (Neethling, 2015), because “the cyclical process of collecting and analysing data is interlinked, and reflection is integrated into every session of data collection” (Neethling, 2015:167). In this study, thematic data analysis was employed to analyse the data. Thematic analysis is a qualitative research technique that allows for the systematic organisation and analysis of large data sets, producing reliable results (Dawadi, 2020). As a result, thematic analysis allowed the co-researchers to summarise the main characteristics of the data, helping them produce a flawless and structured final report (Nowell et al., 2017). Braun and Clarke present six phases of thematic analysis; researchers familiarising themselves with data, generation of initial codes, searching for themes, reviewing themes, defining and naming themes, and producing and reporting (Braun & Clarke, 2006; Solomon et al., 2024).

Figure 1-2 below outlines Braun and Clarke's six phases of thematic analysis (Braun & Clarke, 2006; Solomon et al., 2024):

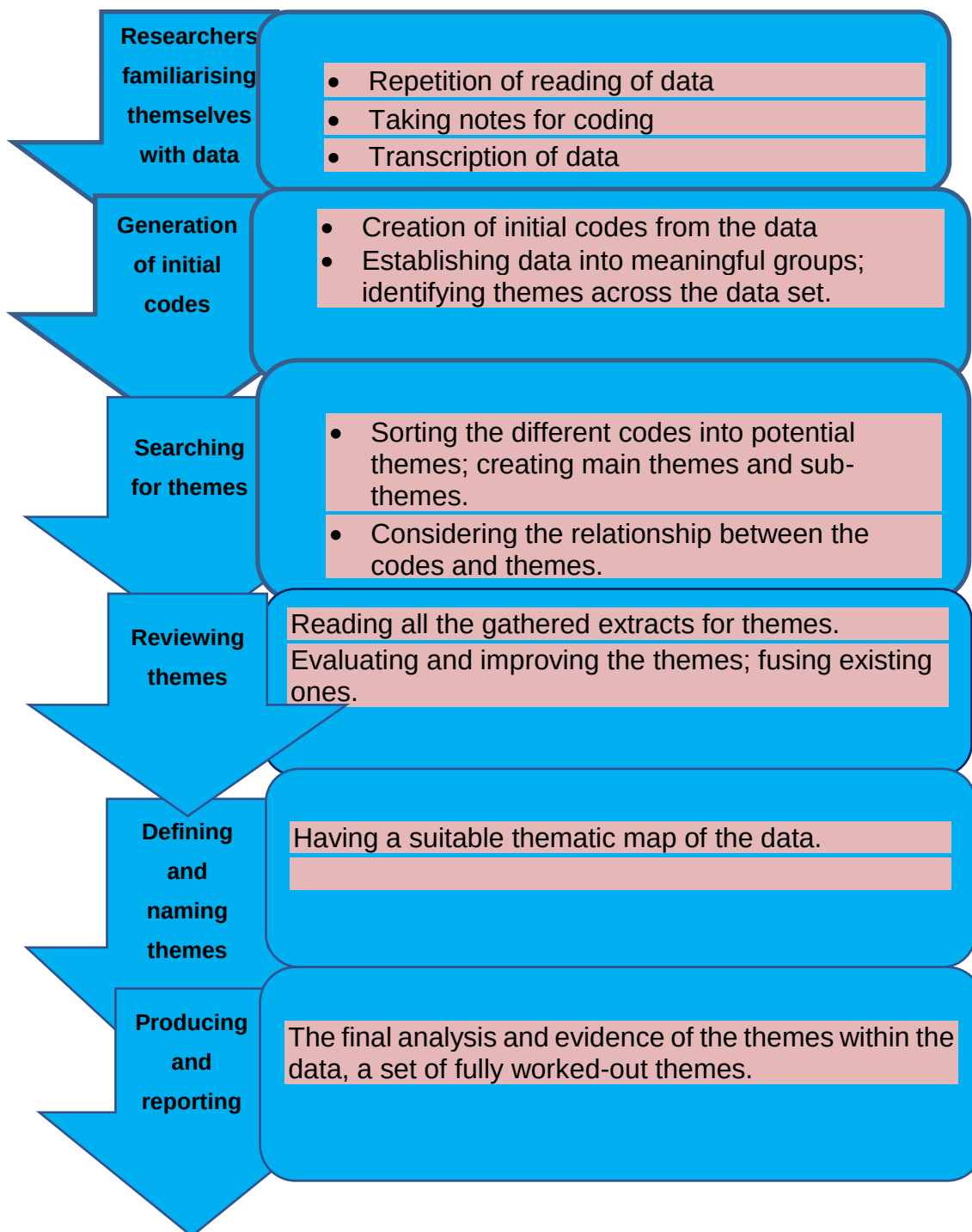


Figure 1.2: Braun and Clarke's six phases of thematic analyses

Source: Author's own construct from Braun and Clarke (2006) and Solomon et al. (2024).

1.8 Quality criteria

Nieuwenhuis (2016) contends that validity refers to the clarification of the truth with understanding. Validity is a complex idea that evaluates the appropriateness of the assumptions that are derived from data (Weng, 2024). Haradhan (2017) states that transparency increases validity, which limits the chances of the researcher being biased in action research. Through the PALAR design, I was open and transparent about the decisions and interpretations made throughout the process of this research study. The transparency allows the readers to make judgments about whether the process went hand-in-hand with the requirements of a valid research (Nieuwenhuis, 2016). Herr and Anderson (2015) proposed five validity criteria, namely outcome validity, process validity, democratic validity, catalytic validity, and dialogic validity, which were interrelated with the action research goals applied for this research study (Neethling & Nel, 2021; Wilson, 2021). Table 1.2 below outlines the validity criteria and action research goals.

Validity criteria	Action research goals
1. Dialogic and process validity	Co-researchers shared new knowledge collaboratively to promote the validity of collected data.
2. Outcome validity	It was my responsibility to encourage and lead co-researchers toward achieving successful results.
3. Catalytic validity	The co-researcher's reflection on gained knowledge led to a transformation of viewpoints regarding the reality of the challenges faced and their role.
4. Democratic validity	I worked collaboratively with the co-researchers, optimising the chances of positive outcomes of the collected data. Every co-researcher's opinion was treated with respect, and everyone's participation was of paramount importance.
5. Process validity	Research methodology suitable for data sustainability and continual reflection by the co-researchers to increase validity, thereby promoting continual learning of co-researchers.

Table 1.2: Validity criteria and action research goals (Neethling & Nel, 2021; Wilson, 2021)

1.9 Ethical considerations

Every researcher should consider the importance of ethical considerations for the research study to ensure that the rights and dignity of the co-researchers are protected. The co-researchers are living beings; therefore, they were treated with care and sensitivity. The risk of this research study was low, as the confidentiality and privacy of the co-researchers were always protected. The co-researchers received a form describing the ethics of care, which were revisited before the beginning of each cycle. Mirza et al. (2023) highlighted the following ethical guidelines which I will be discussing in the next section: informed consent, conflict of interest, and incentives.

1.9.1 Informed consent

Permission letters were sent to the the school principal, the SGB chairperson and the DBE at the provincial level: see ANNEXURE B for the permission letters sent to stakeholders. Every possible co-researcher was given a consent letter to gain an understanding of the purpose of this research study, and most importantly, stress the anonymity and confidentiality of data collection by the rules within the Protection of Personal Information Act (POPIA), 4 of 2023 (RSA, 2013). After the possible co-researchers gained insight into the research study, they signed the forms to provide informed consent to participate in the study. See ANNEXURE A for the informed consent form. They also received an ethics of care form. Furthermore, it was my responsibility to ensure that they understood that their participation is fully voluntary, and they therefore have the freedom to withdraw at any time from the study.

1.9.2 Conflict of interest

To lessen the conflict of interest as I work at the same school as the co-researchers, I encouraged and emphasised a formal yet harmonious working relationship during the data collection process. Most importantly, neutral co-researchers will minimise the falsification of the research findings. According to Mirza et al. (2023), I made co-researchers aware that being neutral during data collection process minimises misrepresentation of the results.

1.9.3 Incentives

A study by Largent et al. (2022) found that the participants highlighted that receiving remuneration might lead to participants withdrawing from the study, as they might have agreed because of money. Subsequently, it might seem like bribery (Largent et al., 2022). Therefore, there was no incentive in the form of remuneration for the co-researchers to be part of this research study. However, the co-researchers will benefit from this study as they gave their views on suggested strategies to improve vocational education, which will benefit their learners.

1.10 Contribution of the study

The results of this study will merit the following:

- The outcome of this research study is expected to be the source of information regarding the SID schools to improve vocational education effectively.
- This research will reveal how co-researchers deal with the challenges they face, preventing the full provision of vocational education to special needs learners, and possible solutions. Furthermore, working as a team through collaboration can strengthen their relationship within the working environment.
- The study will be useful because it will show whether the current strategies used to implement vocational education are successful or not, leading to the identification of gaps to assist researchers with future research studies.

1.11 Layout of the study

Chapter 1: Overview of the study

The first chapter established the study's context and goals. The description of the issue for the research topic, the choice of research design, the study's aim and objectives, quality criteria of the research, and ethical considerations were all included.

Chapter 2: A critical review of the concepts, theories and literature guiding this study

This chapter will present the literature review on the challenges that prevent effective vocational education provision in SID schools.

Chapter 3: A theoretical discussion of the research methodological choices

This chapter includes the research methods utilised in this study, as well as specifics and information regarding the research design. It also covers data-gathering tactics and sampling.

Chapter 4: Data analysis and interpretation

The focus of this chapter is to analyse the information collected. The themes developed and identified from the analysed data in this chapter will be presented and discussed.

Chapter 5: Summary, findings, and recommendations

In this chapter, the recommendations and contributions of the study will be presented, with suggestions for further studies. Limitations encountered in the research study will be noted.

1.12 Chapter summary

This chapter presented an overview of the study. The introduction, background, and rationale, as well as the problem statement, which comprised the research questions that guided this study were discussed, as well as the three cycles that form part of the PALAR methodology, highlighting the participatory processes and collaborative engagements that shaped each cycle. The chapter concluded by outlining the study's contributions, including its relevance to inclusive education and participatory research practices. This sets the stage for the next chapter, in which a critical review of the concepts and theories guiding this study are discussed.

CHAPTER 2: A CRITICAL REVIEW OF THE CONCEPTS, THEORIES AND LITERATURE GUIDING THIS STUDY

2.1 Introduction
2.2 Social constructivism theory
2.3 Action learning theory
2.4 Vocational education
2.5 A South African perspective on vocational education with a focus on learners experiencing barriers to learning
2.6 International perspectives on vocational education with a focus on learners experiencing barriers to learning
2.7 Severe intellectual disability and its consequences for education
2.8 Collaborative interventions to overcome the specific challenges mentioned, internationally and locally
2.9 Chapter summary

Figure 2.1: Chapter 2 overview

2.1 Introduction

A literature review is a pillar of an educational field, serving as a foundation for scholarly inquiry by analytically investigating the research previously done by other researchers (Cram et al., 2020), and enabling the identification of gaps in the existing literature and possible directions for future research with ease (Kraus et al., 2022). In this literature review, the challenges experienced by special schools to improve vocational education, the current strategies in place, and actions stakeholders can take to improve vocational education are discussed. According to Solomon et al. (2024), current literature on vocational education in special schools for SID learners has been evaluated both locally and internationally. This chapter builds on the previous chapter's methodological overview by critically examining the conceptual and theoretical foundations that inform the study. Considering the challenges around improving vocational education in special schools, South African perspectives on vocational education are compared to the Malaysian perspectives, focusing on learners with special needs.

Furthermore, various researchers have carried out a comprehensive literature search to obtain more information about special educators' experiences in the implementation of vocational education (Solomon et al., 2024). This body of work underscores the need for contextually responsive and inclusive strategies, particularly in newly-established SID schools such as the one in this study. As a result, we would like to assist further in improving vocational education through this study. In this chapter I explore the following concepts: international and South African perspectives on vocational education, focusing on learners with special needs, severe intellectual disability and its consequences for education, and collaborative interventions to overcome the specific challenges mentioned internationally and locally. These themes are examined to illuminate the systemic barriers and opportunities for transformation within vocational education for SID learners.

Social constructivism and action learning theory underpinned this study, and these encourage co-researchers to collaborate and share ideas to resolve the identified challenges (Akpan et al., 2020; Han et al., 2016). The two theories are discussed in more depth in the following sections, demonstrating how they inform the participatory processes and strategic development within the study. Lastly, the concept of vocational education is explained, providing a conceptual anchor for the discussions that follow.

2.2 Social constructivism theory

According to Akpan et al. (2020), social constructivism is collaborative learning, as it enables a group of people to interact to share ideas and reach a common goal. This learning theory was established by Lev Vygotsky during the beginning of the 20th century, who believed that knowledge is stimulated through cooperative learning (Amna et al., 2021; Akpan et al., 2020). Amna et al. (2021) further outline the importance of social constructivism: it encouraged the active involvement of the co-researchers, assisted with the development of critical thinking, and promoted mutual trust and respect among the co-researchers. The co-researchers were actively involved through AL to find ways to improve vocational education in special schools. Saleem et al. (2021) outline that the importance of social constructivism is to encourage active involvement of co-researchers, which encourages the advancement of ideas, develops individuals to be critical thinkers to resolve issues, encourages collaboration with others, promotes harmonious friendships amongst groups, and boosts confidence.

Social constructivists trust that collaboration among co-researchers is an integral part of gaining knowledge through communication (Choi et al., 2024). Lev Vygotsky believed that learning happens through group discussions, and this contributes to the goal to be achieved, that is, the co-researchers finding ways to improve vocational education in special schools (Chano, 2024). This theory is particularly relevant to participatory methodologies such as PALAR, where knowledge is co-constructed through dialogue, reflection, and shared experience. While widely accepted, social constructivism has faced critiques for its limited attention to power dynamics and structural inequalities within collaborative learning environments. These debates are especially pertinent when applying the theory to inclusive education settings, where learner agency and systemic barriers must be critically examined. Figure 2.2 below is an illustration of the importance of social constructivism discussed above.

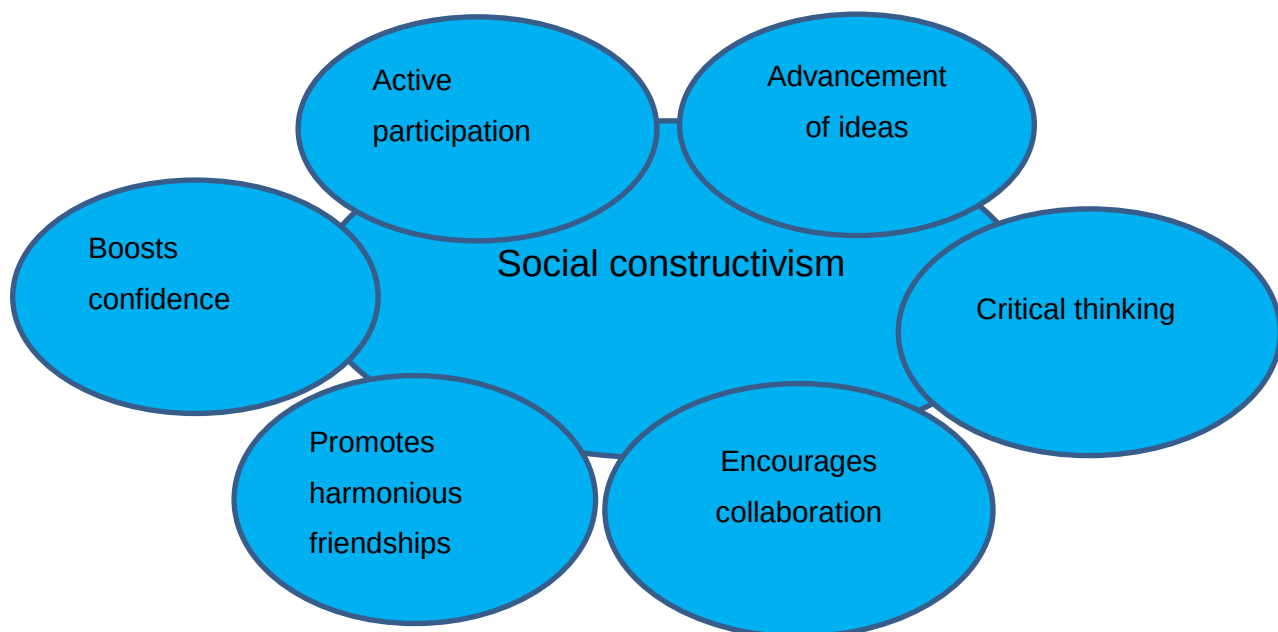


Figure 2.2: Importance of social constructivism theory

Source: Author's own construct

According to Saleem et al. (2021), the social constructivism theory of Lev Vygotsky promotes the importance of language and culture impacting the individual's logical growth and perception of the world. These authors further state that logical growth builds knowledge shared amongst a community that shares a language and has the same goals

and values. The same goal which the co-researchers have is collaboratively sharing ideas to improve vocational education in special schools.

2.2.1 Social constructivism to improve vocational education in special schools

The three fundamental tenets of the social constructivism model displayed in Figure 2.3 are as follows: co-researchers struggle to find solutions whereby reality cannot be discovered before its social invention; a zone of proximal development (ZPD) is created where co-researchers learn from each other, and learning is the outcome of a social process in which meaningful learning is gained by social engagement; lastly, co-researchers learn independently, and as a result, knowledge is a product built through social interactions (Leong, 2022).

Since this study was participatory, social constructivism theory was appropriate to guide the co-researchers. This theory currently serves as a basis for critical thinking in the educational sector, thus influencing the research field to resolve challenges affecting progress for special needs learners (Hay & Joubert, 2021).

The ZPD model assisted the co-researchers who struggled to find solutions to the challenges related to vocational education. Leong (2022) suggests that co-researchers who come across challenges can learn from more experienced co-researchers. According to Ofori-Attah (2021), Vygotsky contended that people gain more knowledge when they learn from more knowledgeable people; this will bring out the best in them, and lead to innovative ideas to solve the identified challenges regarding vocational education. Vygotsky presented the concept of a ZPD in the theory of social constructivism, and it is a zone where an individual cannot resolve a challenge on their own but which rather can be solved collaboratively by a group of co-researchers (Palit, 2020). According to Bozkurt (2017), Vygotsky believed that cooperation in the co-researcher's zone of proximal development nurtures the advancement of individual cognition, which mainly depends on more experienced researchers. This application of ZPD within the PALAR framework demonstrates how theory directly informs practice, enabling co-researchers to scaffold learning and co-develop strategies for vocational education reform. Figure 2.3 below is an illustration of Vygotsky's ZPD model.

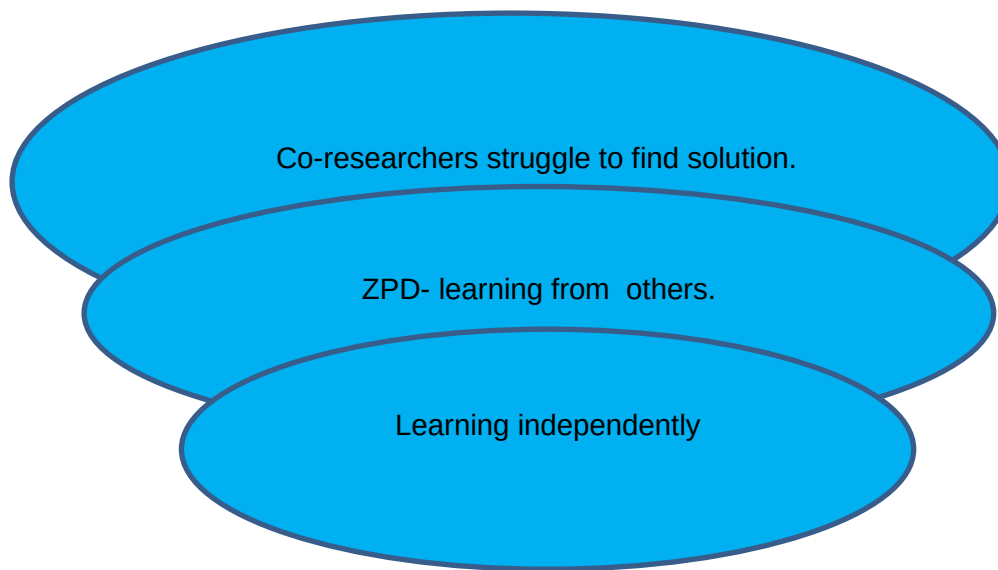


Figure 2.3: Vygotsky's ZPD model

Source: Author's own construct from Palit (2020)

The theory interrelated with constructivism theory to aid in the improvement of vocational education in special schools is the AL theory.

2.3 Action learning theory

Revans was the one who first proposed AL theory and saw it as a process of problem-solving for co-researchers facing diversity and adversity. It includes asking questions collaboratively and engaging in reflective inquiry to learn from different viewpoints (Ling, 2019). According to Mohamed (2023), the following components of AL are outlined in Figure 2.4 and are explained as follows: **Problem** – AL focuses on a problem, challenge, or issue whose resolution is critical for co-researchers to improve vocational education in a special school; **Group** – serves as the fundamental part of AL, which consisted of 5 co-researchers who were accountable to find solutions to the identified problem; **Questions** – the emphasis is on thought-provoking questions rather than statements; **Action** – the co-researchers must have the power to act and ensure that the identified challenge is resolve, so they therefore took it upon themselves to come up with actions that can bring a positive change in vocational education; **Learning** – the co-researchers ensured that they learn from one another throughout the research process; **Coach** – provides guidance and support to the co-researchers throughout the study, ensuring that they understand

the process of PALAR and the purpose of this study. AL theory complements social constructivism by operationalising collaborative learning into cycles of inquiry, reflection, and action.

AL theory is a process of resolving challenges and allowing co-researchers to ask questions, reflect, and learn from each other (Ling, 2019). Coghlan and Rigg (2012) contend that AL theory is a philosophy rooted within the fields of organisations needing solutions to the identified challenge, and allows co-researchers to frequently work collaboratively on complicated challenges (Serrat, 2017). AL theory has been shown to be an effective method for change within the realm of organisational development, which is where it began (Wood et al., 2023). One of the benefits of AL is that it enables co-researchers to share ideas and give advice to one another, developing decisive leadership skills (Goertzen, 2019). Han et al. (2016) assert that groups of people have been using AL theory to reflect on and collaboratively develop solutions to identified challenges. The AL theory has become a crucial tool for co-researchers to resolve identified issues to improve a situation (Wood et al., 2023). Therefore, positive actions to bring change in the implementation of vocational education can only be a success if the co-researchers understand collaboration which is embedded in AL theory. While AL theory is widely embraced, some scholars argue that its effectiveness depends heavily on facilitation quality and group dynamics, which may vary across contexts. This underscores the need for ethical and inclusive facilitation in participatory research. Figure 2.4 below displays components of action learning.

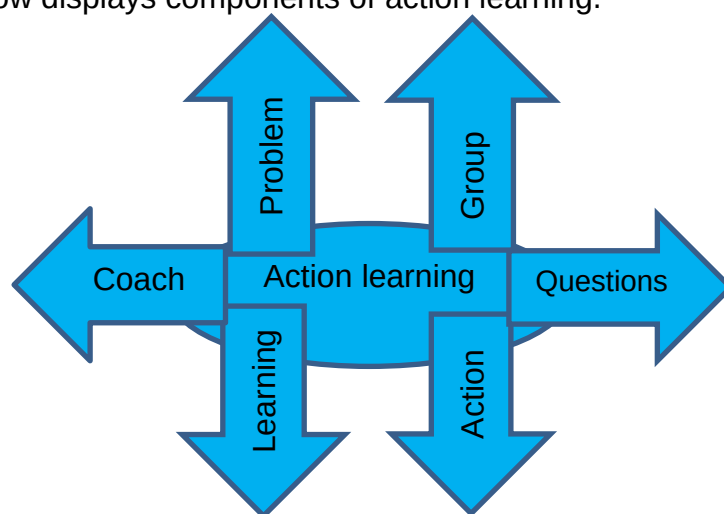


Figure 2.4: Components of action learning

Source: Author's own construct

2.3.1 Action learning to improve vocational education in special schools

AL theory is essential for co-researchers in addressing life's hurdles. Joint endeavours can help overcome recognised challenges hindering the improvement of vocational education. Therefore, co-researchers can employ AL's sustainable development aspect by learning to act amongst the special needs learners, especially those who undertake vocational education, to promote interdependence and resilience when facing life's pressures (Jama & Wood, 2024). According to Serrat (2017), AL promotes awareness and permits the co-researchers to advance their development to deal with challenges. It improves communication skills, encourages creativity, and promotes a sense of responsibility and lifelong learning. Figures 2.5 illustrate the cyclical process of AL suitable for this study. The process starts from the top and moves in a circle to allow each co-researcher to state challenges and provide feedback to other co-researchers (Serrat, 2017). This cyclical model reflects the iterative nature of participatory action research and reinforces the study's commitment to inclusive, transformative learning. Figure 2.5 below is a summary of the action learning process.

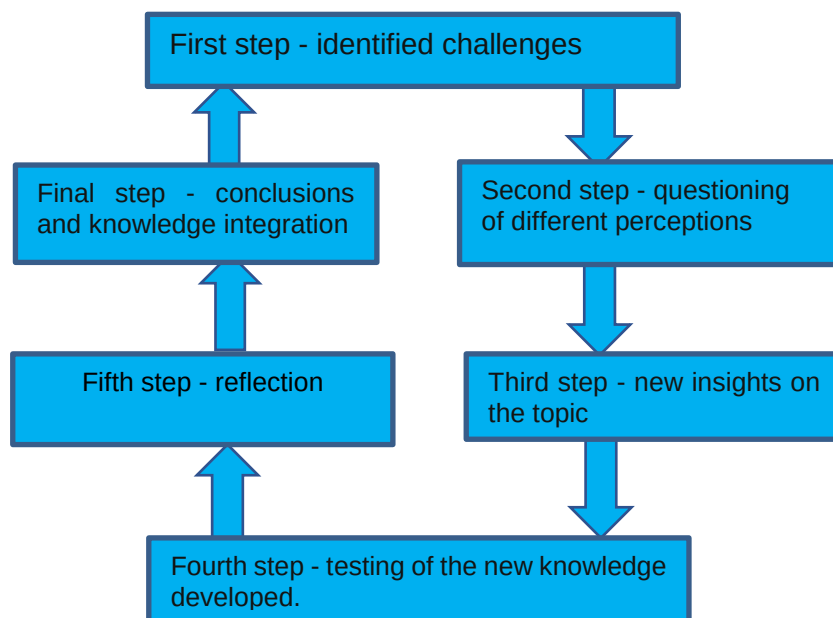


Figure 2.5: Action learning process

Source: Author's own construct

In the first step, the AL process started when the co-researchers stated the challenges they face to provide vocational education to special needs learners; in the **second step** the co-researchers questioned one another to identify different perceptions; in the **third step** the co-researchers developed new insights about the topic; in the **fourth step** the co-researchers tested the new knowledge developed; in the **fifth step** the co-researchers reflected on what worked, what did not work and what can be improved; in the **final step** the co-researchers drew conclusions and marked learnings. Lastly, the integration of the new knowledge was put into practice (Serrat, 2017).

Co-researchers drew on the following process;

- ✚ Before the first meeting, co-researchers thought about the challenges they want to discuss during the first meeting, and agreed on the time and venue to meet.
- ✚ The researcher explained again to the co-researchers the ethics and critical features of the PALAR methodology.
- ✚ Co-researchers were given a chance to write down all the challenges regarding vocational education, then had a discussion, asked questions, and reflected.
- ✚ The meeting ended with an analysis of new knowledge gained. The co-researchers agreed on the logistics of the next meeting.
- ✚ Co-researchers applied AL and social constructivism theory to solve identified challenges regarding vocational education. They were able to interact effectively with each other, and provide support to each other, as well as develop leadership skills (Amna et al., 2021; Serrat, 2017).

The previous sections dealt with the theories, social constructivism and action learning theory underpinning this study. The following section focuses on the most important concept for this study – vocational education.

2.4 Vocational education

According to Pasaribu and Harfiani (2021), vocational education is a specialised education that includes lessons based on theoretical and practical work, to assist special needs learners according to their talents. These authors further state that vocational education in special schools equips learners with entrepreneurial skills and careers in specific fields customised to their abilities. Though vocational skills are a solution for

learners who cannot cope with the mainstream curriculum (Ling et al., 2021), they serve as an essential aspect of their lives as they open possibilities for them to gain skills. Ling et al. (2021) further state that special needs learners can develop through vocational education. This concept is central to the study's aim of enhancing inclusive education, as vocational education offers a pathway to independence, dignity, and economic participation for learners with severe intellectual disabilities (SID).

2.5 A South African perspective on vocational education with a focus on special needs learners

In South Africa, the severe intellectual disability (SID) curriculum established through the Curriculum Assessment Policy Statement (CAPS) was approved by the Minister of Basic Education in 2013 (Rens & Louw, 2021). According to the Department of Basic Education (2018), DCAPS accommodates learners with barriers to learning ranging from moderate to severe intellectual disability throughout the school age range. However, for this study, the focus was on SID learners. This curriculum framework provides the structural basis for vocational education in special schools (Solomon et al., 2024), and reflects South Africa's commitment to inclusive education.

The Convention on the Rights of Persons with Disabilities (2006) and the White Paper on the Rights of Persons with Disabilities (2015) state that the Differentiated Curriculum and Assessment Policy Statement (D-CAPS) promotes the development of talents for learners experiencing barriers to learning, preparing them for independence and free participation in society (DBE, 2018). DBE (2018) further states that one of the objectives of DCAPS is to enable the special educators to teach vocational education to learners experiencing barriers to learning, and equip them for work in a sheltered, protected workshop, or to be employed in an open labour market under supervision. This policy alignment illustrates how vocational education is not only pedagogical but also a rights-based imperative.

Furthermore, the DBE (2016) highlighted that for learners to be diagnosed with a specific disability, the therapists must perform clinical assessments and conduct standardised tests. Standardised tests include an intelligence quotient (IQ) test used to test the intellectual level of the learners, and a score of less than 75 indicates a low intellectual

level. According to Sonia and Sarungbam (2023), the IQ for learners with mild ID is between 50 and 70, with moderate ID is between 36 and 49, severe ID is between 20 and 35, and those with profound ID have an IQ that is below 20. As a result, learners with low scores in IQ mostly need help with theory rather than practice or vocational education (DBE, 2016). Shree and Shukla (2016) reported through the study they conducted that learners with low IQ scores need help understanding theoretical work as opposed to practical work, and these learners work at a slow pace. Hence, special needs learners should have 80% of hands-on activities and 20% of theoretical work in vocational education following the DCAPS curriculum (DBE, 2018). This adaptation reflects a learner-centred approach and underscores the conceptual framework's responsiveness to cognitive diversity. Therefore, the delivery of vocational education depends on the different talents of special needs learners (Jauhari et al., 2020). DBE (2018) further states that SID schools in South Africa admit learners from the age of five, and the exit age is 18 years. Therefore, learners must be in different grades according to the following chronological ages: grade R from age 5 to 7; grade 1 for ages 8 and 9; grade 2 for ages 10 and 11; grade 3 for ages 12 and 13; grade 4 for ages 14 and 15, and lastly, grade 5 for ages 16, 17 and 18 (DBE, 2018).

All vocational subjects offered by the SID school, as stated in the Grade R-5 Curriculum and Assessment Policy Statement Grade R-5 for Learners with Severe Intellectual Disability, are listed below in table 2.1. This structured progression ensures age-appropriate skill development, and aligns with the broader goals of inclusive vocational education. Table 2.1 below outlines the vocational subjects offered by the SID school.

Elective vocational subjects	Time allocation	Ages
Agricultural studies	8 Hours per week	14-18 years (Grade 4 and 5)
Arts and crafts		
Civil technology: Bricklaying and plastering		
Civil technology: Plumbing		
Civil technology: Woodworking and timber		
Consumer studies: Food production		
Hospitality studies		
Mechanical studies: Body works - Panel beating and Spray painting		
Mechanical technology: Motor mechanics		
Mechanical technology: Welding		
Office administration		
Personal care: Ancillary health care		
Personal care: Beauty and nail technology		
Personal care: Hairdressing and beauty care		
Service technology: Maintenance		

Table 2.1: Vocational subjects in SID school (DBE, 2018)

The following sections focus on the challenges hindering the full implementation of vocational education for special needs learners.

2.5.1 Challenges regarding vocational education resources in South African SID schools

According to Mohd et al. (2023), learners experiencing barriers to learning must receive access to adequate resources that meet their different needs, enabling them to reach their full potential. However, it is a concern when there is evidence that continues to mount

that the lack of resources in special schools continues to be a barrier to allowing learners to receive a good quality education. Although some learners with barriers to learning might have a passion for the skills taught at special schools, many challenges still hinder their educational accomplishment (Mohd et al., 2023). Access to appropriate resources for learners with learning barriers, including facilities and equipment needed for vocational education, remains challenging in special schools (Adebisi et al., 2014). Rens and Louw (2021) contend that since the implementation of the SID curriculum, special educators have faced numerous challenges due to limited resources. Furthermore, unions and SMTs have highlighted that more resources are needed to ensure the ability to manage the learners' needs within the school (Kennya et al., 2020). This reflects a critical limitation within the conceptual framework: while policy and curriculum are well-articulated, implementation is constrained by systemic resource gaps.

Although there are challenges, such as a need for more resources identified by various researchers, special educators and the community should assist in providing support to equip learners in need of this support to fulfil their dreams, or become independent (Garcia-Melgar et al., 2022). Hence, it is emphasised within the Convention on the Rights of Persons with Disabilities (2015) that people with disabilities should have the same equal rights, resources, and opportunities that can assist them with independent living (Mohd et al., 2023). Independent living means that special needs learners need the same resources as others to make decisions to start their own families, and those who need low intensive support obtain employment that matches the skills they learned at special schools (Solomon et al., 2024).

According to Essays (2018), resources are written sources, visual and audio aids, people, and technology to support special educators and learners with barriers to learning in the education process. Furthermore, resources play a significant role in helping learners with learning barriers to process the information being taught to them, making it easy to connect the information to their brains (Essays, 2018). This cognitive link between resource access and learning outcomes reinforces the conceptual framework's emphasis on equity and inclusion. These become a considerable concern when there is a lack of resources to enable learners to connect the information to their brains with this help.

The new SID school where I work offers vocational subjects such as beauty and nail technology, needlework, woodwork, agricultural studies, hospitality, and arts and crafts, which still need to be fully implemented due to the need for more resources. Moreover, most learners get bored and unmotivated because there are insufficient resources for vocational education. According to Reyes-Ortiz (2019), special needs learners may be more prone to experiencing a decline in motivation during their educational journey, and therefore inadequate motivation is likely to hinder their learning efforts. The new SID school tried to implement the practical part of agricultural studies (see figure 2.6 and 2.7), but it did not materialise due to a lack of resources and a shortage of special educators. The images below were taken by the researcher at the school which the study is based, and the researcher included them in this chapter to support the research done by other researchers used in this study's literature review, specifically in section 2.5.1. This case study illustrates the real-world implications of the conceptual framework, and highlights the urgent need for systemic support to realise its goals.



Figure 2.6: Special Needs Learners cleaning weeds in the garden.



Figure 2.7: An image showing weeds that keep on growing

Special needs learners capable of learning and doing skills are enthusiastic and willing to learn more, as they know that what they learn at special schools might be their only hope to make a living when they exit the school. Omar and Farzeeha (2019) believe that special needs learners can apply the skills they acquired if society has a different mindset regarding their abilities. Moreover, awareness for employers about the various abilities of special needs learners can be raised (Das, 2025).

2.5.2 Challenges regarding vocational training for special educators

Special educators should receive vocational education training to equip and enable them to deliver quality vocational education to special needs learners. According to Jauhari et al. (2020), special educators teaching vocational education should be competent, with relevant skills and qualifications. Lack of training may make them unable to deliver and fulfil their obligation, and cause a poor judgment of them from society or the parents. As a result, parents may believe that their children are better off staying at home, since there are no improvements in the skills and knowledge meant to be provided to their children in special schools. Adebisi et al. (2014) highlighted that some parents have lost hope and believe that their children cannot acquire any knowledge and achieve in special schools, thereby they have only one option, which is allowing them to ask for food and money on the streets because of unemployment, or staying with them at home. Wang (2024) asserts

that if special needs learners are attending the special schools where their needs are catered for, parents become relieved.

Hence, the vocational education provided in special schools must be of good quality, as it plays an important role by giving hope to learners experiencing barriers to learning that they can become something better. Learners' lives can be successfully fulfilled with the help of skilled special educators to ensure the successful delivery of vocational education (Opoku, 2016). This underscores the conceptual link between educator competence and learner empowerment, which is central to the study's framework. Figure 2.8 below outlines the positive outcomes that can be enhanced by involvement of the District-Based Support Team (DBST) and SMT.

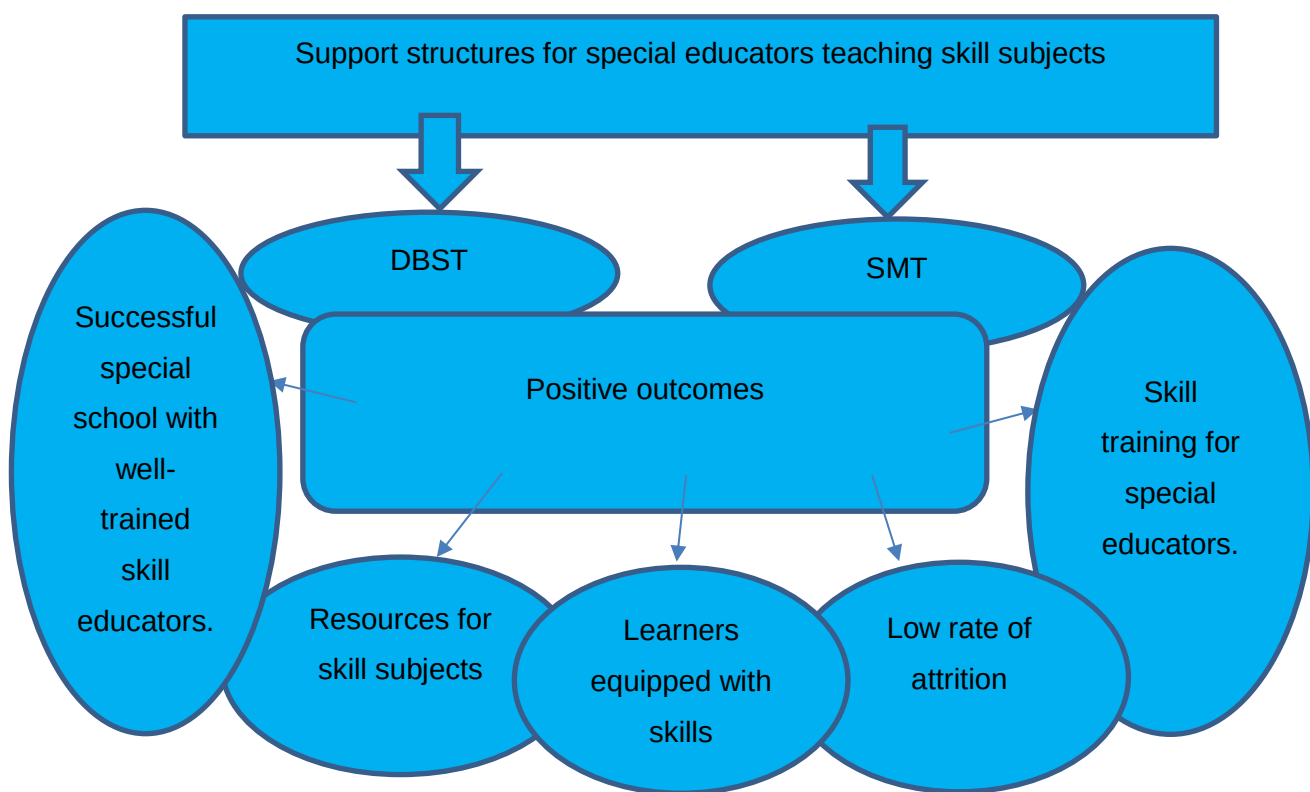


Figure 2.8: Positive outcomes of a strong supportive structure towards special educators

Source: Author's own construct

Special educators without vocational skill training can become described as failures or incompetent in doing their jobs, and they can be flexible enough to resign and look for

something better elsewhere. According to Williams et al. (2020), studies have revealed that special educators who need training to teach special needs learners are more prone to attrition. Williams et al. (2020) further explain that data from a follow-up survey of educators in a national illustrative sample found that fully-skilled special educators were more likely to be in the same school for a long time than those who were not. Therefore, it is beneficial when special needs learners are taught by special educators, who will use a specific curriculum, with instructions designed to meet the needs and abilities of the learners (Opoku, 2016). This reflects the importance of retention and stability in special education environments, which directly impacts learner outcomes.

Special educators' training in vocational education can only be possible with supportive solid structures such as the SMT and the DBST. Williams et al. (2020) assert that, though district officials play an essential role in supporting and coordinating special schools, they often need to express more knowledge regarding special educators and how to help them. Adebisi et al. (2014) argue that these officials can be named as non-professionals who need more passion for special needs learners. This situation harms the entire development of the school, including training special educators. DBST support is essential to ensure that teaching and learning are improved in special schools (Cibane, 2020).

Williams et al. (2020) state that when district officials understand the role of special educators, including resources and support systems, special schools can have more positive outcomes. Therefore, well-trained and satisfied special educators can lead successful special schools (Strydom., 2012). The advantage of trained special educators is that they are equipped to provide targeted support for special needs learners, fostering inclusive and skill-based learning environments (Wang, 2024). This section highlights a key limitation within the conceptual framework: the success of vocational education is contingent not only on curriculum design but also on systemic support and educator development. The advantage of trained special educators is that they will know how to provide support for special needs learners (Wang, 2024).

2.6 International perspectives on vocational education with a focus on special needs learners

The Malaysian government introduced special needs education in 1920, catering to the needs of special needs learners (Jamaluddin et al., 2021). By 2013, the Malaysian Minister of Education launched a 2013-2025 plan for an education curriculum for special needs learners, focusing on vocational education to equip the learners with job skills (Dahalan & Toran, 2023). Othman et al. (2022) argue that the 2013-2025 plan caters to learners with different disabilities: learning barriers, physical disabilities, and visual, physical, and hearing impairments. In Malaysia, several special schools offer vocational education to cater to the needs of learners and to provide them with Malaysian skill certificates (SKM) to enable them to be employable (Omar & Farzeeha, 2019). This international example illustrates how policy-driven vocational education can promote employability and social inclusion for learners with disabilities. Table 2.2 displays all vocational subjects offered by Malaysian special schools.

One of the challenges experienced by special needs learners is the level needed for skill acquisition, which is achieved if special educators are competent to teach vocational education (Jamaluddin et al., 2021). In Malaysia, some special educators have special education degree qualifications, and others have certificates in special education (Zaid et al., 2021). Table 2.2 outlines the vocational subjects offered for special needs learners by the Malaysian special schools.

Division	Vocational subjects
Hospitality	• Hairdressing • Cooking and baking • Cleaning services
Motorcycle Fitting	• Motorcycle maintenance and servicing
Woodworking	• Woodwork manufacturing
Sewing	• Women's tailoring
Printing-impact skill	• Desktop publication

Table 2.2: Vocational subjects offered for special needs learners (Omar & Farzeeha, 2019)

The following section elaborates on the challenges experienced by Malaysian special schools regarding vocational education.

2.6.1 Challenges regarding the delivery of vocational education in Malaysian special schools

One of the primary challenges faced by Malaysian vocational education for special needs learners is the competency of special educators in teaching vocational skills and managing learners with behavioural problems. As a result, special educators' competency contributes positively toward the learners' skill competency, and plays a significant role in their post-school lives (Dahalan & Toran, 2023). Dahalan and Toran (2023) further highlight that special educators need extensive knowledge of vocational skills and effective strategies for handling special needs learners, ultimately preventing attrition. To alleviate the chances of their attrition, special educators should receive different forms of support and teaching aids to gain confidence in providing skills and knowledge to the learners (Dahalan & Toran, 2023). Apart from special educators' competency in vocational education, other factors such as teaching aids, workshops for skills, and equipment for different skills can positively affect the delivery of vocational education (Jamaluddin et al., 2021). This reinforces the conceptual framework's emphasis on the interdependence between educator capacity, resource availability, and learner outcomes. Subsequently, as special needs learners prepare to exit special schools, their parents are increasingly concerned about their prospects without adequate skills training. Unfortunately, misconceptions held by employers about special needs individuals only exacerbate the situation, leading to a lack of job opportunities and a limitation of valuable job experience (Omar & Farzeeha, 2019). According to Dahalan and Toran (2023), employers might have concerns about hiring learners with behavioural and emotional challenges. To alleviate employers' misconceptions about individuals with special needs, the action plan on Learners with Learning Barriers 2016 to 2022 outlines several aspects, including advocacy. The goal is to raise awareness and create a positive attitude in the community toward special needs learners through effective programming (Jamaluddin et al., 2021). This case illustrates how conceptual frameworks must account

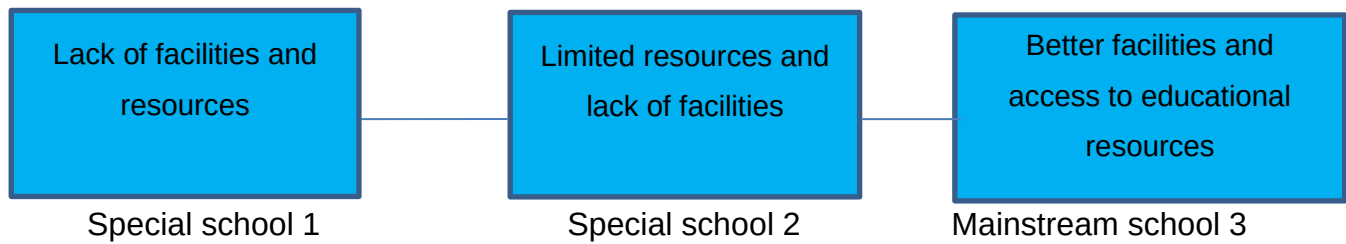
for societal perceptions and systemic barriers, which influence the success of vocational education initiatives.

2.7 Severe intellectual disability and its consequences for education

Intellectual disability (ID) is defined as the most prevalent nature of developmental disability, which lasts a lifetime (Solomon, 2023), and the cause is usually unknown (Shree & Shukla, 2016). According to Sonia and Sarungbam (2023), ID learners may have difficulty in carrying out basic life skills, and it becomes visible before the age of 18. Shree and Shukla (2016) further state that ID has profound social implications that impact not just the individual with the disability but also their families and the community. They may have limited intellectual capability (Marín-Suelves et al., 2023). SID learners receive support through an individual educational plan (IEP), a document that assists in the learners' progress and the implementation of guidelines explicitly drawn up for the specific exceptional learner and which is legally compliant (Tremblay & Belley, 2017). According to Chitiyo and Dzenga (2021), the IEP document outlines detailed goals for special needs learners, and the goal is to assist the learners in accomplishing their learning goals more successfully than they otherwise might. This conceptual clarification demonstrates the significance of tailored educational planning for SID learners, aligning with inclusive education principles.

Learners who have an ID or other disabilities require support provided at special schools (McKenzie et al., 2023). Moreover, their memory capacity is below average compared to learners without disabilities, making it difficult to connect new knowledge to real-life situations (Shree & Shukla, 2016). Marín-Suelves et al. (2023) argue that ID learners may have neurodevelopmental disability affecting their motor and sensory development, social and emotional behaviour, and basic reasoning functions. Shree and Shukla (2016) further state that severely intellectually disabled learners are divided into mild, moderate, severe, and profoundly intellectually disabled. For this study, the focus is on learners with severe intellectual disability (SID), whose educational needs require intensive support and differentiated instruction. For this study, the focus was on the learners with severe intellectual disability. Figure 2.9 below is a diagram displaying the unequal and equal educational opportunities in different schools.

1. Unequal educational opportunities for learners with learning barriers



2. Equal educational opportunities for learners with learning barriers

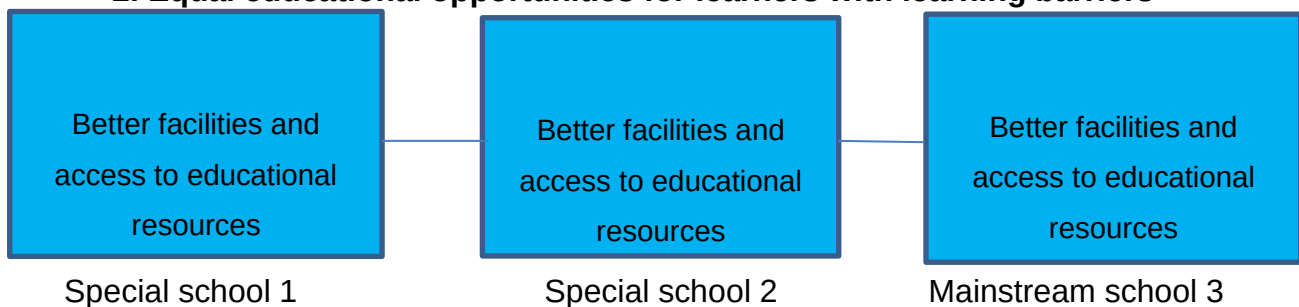


Figure 2.9: Diagrams 1 and 2: displaying unequal and equal educational opportunities in different schools

Source: Author's own construct

Against the background of apartheid in South Africa, education for special needs learners, including intellectually disabled learners, was given less attention, especially for black children (Wood et al., 2019), which included a lack of or inadequate resources (Solomon, 2023). Researchers found that lack of access to learning material was one of the challenges faced by special needs learners (Botha et al., 2023). Then, in 1994, it was stated within the South African democratic Constitution, that equal opportunities in education would be available to all learners. Unfortunately, this right provided within the Constitution was not immediately implemented, as Wood et al. (2019) posit that on March 18 2004, several learners, their parents, and staff members from special schools, coming from both urban and rural settlements, began a protest at the Provincial Education Minister's office to request equality in education for special needs learners. As a result, this right came into effect in 2010, under court case number 18678/2007 in the Western Cape Forum for ID vs the Government of the Republic of South Africa. Subsequently, DBE was obligated to ensure that all special needs learners receive quality education

(McKenzie et al., 2023). This historical case illustrates the systemic barriers faced by SID learners, and the legal interventions required to uphold their educational rights.

2.8 Collaborative interventions to overcome the specific challenges mentioned internationally and locally

According to Keyton (2017), collaboration is a way of interacting and working together to resolve an identified challenge to reach a common goal. Keyton (2017) further states that collaboration requirements entail an interaction between two or more cities or countries to work on finding new ideas. Lusha (2024) argues that collaboration involves several people working together with the same understanding, sharing resources and ideas to reach a common objective. This conceptualisation of collaboration aligns with participatory and systemic change models, reinforcing the framework's emphasis on multi-stakeholder engagement.

Considering the challenges experienced by special schools internationally and locally, Jauhari et al. (2020) posit that to improve the challenges regarding the improvement of resources in special schools, there should be a partnership between special schools and companies or factories, to expose exceptional learners to different skills at different workplaces according to their capabilities.

A collaboration between companies/factories and special schools can alleviate, if not all, at least a few of the challenges regarding the shortage of resources in special schools. For example, suppose special schools offer skills like woodworking and timber, but teaching special needs learners only the basics of making chairs or tables. Factories can provide **job shadowing** to further special needs learners' knowledge acquired from the school (Das, 2025), and take them step-by-step through designing chairs or tables used for residential/business settings. This illustrates how collaborative interventions can bridge the gap between school-based vocational training and real-world skills application.

What will be more beneficial is that factories will have more equipment than the special schools. As a result, they can even **donate equipment** they no longer use but which is still in good condition, or **donate funding** for special schools to buy equipment or materials. Furthermore, to limit the chances of special educators' attrition and ensure that those not yet trained to teach skills do not get demotivated, the SMT can organise for

them to be workshopped by the companies about current developments in their industries (Jauhari et al., 2020). Educators attending **workshops** can incorporate the DCAPS curriculum into the skills they were equipped with during workshops. This intervention reflects the framework's emphasis on educator development, resource mobilisation, and learner empowerment. However, a potential limitation is the dependency on external stakeholders, which may affect sustainability and consistency of support.

In this section I explored a collaborative intervention between South Africa and Malaysia to bring about positive change in improving vocational education in special schools. This international collaboration exemplifies the potential of cross-border partnerships in addressing systemic challenges and enhancing inclusive vocational education. Figure 2.10 below outlines a summary of benefits of special schools working collaboratively with factories.

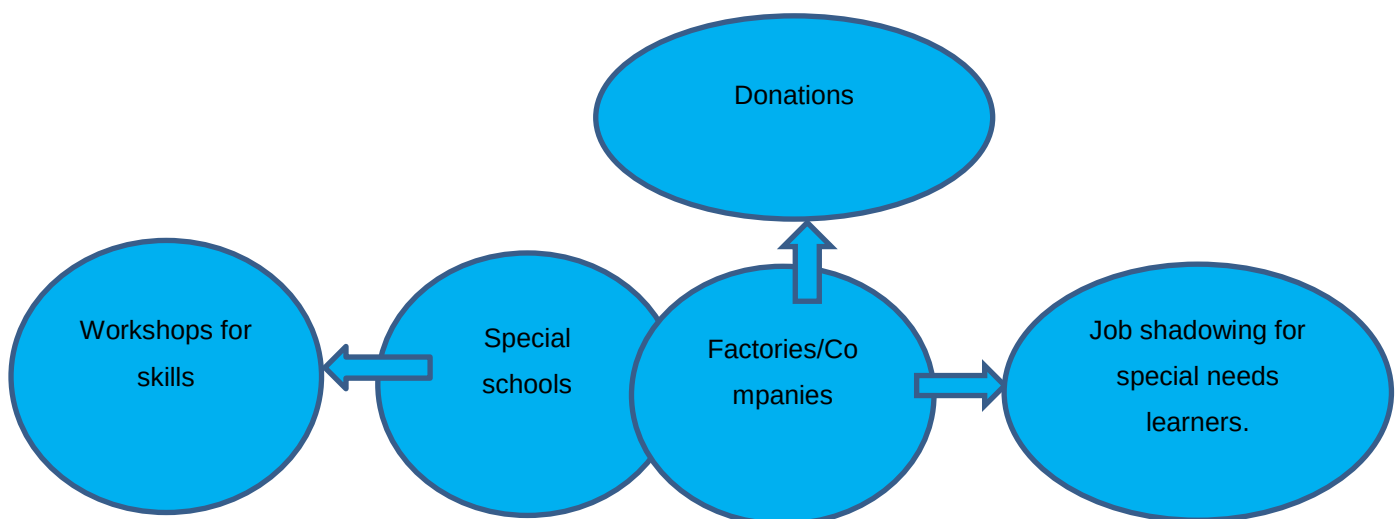


Figure 2.10: Special schools working collaboratively with factories

Source: Author's own construct

2.9 Chapter Summary

In this chapter, I discussed South African and international perspectives on vocational education, focusing on special needs learners. I also explained severe intellectual disability and its consequences for education, and collaborative interventions to overcome the specific challenges mentioned, both internationally and locally. Lastly, I

discussed the integrated theoretical frameworks to outline how they can assist co-researchers in developing solutions to improve vocational education in special schools. Together, these elements provide a conceptual and contextual foundation for the study's methodological approach. In the next chapter I provide a theoretical validation regarding the research methodology, with a focus on participatory action learning and action research cycles that guided the inquiry process.

CHAPTER 3: A THEORETICAL DISCUSSION OF THE RESEARCH METHODOLOGICAL CHOICES

3.1. Introduction
3.2 Purpose of the research
3.3 Research methodology
3.4 Research paradigm
3.5 Research design
3.6 Research methods
3.7 Role of the researcher
3.8 Data analysis
3.9 Quality criteria
3.10 Ethical considerations
3.11 Chapter summary

Figure 3.1: Chapter 3 overview

3.1 Introduction

Vocational education in special schools is not merely a curriculum offering – it is a transformative pathway toward inclusion, empowerment, and lifelong opportunity (Pasaribu & Harfiani, 2021). This chapter explores how PALAR can serve as a catalyst for such transformation, placing collaboration and reflection at the heart of educational change. In this chapter I anticipated demonstrating how PALAR can improve vocational education in special schools. According to Chukwuere (2021), a theoretical framework is a supportive structure for a theoretical theory that guides researchers to gain knowledge about data and the analysis of the results. Building on the foundational concepts and methodological rationale presented in chapter two, this chapter moves from theoretical framing to practical application, showing how PALAR was operationalised within the study. In this research study, I began by explaining the purpose of the research study, research methodology, action research design, research methods, data generation process, thematic analysis, and ethical considerations. This chapter is significant within the broader research because it lays the groundwork for understanding how collaborative inquiry and reflective practice can generate meaningful insights into vocational education

challenges and opportunities. Since improvement in vocational education requires a collaborative approach, different approaches that stakeholders utilise to improve vocational education in special schools were addressed. The chapter will provide a detailed account of the research design and methodological choices, setting the stage for the findings presented in chapter four. It highlights how co-researchers engaged with the PALAR process to co-create knowledge, and how their lived experiences shaped the thematic outcomes of the study.

3.2 Purpose of the research

In this research study I aimed to explore and identify the current strategies to provide vocational education, and actions that stakeholders took to improve vocational education in special schools. The co-researchers and I used a PALAR approach as a guide to find ways to improve vocational education.

3.3 Research methodology

The critical transformative paradigm is a framework for promoting justice and equitable opportunity in marginalised and impoverished communities. To follow this paradigm, the co-researchers ethically addressed issues impacting the school (James et al., 2024). Consequently, the critical transformative paradigm was deemed an appropriate research methodology to guide this study.

A research methodology is a systematic way to research and obtain relevant data to address research questions or investigate an issue. It describes the methods, processes, and resources the researchers employed to organise, create, carry out, and evaluate (Kassu, 2019). The co-researchers defined their goals and problems and provided the findings derived from the information gathered throughout the investigation (Kassu, 2019). Omodan (2022) asserts that the transformative research paradigm is more than just the information gathered throughout the research study; it is about allowing the co-researchers to voice out their challenges and take part in resolving the identified issues. Moreover, this paradigm can bring about significant change.

3.4 Research paradigm

According to Omodan (2022), the critical transformative paradigm is a research viewpoint that draws from concepts and theories with the shared objective of transforming and

emancipating communities by collective action. It is grounded in critical theory and participatory principles, aiming to challenge structural inequalities and promote inclusive change through dialogic engagement. Omodan (2020) further stresses that selecting a transformative paradigm is not restricted to the research methodology and its philosophy; interviews, social observation, interactions, and discussion groups are all within the domain of the transformative paradigm when it comes to data gathering for such studies. This paradigm therefore aligns with participatory methodologies such as PALAR, which prioritise co-construction of knowledge and stakeholder empowerment.

According to Omodan (2022), transformative researchers work to establish a good relationship with the co-researchers, based on mutual respect and trust. Second, they see research as a collaborative process where they learn from one another. Thirdly, they emphasise the significance of context for comprehending research findings, and regard knowledge as socially created. Lastly, transformational researchers hope to free the lives of those studied, and advance social justice through their work (Omodan, 2022). These principles directly informed the relational and ethical stance adopted in this study, where co-researchers were actively involved in shaping the inquiry and interpreting findings. According to Romm (2015), special needs learners, and those who are impoverished, are examples of disadvantaged groups whose lives and experiences are given paramount significance by the critical transformational paradigm. According to UNESCO (2024), special needs learners who are at risk of being marginalised in educational systems come across interrelated obstacles affecting their learning. I therefore investigated strategies that aimed to improve vocational education in special schools. Given the paradigm's commitment to equity and voice, it provided a robust lens through which to examine and address systemic barriers in vocational education for special needs learners. As a result, the critical transformational paradigm was suitable for this study, as special needs learners may benefit from improved vocational education. Its emphasis on transformation, inclusion, and collaborative inquiry made it particularly appropriate for a PALAR-based study focused on educational change.

The following is an element of the critical transformative paradigm: **epistemology** is a power imbalance among co-researchers, and it is therefore necessary to build interactive relationships (Kivunja & Kuyini, 2017; Omodan, 2020). Results are transactional and lead

to objective knowledge production (Omodan, 2020). This epistemological stance shaped the study's data generation process, ensuring that knowledge emerged from shared reflection and mutual learning. Through the PALAR design, the co-researchers collaboratively stated their reasoning on challenges preventing the improvement of vocational education. Moreover, it developed a new understanding of actions that can bring about positive change in a new SID school. This demonstrates the paradigm's applicability to the chosen research approach, where knowledge was not extracted but co-created.

Ontology is the perspective on reality and existence, which can influence the theoretical framework used for this study (Omodan, 2020). This assumption encouraged the co-researchers to ask questions about the nature of the research problem (Kivunja & Kuyini, 2017). Thus, the ontology for this research study was interactive, allowing the co-researchers to share their perceptions based on experiences. This ontological position reinforced the study's commitment to valuing diverse lived realities and contextual understandings.

Methodology: According to the principle of the transformative paradigm's methodology, research aims to dispel myths, illusions, and incorrect information so that people are empowered to act and change their society on an indigenous level. As a result, both the researcher and the participants were called co-researchers. This allowed them to cooperate and deal with the identified issue without assuming dominance (Omodan, 2020). The PALAR methodology was thus a natural extension of this paradigm, enabling iterative cycles of reflection, action, and learning.

The axiology paradigm encouraged me to consider ethics, a field of paradigm assumptions that tackles difficulties. In addition, it assisted with the advancement of social fairness, human rights, and moral and cultural respect. It tackled reciprocity and injustices equally. The transformational paradigm's axiology established and maintained the standards for doing this research (Kivunja & Kuyini, 2017; Omodan, 2020). Ethical considerations were embedded throughout the study, ensuring that the research process upheld dignity, respect, and justice for all participants. Table 3.1 below outlines the elements of critical transformation; meta-theoretical assumptions and emancipatory-critical and participatory paradigms.

Meta-theoretical assumptions	Emancipatory-critical and participatory paradigm
Epistemology	A power imbalance among co-researchers is recognised and addressed. Therefore, the results are transactional and lead to objective knowledge production.
Ontology	The perspective on reality and existence can influence the theoretical framework used for this study.
Methodology	It encourages the participation of co-researchers. It also allows them to cooperate and deal with the identified issue without assuming dominance.
Axiology	The advancement of social fairness, human rights, and moral and cultural respect.

Table 3.1: Elements of critical transformative (Omodan, 2020)

3.5 Research design

We adopted PALAR as the perfect research design for this study, as its benefit was to aid co-researchers with knowledge, skills, or values (Mahadew, 2023). PALAR is rooted in critical and participatory paradigms, making it particularly suitable for research that seeks to empower marginalised groups and foster systemic change. This initial step created a collaborative space where co-researchers could engage in dialogue, identify challenges, and co-develop solutions. Moreover, PALAR represents a transformative community education that improves individuals' abilities by fostering lifelong learning (Wood et al., 2023). According to Martinez-Vargas (2022), PALAR goes beyond just a methodology; it embodies a lifestyle, a work approach, and a mode of existence. It represents a mindset shaped by values, philosophical beliefs, and paradigms of learning, teaching, and investigation. This theoretical foundation aligns with the study's aim to

improve vocational education in special schools through inclusive, reflective, and participatory processes.

PALAR consists of a participatory process where co-researchers work together and learn from one another, while the cyclical process consists of a framework that permits the co-researchers to reflect and analyse (Neethling & Nel, 2021). This cyclical nature – plan, act, observe, reflect – ensures that learning is iterative and responsive to the evolving needs of participants. The co-researchers' adaptation of working collaboratively in the ALS sessions was a critical part of the PALAR research design. Their active involvement ensured that the research approach directly addressed the research question and remained grounded in lived experience.

PALAR concentrates on a limited number of individuals within a community who are vigorously and collaboratively involved in resolving a significant and complex issue, as the problem and its resolution directly impact them (Wood & Zuber-Skerritt, 2013b). Neethling and Nel (2021) and Wood and Zuber-Skerritt (2013b) further state that relationship building, reflection, and recognition are the three foundational components of the PALAR process. **Relationship building** promoted trust among the co-researchers, and **reflection** encouraged co-researchers to learn more about the identified problem to be resolved and to reflect on gained knowledge. **Recognition** focused on the results of the data collected in the PALAR process. Furthermore, it allowed the co-researchers to celebrate shared attainments, which can be the solution to the identified issue, and the celebration continues throughout the entire PALAR process. These components not only enhanced the validity of the findings but also fostered a sense of ownership and empowerment among participants.

The PALAR framework employed in this study allowed the researcher and the co-researchers in this study to participate in a cyclical process to collectively resolve the identified issues through a spiral of **planning** a change, **acting** on that change, **observing** and reflecting on the process and consequences of that change, and lastly, **repetition** (see figure 3.2) (Kemmis & McTaggart, in Tracy, 2019; Puri, 2023). In this study, the co-researchers were engaged in the action learning set (ALS) during the three cycles thoroughly explained in chapter 1. The comprehensive investigation was conducted through repeated cycles of learning and inquiry (Mahadew, 2023). This

iterative structure ensured that the research remained responsive and adaptive, allowing for deeper insights and sustained engagement.

While PALAR offers significant strengths – such as inclusivity, contextual relevance, and empowerment –it also presents limitations. These include the time-intensive nature of the process and the challenge of maintaining consistent participation. However, its alignment with the transformative paradigm and its proven effectiveness in similar studies (e.g. Wood & Zuber-Skerritt, 2013b; Neethling & Nel, 2021) reinforce its appropriateness for this research.

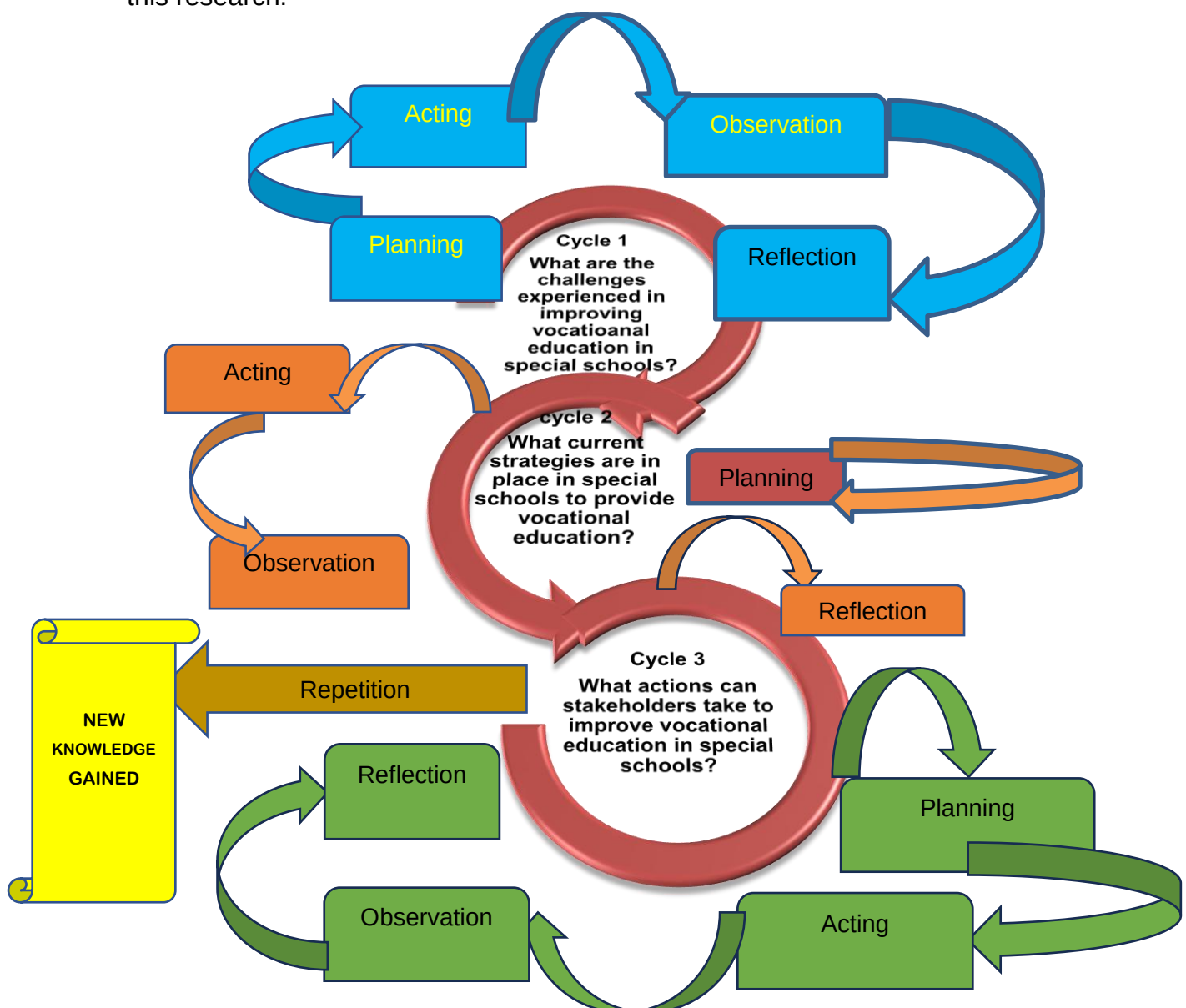


Figure 3.2: The Cyclic process of PALAR

Source: Author's own construct

3.6 Research methods

Research methods allow the researcher to gather and evaluate data (Scribbr, 2024).

Research methods such as observation and focus groups determine how data is collected from the co-researchers, and the researcher chose focus groups as the suitable method according to the study objectives (Khan et al., 2023). Focus groups permitted the co-researchers to obtain data regarding social reality (Nieuwenhuis, 2016). For this study, there was collaboration among the co-researchers.

3.6.1 Site and recruitment of co-researchers

Participant selection in PALAR involves inviting individuals who are meaningfully connected to the research context to engage as co-researchers in a collaborative inquiry process, rather than merely selecting a sample for data collection (Makwana et al., 2023). In action research, participant selection is not about generalisation but about selecting information-rich cases that offer deep insight into the phenomenon under investigation. As a result, a smaller venue and fewer resources were utilised, making the sampling process more manageable and cost-effective. The co-researchers for this study were selected employing purposive sampling, which is part of the non-probability sampling method, where they have suitable characteristics required for this specific research (see table 3.2) (Nikolopoulou, 2023). Etikan et al. (2016) also stress that co-researchers are specifically chosen in purposive sampling based on their qualities, also known as judgment sampling. This method was appropriate because the study required participants with direct experience in vocational education within a SID school context.

Purposive sampling in action research is a sampling method that seeks to find co-researchers who have similar experiences with a central phenomenon to find solutions to the identified challenges (Kalu, 2019). This aligns with the transformative paradigm, which prioritises collaboration with those most affected by the issue under study. The results achieved through action research are not only about theory but are practically based and can lead to positive outcomes (Altrichter et al., 2022). Purposive sampling is utilised in most research studies to promote quality sampling without prejudice, and to promote the consistency and reliability of the results (Nyimbili & Nyimbili, 2024). It ensures that participants are selected based on their relevance to the research aim, enhancing the credibility and applicability of the findings. In this study, purposive sampling was used to

identify individuals who could meaningfully contribute to the inquiry and co-create solutions for the improvement of vocational education (Maree & Pietersen, 2016). The number of potential co-researchers purposively sampled for this study was 5. This sample size was enough to allow for deep engagement and iterative reflection, while remaining manageable within the PALAR framework.

Considering the statement above, the focus was on those who met the following requirements for this research study:

- Four special educators who teach vocational education at the participating SID school.
- One SMT member who works at the participating SID school.

These inclusion criteria ensured that all participants had direct, practical experience with the vocational education programme and were positioned to influence or implement change. Exclusion criteria excluded individuals without direct involvement in vocational education delivery or decision-making within the SID school, as their perspectives would not align with the study's participatory and practice-oriented focus. The sampling process was executed by first identifying the SID school as the research site, followed by consultation with school leadership to nominate potential co-researchers who met the inclusion criteria. Invitations were extended, and informed consent was obtained prior to participation. This ensured ethical engagement and voluntary involvement throughout the research cycles. Table 3.2 below outlines the biographical characteristics of co-researchers teaching vocational education in special schools.

Participant	Sex	Race language	Formal qualifications	Post Level	Type of school	Vocational subject taught
C1	M	Black: Sesotho	B.Ed. Degree	1	Special school	Wood work
C2	M	Black: Sesotho	B.Ed. Degree	1	Special school	Arts and craft
C3	F	Black: Xhosa	B.Ed. Degree	1	Special school	Needlework
C4	M	Black: Xitsonga	B.Ed. Degree	1	Special school	Agriculture
C5	M	Black: Sesotho	B.Ed. Degree	2	Special school	Wood work

Table 3.2: Description of the biographical characteristics of co-researchers teaching vocational education in special schools

Source: Author's own construct

3.6.2 Data generation process

Concerning the specified topic for this study, data generation is a condition that researchers set up to generate data that they should find valuable for further data processing (Göran, 2019). In participatory methodologies such as PALAR, data generation is co-constructed through dialogical engagement, enabling the emergence of

contextually grounded insights. Data generation is an observation that permits the researcher to have access to primary information from co-researchers (Scribe, 2023).

Through iterative cycles of inquiry guided by research questions, data generation was collaboratively undertaken with co-researchers, using methods that allowed for rich, contextualised insights to emerge. Furthermore, obtaining high-quality evidence was the aim of data gathering as it contributed to rich data analysis and provided a credible and convincing response to research questions (Scribbr, 2024). The methods selected were grounded in participatory action learning and research principles, ensuring alignment with the study's objectives and the lived experiences of co-researchers.

The data generation process was structured across three cycles, each comprising multiple engagements using diverse participatory methods. This cyclical structure allowed for reflection, adaptation, and deepening of insights over time.

Cycle 1	Date	Data generation method
Day 1	03 October 2024	Discussion groups
Day 2	14 October 2024	Discussion groups and symbolic drawing
Day 3	30 October 2024	Discussion groups (step 8) (see table)
Cycle 2		
Day 1	05 November 2024	Photovoice method
Day 2	26 November 2024	Photovoice method
Day 3	22 January 2025	Photovoice method
Day 4	12 February 2025	Photovoice method and discussion groups (step 8) (see table)
Cycle 3		
Day 1	11 March 2025	Discussion groups
Day 2	20 March 2025	Discussion groups and collage
Day 3	13 May 2025	Collage
Day 4	9 June 2025	Discussion groups
Day 5	27 June 2025	Discussion groups

Table 3.3: Schedule for data collection

Source: Author's own construct

3.6.2.1 Discussion groups

According to Tegan (2021), a discussion group is a research method that encourages questions to be answered by the co-researchers in a conducive setting for research meetings. A discussion group is an easy and cheaper method, and since it is carried out

face-to-face, I provided clarity to co-researchers whenever there was confusion about the topic, questions, or research process. Furthermore, this method allowed the co-researchers to reflect on the discussions (Sachdeva et al., 2024). The discussion group supported dialogical learning and collective meaning-making, which are central to PALAR. Discussion groups method may negatively affect the results, as some co-researchers might not be able to fully express themselves out of caution not to be judged by others, and if this method is not well facilitated, it could result in arguments (Adekola & Olumati, 2023). To mitigate this, facilitation strategies such as inclusive questioning, affirming responses, and rotating turns at speaking were employed to maintain data quality and integrity.

This method was mostly used in cycle one and three, as it is the most crucial time to plan activities throughout the data collection process, clarify the research topic, and provide guidelines to the co-researchers. The discussion group method was utilised at the end of every cycle to analyse, interpret, and transcribe the data. According to Sachdeva et al. (2024), the discussion group method assisted the co-researchers with better planning of the processing and analysing of data at the end of each cycle. A discussion group also served as a reflective space to validate findings and co-construct meaning. Selection was based on relevance to the research context and willingness to engage in collaborative inquiry, which is consistent with PALAR principles. Digital tools such as WhatsApp were used to coordinate meetings and share materials, enhancing accessibility and communication (Mwanda, 2022). The following are the steps of the discussion groups to research the issue at hand. However, depending on the background and expertise of those engaged in the data collection, there is a difference in the necessity of following these steps. The co-researchers were selected according to the biographical characteristics suitable for this study (see table 3.1).

Step 1	Planning of activities to be done for the entire process of discussion groups.
Step 2	Decision on the criteria for selecting possible co-researchers, sampling method, the required number, and process of recruitment. The number of possible co-researchers selected for this study was 5.
Step 3	Selection of a moderator and recorder of the meetings. The researcher was the moderator, and one of the co-researchers was the recorder.
Step 4	Guidelines and topic discussions.
Step 5	Clarity about the study.
Step 6	Choosing the site for discussion groups, agreement on dates and times among the co-researchers, and preparation of supportive materials or resources. A WhatsApp group was created for easy communication regarding dates and times for meetings.
Step 7	The beginning of the discussion group by providing an overview of the study in a question-and-answer session.
Step 8	Analysis and interpretation of results and transcribing of results.

Table 3.4: Discussion groups steps (Sachdeva et al., 2024)

3.6.2.2 Drawing approach

Drawing as a research tool may increase and deepen co-researchers understanding. Furthermore, drawing by hand improves mental clarity, wellness, and creativity. It raises visual competency and enhances visual literacy (Avotina, 2021). This approach is a source of new information and proof of unique values (Avotina, 2021). According to Ademolu (2022), drawing approaches are suitable for action research because they provide the co-researchers the freedom to conceptualise and reflect on their answers, resulting in a more thoughtful and comprehensive portrayal of their ideas.

The limitation of the drawing approach would be the lower participation of co-researchers due to their inability to draw. However, the co-researchers were made aware that my attention is focused on the meaning of their drawings, not their artistic merit, and every drawing has significance for the study (Ademolu, 2022). In this study, the co-researchers

drew pictures displaying the challenges they are experiencing in improving vocational education in the SID school. This method supported emotional expression and symbolic representation of vocational challenges, aligning with the study's objectives. The drawing method was utilised in cycle one.

3.6.2.3 Photovoice

In the 1990s, Caroline Wang and Mary Ann Burris developed the photovoice approach, a participatory action research technique (Wang, 2020). With photography, co-researchers expressed themselves, their realities or their worries, and actively participated in choices that may impact their communities and themselves in a positive way (Stark, 2021). Furthermore, since then, photovoice has been utilised for different reasons around the globe and by a diverse range of communities, including activism, research, needs assessments, program monitoring and evaluation, and revenue generation (Stark, 2021). This author further states that, according to research, photovoice can stimulate good social change by helping people see the need for change, raising their personal and their community's awareness of their lived reality, empowering marginalised people to be change agents, and boosting their ability to solve problems.

According to Suprpto et al. (2020), photovoice is the act of taking photos and then telling stories related to these photos. It is an approach aiming to gain interest in research objects. The attraction of these objects makes it easier for readers or co-researchers to analyse events clearly and meaningfully so that they can increase researchers' responses. Photovoice is a reinforcement or training technique to help communicate the contents of images and photos. It has been widely used in various studies as a method or strategy in problem-solving in the form of photography, from educational, social, health, and non-traditional literature, using PAR. To reflect that this is the generic outline of Photovoice, as cited by Suprpto et al. (2020): The first step of the process of photovoice starts when co-researchers hypothesis the process of photographs; the second step is the selectivity through PAR; the third step is the co-researchers taking photos that represented their stories; the fourth step allows the co-researchers to analyse the information about the photos taken; and lastly, the fifth step, the co-researchers find the meaning of the photos taken. In this study, photovoice was implemented using digital cameras and mobile phones, with ethical protocols for consent and image sharing. This

method aligned with the study's aim to foreground lived experiences and empower co-researchers as knowledge producers. This method was utilised in cycle two.

3.6.2.4 Collages

De Rijke (2024) states that collages are about interactions that encourage the co-researchers to engage in intellectual discourse. Moreover, it is an interdisciplinary and multifaceted creative system of arrangement. The arrangement of collages is not just a patchwork or a graphical list but an intuitive understanding of how the world might be assembled (De Rijke, 2024). Culshaw (2019) argues that working on collages can assist the co-researchers in communicating their stories to represent comprehensible perceptions and incidences. Furthermore, they can reach insights they may have missed during other sessions. Limitations for collage include insufficient pictures relevant to the research topic in the magazine used (Mackworth-Young et al., 2022). Collage was used to visually synthesise vocational challenges and aspirations, supporting creative reflection and thematic analysis. Collage was utilised in cycle three.

3.7 The role of the researcher

I was responsible for ensuring that the venue was available and that co-researchers had pens, pencils, and books/blank pages for drawing purposes. Nieuwenhuis (2016) states that the researcher must communicate with co-researchers beforehand to clarify the logistics for transportation to the venue. Communication between the researcher and co-researchers is of utmost importance, as the researcher can evaluate if the co-researchers still want to remain part of the study (Xu et al., 2020). Fortunately for this study, the co-researchers work at the same school as the researcher. It was, therefore, convenient in terms of transportation costs. Upon the co-researchers agreeing to be part of the study, I requested them to sign the consent forms. Signing the consent forms took place after the information in the consent forms was read and understood. I scheduled the meetings so that they did not infringe on work time and thus considered the responsibilities and duties of the possible co-researchers. Since the study followed a participatory approach, I explained the process of PALAR to the possible co-researchers, who were then called "co-researchers" after signing the consent forms. I explained to the co-researchers that, should there be a need for more clarity, I will consult experienced supervisors. I maintained a harmonious relationship with the co-researchers to promote a conducive

atmosphere, professionalism, and honest participation. I was responsible for transcription of the recordings, and a report will be submitted to my supervisors.

3.8 Data analysis

Thematic analysis is a process of finding and analysing patterns or themes in a data collection, and produces fresh perceptions and knowledge (Naeem et al., 2023). These authors further explain that thematic analysis is one way to examine data. It entails finding and reporting patterns in a data set, subsequently deciphered to reveal their significance. Naeem et al. (2023) describe the thematic analysis process below as an approach designed to promote thoroughness and minimise prejudice. This method was selected for its flexibility and suitability for participatory research, allowing co-researchers' voices to be meaningfully represented.

The initial stage: I became familiar with the data and had a high-quality audio recording for the meeting. Furthermore, a word-for-word transcription identified patterns to discover the most relevant statements. See ANNEXURE E for an example of a semi-structured interview transcription. This stage ensured immersion in the data, which is critical for identifying nuanced meanings and maintaining analytical integrity (Dawadi, 2020).

In the **second stage** I chose keywords and used co-researchers' most often utilised keywords during data collection. The keywords permitted me to create codes that correctly replicated the underlying meaning of the data in action research. Moreover, the generated codes are guaranteed to accurately denote the data by using keywords to represent the thoughts and ideas included in the data (Linneberg & Korsgaard, 2019). Numerous writers propose that researchers can choose relevant explanations from the data by analysing a transcript several times. This iterative approach enhances the credibility of the coding process and reduces the risk of misinterpretation (Naeem et al., 2023).

The third stage is coding, also identified as words or codes. The coding process is when the researcher splits data into smaller segments to classify themes. Coding enables researchers to identify specific data elements applicable to research questions, which are utilised to develop a more comprehensive understanding of the underlying concepts

(Ahmed et al., 2025). Manual coding was used, supported by reflective memos to track analytical decisions, and ensure transparency (Naeem et al., 2023).

The fourth stage is theme development. Themes are developed by grouping codes meaningfully to find patterns and connections (Ahmed et al., 2025). Here, I moved from a thorough examination of codes and categories to a more conceptual interpretation through the development of themes. Themes were reviewed collaboratively with co-researchers to validate interpretations and ensure alignment with the study's objectives (Naeem et al., 2023).

The fifth stage is conceptualisation through interpretation of keywords, codes, and themes. Understanding and characterising concepts that emerge from the data are part of the conceptualisation stage. Researchers determine societal trends and enhance them into descriptions corresponding with their investigations. This stage allows for the abstraction of findings into broader educational implications, supporting the research questions (Naeem et al., 2023).

The sixth stage is the development of the conceptual model. A distinctive representation of the data is created in this process through pre-existing ideas. The model synthesises emergent themes with theoretical constructs, offering a visual and narrative framework for presenting results. Potential biases were addressed through triangulation, member-checking, and reflexive journaling, which helped maintain analytical integrity and trustworthiness (Naeem et al., 2023).

3.9 Quality criteria

According to Zuber-Skerritt et al. (2015), validity in action research is evident if the participants' findings are identifiable and acknowledged in terms of shared advantages. The validity of a research study should be suitable and have accuracy in terms of reporting. This study is participatory in nature, and therefore validity was prioritised through dialogic-, outcome-, catalytic-, democratic- and process validity, as outlined by Herr and Anderson (2015). These criteria were selected to align with the transformative paradigm and to mitigate potential biases such as researcher positionality, power imbalances, and selectivity. Although there are no approaches that entirely ensure validity, there are several tools that can significantly aid in lessening validity threats and

enhancing the credibility of the research result (Coleman, 2021). Khan et al. (2023) state that validity is about the accuracy and relevancy of the research results. The use of PAR enhanced trustworthiness and the validity of the study by embedding reflexivity, collaboration, and iterative feedback loops throughout the study's interpretation. Each criterion contributed to strengthening the study's methodological rigour and ensuring that findings were both contextually grounded and ethically sound. Mcmillin (2021) states that transcription is changing a recorded audio into a written form. The researcher shared the transcriptions with co-researchers to honour what was stated in the information letters. This transparency was essential in maintaining the integrity and trustworthiness of the data analysis process. Mcmillin (2021) further states that transparency ensures no discrepancies in data. The limitation of transcriptions is that a one-hour audio can take up to eight hours to transcribe, depending on the researchers' typing experience. To mitigate this challenge, the researcher employed iterative listening and member-checking to ensure transcription accuracy and completeness. Consequently, transcription is a powerful tool that assisted co-researchers in gaining a better understanding of the collected data and its meaning (Point & Baruch, 2023). Manual transcription allowed for deeper engagement with the data and supported the participatory ethos of the study. The next section discusses dialogic-, outcome-, catalytic-, democratic- and process validity, as outlined by Herr and Anderson (2015).

3.9.1 Dialogic validity

According to Wilson (2021), Herr and Anderson see dialogic validity as a response regarding the process I followed through the action research, provided by other researchers for alternative interpretations. To ensure quality criteria of dialogic validity, the co-researchers and I established a common understanding by listening to each other to encourage a participatory perception (Wilson, 2021). This iterative dialogue helped reduce researcher bias and ensured that interpretations were co-constructed rather than imposed.

3.9.2 Outcome validity

Outcome validity is a process whereby the co-researchers slightly reframe the challenge to gain an understanding of its intricacy (Wilson, 2021). To ensure quality of outcome validity, the co-researchers utilised it to resolve the primary question: How can vocational

education be improved in special schools? Furthermore, the outcome validity encouraged the co-researchers to acknowledge the areas where they need to be developed in terms of skills (Neethling & Nel, 2021), and finally put in place the suggested actions to improve vocational education in special schools. This criterion influenced the study by ensuring that the findings led to actionable change and skill development, rather than remaining purely theoretical.

3.9.3 Catalytic validity

Catalytic validity is the process in which action research allows the co-researchers to have a different perception about themselves, the purpose of the research study, and the collective achievements (Neethling & Nel, 2021; Wilson, 2021). To ensure quality of catalytic validity, the co-researchers were all engaged in coming to reality with daily experiences (Neethling & Nel, 2021), so they were able to state the challenges they experienced to deliver vocational education, and had to put their heads together to come up with solutions. This transformation of understanding and practice among co-researchers helped mitigate bias by decentralising authority and fostering collective agency.

3.9.4 Democratic validity

Democratic validity is when action research is conducted through the collaboration of co-researchers who are affected by the identified challenge (Wilson, 2021). To ensure quality of democratic validity, the co-researchers, the school in which the study was conducted, including all the stakeholders who provided permission for the study, will receive feedback (Wilson, 2021). Every co-researcher's viewpoint was valued and treated with respect (Mohd et al., 2023), and therefore, the audio recordings were shared with them to ensure that what was transcribed was in line with what they had stated. This inclusive approach reduced the risk of misrepresentation and reinforced the reliability of the data through member checking.

3.9.5 Process validity

Process validity was not only about the process that led to a positive outcome but also about ensuring that the co-researchers became life-long learners (Neethling & Nel, 2021; Wilson, 2021). To ensure quality of process validity, the researcher utilised triangulation

for more accurate results (Neethling & Nel, 2021). Triangulation is when the researcher uses different forms of data generation methods to gain different perspectives from the co-researchers (Donkoh & Mensah, 2023). The use of triangulation was to ensure that the findings are accurate and not shaped by a single viewpoint (Neethling & Nel, 20121). This also helped address potential biases by validating findings across multiple data sources and perspectives. The different data collection sources included focus groups, government gazettes, journals, books, and letters (Taherdoost, 2021).

3.10 Ethical considerations

This study has been approved by the **Faculty of Education Sciences Ethics Committee**, ethics number: NWU-00291-24-A2, overseeing the research process. See ANNEXURE D for the ethics approval letter. It ensured that potential co-researchers were protected from harm and considered their right to privacy. As a result, ethical considerations played a significant role throughout this study. Maree (2016) states that the researcher needs to know the moral strategy determined by the committee. Protection of privacy and from harm should take priority if the research findings divulge sensitive information (McGregor, 2023).

3.10.1 Informed consent

The possible co-researchers/participants for this study were special educators; therefore, permission was granted from the Department of Education at the provincial level (See ANNEXURE C for approval of research), the school principal, the school governing body (SGB) at the participating SID school, and the special educators themselves. The University of Gloucestershire (2018) emphasises the importance of informed consent from the possible co-researchers, even though permission is also gained from other stakeholders. The information in the consent forms used to gain informed consent should give the co-researchers a clear understanding of the study, and they should have the ability to make decisions (Manandhar & Joshi, 2020).

The possible co-researchers were made aware that participation was voluntary and, should they need to, they could be excused from the study at any time with no penalties. They agreed to be part of the study and signed the consent forms to give their voluntary consent to participate. The consent process was guided by the ethical principles of

autonomy and transparency (Joyce et al., 2025), and all forms were reviewed and approved by the ethics committee.

3.10.2 Protection from harm

I ensured that the co-researchers were protected from any harm. For example, the room used for meetings had no open electrical wires and it was not near sources of smoke or other hazards. I assured the co-researchers that should there be any indication of any possible form of harm, they will be informed beforehand. More importantly, I ensured that clean drinking water was available to keep everyone hydrated (Albulescu et al., 2022). Potential ethical challenges related to physical safety were identified during site inspections and resolved through proactive environmental adjustments.

3.10.3 Right to privacy, confidentiality, and anonymity.

It was my responsibility to explain to the potential co-researchers that sessions will be audio-recorded, and I will therefore transcribe every word. They were referred to as co-researchers after signing the consent forms. Moreover, the co-researchers had access to the findings, which will be used as part of a dissertation, to publish articles, or presented at conferences. Data collection anonymity and confidentiality were adhered to according to the Protection of Personal Information Act (POPIA) rules, 4 of 2013 (Republic of South Africa, 2013). In addition to maintaining the right to privacy, confidentiality, and anonymity, I did not use the co-researcher's names but instead used codes such as C1(Co-researcher 1) when transcribing the recordings. Codes will protect the link between the identity and what was said by the co-researchers. The use of codes enhances confidentiality and anonymity. The audiotapes recorded during the meetings will be kept safe by the supervisors at the North-West University. Maree (2016) stresses that destroying audiotapes is one of the ways to protect the co-researcher's identities. According to Ellman et al. (2020), audiotapes and transcriptions should be safely kept in a computer protected by a password, and hard copies should be kept in a locked storeroom/locker. All digital files were encrypted and stored on password-protected devices, while physical documents were secured in locked cabinets. Ethical challenges related to data security were addressed through consultation with information technology (IT) specialists and ethics advisors.

3.11 Chapter summary

In this chapter I outlined the research methodology underpinned by the PALAR. I described ethical considerations to explain the co-researcher's rights, safety, and confidentiality. Validity was addressed through dialogic, outcome, catalytic, democratic, and process validity, ensuring methodological rigour and alignment with the transformative paradigm. This study aimed to explore the current strategies to provide vocational education, and the actions stakeholders can take to improve vocational education in special schools. The co-researchers formed part of the discussion groups, utilising symbolic drawing, photovoice method, and collages during data collection in cycles one, two, and three. These participatory tools facilitated rich, multi-modal data generation, and empowered co-researchers to express lived experiences. In chapter 4, I lay out the findings from the data analysis and discuss the findings. This next chapter builds on the methodological foundation laid here, offering a detailed interpretation of the data, and highlighting key themes that emerged across the research cycles.

CHAPTER 4: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction
4.2 Analysis and interpretation of data
4.3 Discussion of the themes
4.3.1 Cycle one: identifying challenges to improve vocational education in special schools
Theme 1: obstacles to enhancing vocational education
4.3.2 Cycle two: evaluating strategies for vocational education in special schools
Theme 2: existing approaches and methods
4.3.3 Cycle three: actions stakeholders can take to improve vocational education in special schools
Theme 3: Opportunities for growth and innovation
4.4 Discussion of findings
4.5 Chapter summary

Figure 4.1: Chapter 4 overview

4.1 Introduction

Building on the foundation laid in chapters one to three, this chapter marks a pivotal moment in the research journey – where the voices of co-researchers take centre stage and the data begins to speak. In chapters one to three, I presented the PALAR research methodology and its components, the three cycles which guided me through the entire data collection. This was done through discussion groups. During cycle one sessions, which took place in three days, I first explained the process of PALAR and emphasised to the co-researchers that this is a collaborative method and therefore no one person will be dominant over any other. We took advantage of brainstorming sessions to establish a strong relationship among us, and a needs analysis was considered to enable the co-researchers to voice out their needs and opinions. They were afforded a chance to state the challenges they face regarding the improvement of vocational education in special schools. This was done through the symbolic drawing method. This initial cycle laid the groundwork for understanding the lived realities and systemic barriers faced by special educators and learners.

Cycle two sessions took place in four days, and the co-researchers reflected on what occurred in the previous cycle, and then brainstormed the session's activities. This was done using the photo-voice method as they took pictures of the current strategies they use to provide vocational education. This reflective process not only deepened the inquiry but also illuminated the creative and adaptive practices already in place, offering insight into the resilience within special schools. Cycle three sessions took place in five days, and the co-researchers made one collage that had different pictures summarising the outcome of the study to answer the following question: What action can stakeholders take to improve vocational education in special schools? This final cycle shifted the focus from exploration to transformation, generating actionable ideas and community-driven solutions for systemic change.

All the sub-questions answered in three cycles emerged from the following primary question: How can vocational education be improved in special schools? This chapter is significant within the broader study as it translates participatory engagement into thematic insights, offering a nuanced understanding of both challenges and opportunities in vocational education for special needs learners.

In this chapter, I present how data was gained from the co-researchers collaboratively and how thematic analysis revealed the themes that emerged from the three cycles to determine the actual significance of the data. The interpretation of data is derived from transcriptions of the co-researchers, along with visual representations. By weaving together narrative accounts, symbolic drawings, photographs, and collages, this chapter provides a rich, multi-layered account of the findings. It sets the stage for the concluding chapter, where these insights will be synthesised into recommendations and reflective questions for future research and practice.

4.2 Analysis and interpretation of data

In this section and the subsequent sub-sections, I discuss the findings and the discussions around the study. Table 4.1 below outlines the identified themes and sub-themes that emerged from cycles one to three and are therefore discussed in more detail, including the literature review of this study.

PALAR cycle	Themes	Sub-themes
1	Theme 1: Obstacles to enhancing vocational education	• Sub-theme 1.1: Root causes of challenges faced by special educators • Sub-theme 1.2: Impact of challenges on learners' outcomes • Sub-theme 1.3: Environmental and accessibility constraints
2	Theme 2: Existing approaches and methods	• Sub-theme 2.1: Teaching strategies currently employed by educators • Sub-theme 2.2: Institutional initiatives to support vocational education • Sub-theme 2.3: Challenges in implementing current strategies
3	Theme 3: Opportunities for growth and innovation	• Sub-theme 3.1: Collaborative solutions for vocational education enhancement • Sub-theme 3.2: Advocacy and community engagement • Sub-theme 3.3: Technological advancements and their role

Table 4.1: Emerged themes and sub-themes from cycle one to three

Source: Author's own construct

4.3 Discussion of themes

4.3.1 Cycle one: Identifying challenges to improve vocational education in special schools

Theme 1: Obstacles to enhancing vocational education

The above theme and its sub-themes emerged from cycle one during the identification of challenges experienced by the co-researchers to improve vocational education in special schools. The co-researchers discussed the different challenges they face which prevent them from fully implementing vocational education. The following challenges are presented in **sub-theme 1.1**: The root causes of challenges faced by special educators, **sub-theme 1.2**: Transportation and logistical issues, fragmented communication and cooperation between stakeholders, and **sub-theme 1.3**: Environmental and accessibility constraints.

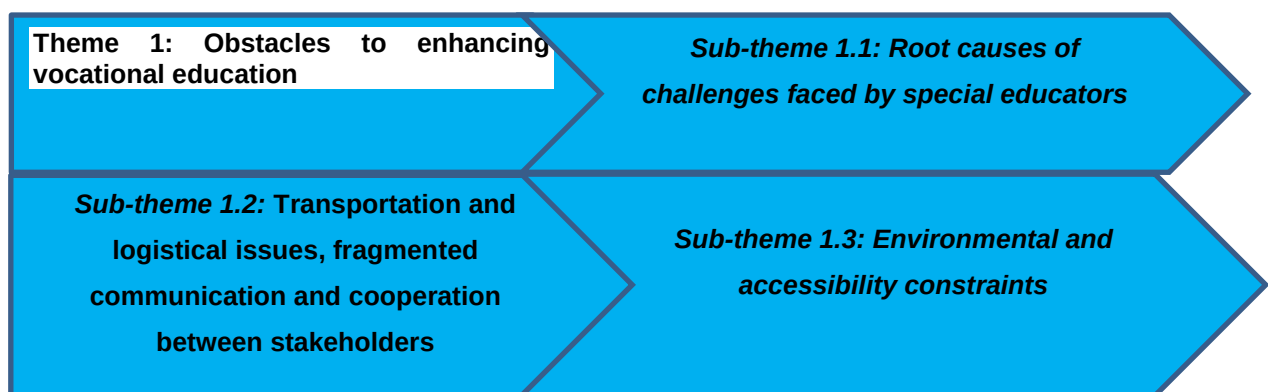


Figure 4.2: Theme 1 and the produced sub-themes 1.1, 1.2 and 1.3

Source: Author's own construct

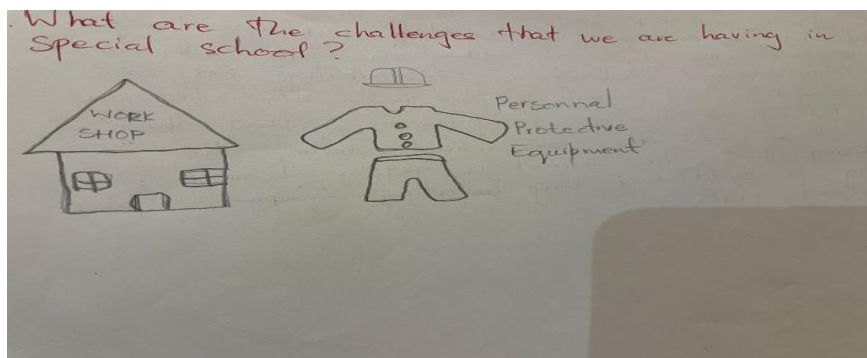
Sub-theme 1.1: Root causes of challenges faced by special educators

The co-researchers had a focus-group meeting where they collaboratively discussed the challenges they face regarding their experiences to improve vocational education in special schools. The challenges under sub-theme 1.1 included the following: Institutional barriers such as inadequate funding and limited resources, and lack of specialised training for educators to address diverse needs.

- **Institutional barriers, such as inadequate funding and limited resources**

The findings revealed that special needs educators encounter almost the same challenges regarding the resources, and not enough funding, to enable them to fully implement vocational education for special needs learners. This was further confirmed by most of the co-researchers.

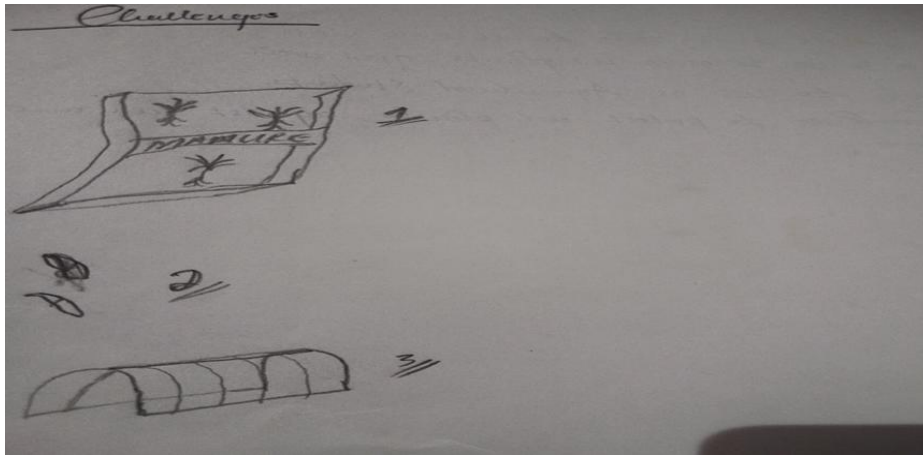
C1 mentioned: *“We are having a challenge of the equipment, and the PPE for the learners and for the educators.”* (see Drawing 4.1). This underscores the absence of basic protective gear required for safe participation in vocational activities, exposing a gap in institutional support for occupational safety standards.



Drawing 4.1 Skills workshop and PPE (C1)

C4 made a drawing of a manure bag and a greenhouse (see Drawing 4.2) as an indication of some of the resources the school lacks to be able to start a vegetable garden as part of the agricultural skill for special need learners. These factors inhibit the learners from receiving access to vocational education.

C4 stipulated: *“The challenge that I currently have with the school is that we don't have the safety clothes for the learners to cut the grass. And then the second one is that we don't have tools to use. And then also the seeds. And then also the greenhouse. Because the greenhouse prevents too much rain and the sun. So, without the greenhouse, there is nothing that I can do.”* C4's statement reveals layered constraints – ranging from missing safety apparel to the lack of agricultural infrastructure –highlighting how these shortages obstruct curriculum delivery and skills development in practical subjects.



Drawing 4.2 A bag of manure and a greenhouse (C4)

The co-researcher mentioned that the challenge they are faced with is that they use old wood to teach the learners woodwork. This finding points to an improvisational approach to teaching, where outdated and potentially unsuitable materials are substituted for proper supplies due to budgetary restrictions.

C1 stated: *“We use the old wood, like we are using the roof wood. And so, some of those, what can I call them? Wood or what? Yeah. So, some of them are old, you know, and not in good conditions.”* This quote adds depth to the previous observation, by illustrating how resource scarcity compromises the quality and safety of vocational instruction, which may negatively impact learner engagement and outcomes.

C3 added: *“Challenges are, shortage of materials and infrastructure.”* **C2 stressed:** *“Sometimes the school run out of budget, so it's difficult for us to execute our duties.”* This succinctly captures the core institutional barrier: an overarching lack of physical and material support structures essential for effective vocational training.

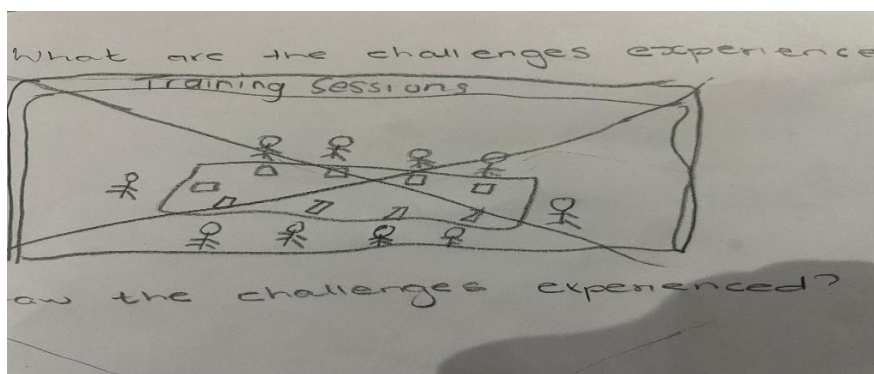
C2 further added: *“We have limited lack of resources, so it hinders the smooth operating or moving of our projects and our curriculum, because from time to time we have to stop because we lack this, or we can't do this because the space does not allow.”*

C2's remarks reinforce the ongoing disruption caused by inadequate facilities and planning, emphasising how spatial constraints and resource gaps impede sustainable curriculum implementation.

- **Lack of specialised training for educators to address diverse needs**

One co-researcher pointed out that a significant source of frustration lies in the lack of specialised training provided to educators tasked with teaching vocational subjects. Without appropriate professional development, educators may struggle to meet the diverse learning needs present in special schools, particularly when teaching highly technical or skills-based subjects.

C5 mentioned: *"Another challenge that I think we're experiencing in school is that we have teachers who are teaching subjects which they are not experts. They do not have the necessary expertise to teach. For example, myself, I was teaching woodwork. And to be quite honest, I'm quite clueless in that field. So, it's a challenge as well."*(see Drawing 4.3)



Drawing 4.3 Lack of skill training (C5)

This candid reflection reveals how the absence of subject-specific training can undermine both educator confidence and instructional quality (see Drawing 4.3). It also emphasises the broader systemic issue where teachers, despite their commitment, are often expected to deliver vocational content without adequate preparation, negatively impacting learner outcomes.

The need for targeted training and professional development is therefore critical – not only to enhance the educators' competence in vocational disciplines but also to ensure inclusive and effective delivery that addresses the full spectrum of learners' abilities.

Sub-theme 1.2: Transportation and logistical issues, fragmented communication and cooperation between stakeholders

Few co-researchers expressed concern regarding the logistical and communication challenges that contribute to limited parental involvement, which in turn hinders learner progress and disrupts the effectiveness of vocational education delivery.



Drawing 4.4 Parental support (C2)

C2 mentioned: *“Another problem is parental involvement due to our school being secluded from the general township or the general community. We don't really have a lot of parents participating in either activity at school or any other thing. Even for meetings, we must make a means that we go collect them, so we don't really have that much of parental involvement.”*

This statement highlights how geographical isolation creates physical and social distance between the school and the broader community, complicating efforts to engage parents. The lack of accessible transportation solutions and proactive communication strategies contributes to a fragmented partnership between the school and its stakeholders.

C1 stressed that: *“Sometimes the school runs out of budget.”* This budgetary strain further exacerbates logistical challenges by limiting the school's ability to arrange transport for parents or invest in outreach programmes that could foster stronger

cooperation. Financial constraints thus serve as a structural barrier, impairing not only resource provision but also stakeholder collaboration crucial for sustained learner development.

Taken together, these insights suggest that meaningful parental engagement is heavily influenced by systemic issues – ranging from transportation limitations to financial instability and fractured channels of communication. These factors collectively inhibit collaborative planning and shared ownership of vocational learning goals.

Sub-theme 1.3: Environmental and accessibility constraints

- **Insufficiently adapted learning environments for vocational training**

The data reflects a consistent concern among co-researchers regarding the inadequacy of vocational learning environments in special needs schools. These spaces, originally not designed to meet the functional requirements of inclusive vocational training, present several physical and structural challenges.



Drawing 4.5 Lack of a workshop (C1)

C1 mentioned: “We hold the challenges of working in a workshop (see Drawing 4.5).” This statement points to broader infrastructural limitations associated with vocational spaces, suggesting that the existing workshop setup fails to meet necessary standards for effective teaching and learning. **C1 elaborated:** “Inside the workshop, we have a challenge of this kind of building. And then inside, then

we have a few challenges of equipment and other things. So those are the things that we have a challenge with." This further highlights that both the physical condition of the building and the lack of essential equipment hinder the delivery of practical instruction, underscoring a pattern of resource inadequacy within the learning environment.

C2 added: *"So, due to our school still developing, we have a very limited number of resources. For example, we must utilise our theoretical classes for practical work as well, so we don't have workstations."* This insight reflects the improvisational measures educators must take, such as repurposing theory classrooms for practical activities, which compromises the integrity of vocational training and disrupts curriculum alignment.

C2 further added: *"What I noticed is that due to the condition of our learners, some of them are on wheelchairs and these tables are not convenient for, they are not user-friendly for learners on wheelchairs. So yeah, at least if we can get a space that is going to be inclusive or friendly to everyone, irrespective of their condition."* Here, the educator voices concern around inclusivity, revealing that classroom furniture and design are not adapted for learners with mobility impairments. The lack of accessible features negatively affects learner participation and reinforces systemic exclusion in practical learning contexts.

C3 stated: *"Some of the things that I'm using are stored inappropriately. There's no space. So, they are scattered all over."* This final observation emphasises the lack of organised and purposeful spatial planning. Disorganised storage and overcrowded conditions suggest that vocational materials are not safely housed, which may pose risks and further obstruct efficient teaching practices.

Together, these findings reveal that vocational environments in special schools remain structurally misaligned with learners' diverse physical needs and educators' practical teaching requirements.

There is a clear need for investment in purpose-built, inclusive spaces that prioritise both functional design and equitable access to training resources.

- **Insufficient technology-assisted learning to accommodate diverse needs**

C2 drew pictures (see Drawing 4.6) of technological devices as an indication of some of the resources the school lacks to improve vocational education.



Drawing 4.6 Lack of technological devices (C2)

C2 mentioned: *“We don’t have the much-needed technology that our current economy requires. For example, we don’t have laptops. Learners, when you talk about the computer room, they don’t even know what a computer room is.”*

This statement highlights a stark disconnect between the skills demanded by the modern economy and the resources available within the school. The lack of basic digital infrastructure, such as computers and dedicated learning spaces, restricts learners from developing technological literacy—an increasingly indispensable competency for employability and independent living. Moreover, the absence of technology diminishes the opportunity to incorporate inclusive teaching strategies, such as assistive software and multimedia content, which could cater to learners with varied cognitive and physical abilities.

C2 further stated: *“Our parents are not keeping up with the technological advancements because some of the gaps can be bridged by technology, but due to them not keeping up*

to pace with the technological advancements, it's causing a gap within our curriculum, and the progress of the curriculum.”

This observation expands the concern beyond the school, noting how limited parental engagement with technology contributes to broader curriculum disruptions. When families lack awareness or access to digital tools, the home-school partnership becomes strained, and learners are less likely to receive technological reinforcement outside the classroom. Consequently, this two-fold technological gap – within the institution and among stakeholders – impedes curriculum implementation and reduces the potential for holistic learner development. Addressing these barriers requires targeted resource investment and coordinated support across both educational and community structures.

4.3.2 Cycle two: Evaluating current strategies for vocational education in special schools

Theme 2: Existing approaches and methods

The above theme and its sub-themes emerged from cycle two during the identification of the current strategies in place to provide vocational education. The purpose of this theme was to explore the current strategies used by the special educators to teach vocational education, how they incorporate technology-assisted learning, and how they utilise the learning environments for vocational training.

The co-researchers discussed different approaches and methods they use to deliver vocational education in a special school. The following approaches are presented in sub-theme 2.1: The teaching strategies currently employed by special educators, sub-theme 2.2: Incorporating technology-assisted learning to accommodate diverse needs, and sub-theme 2.3: Adapted learning environments for vocational training.

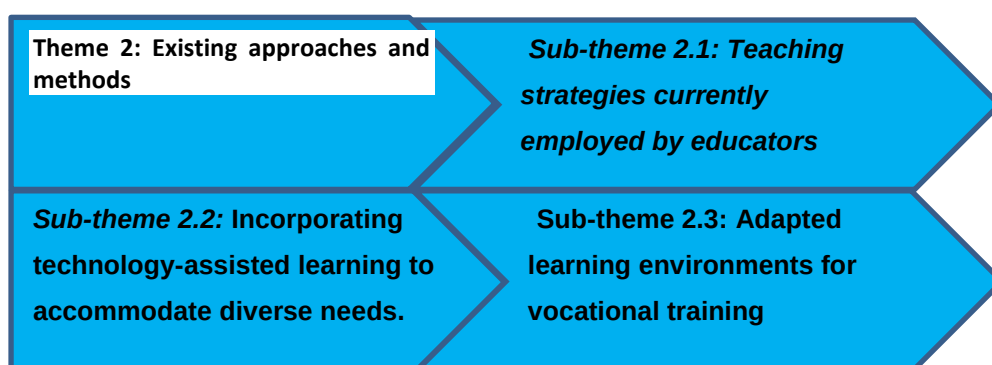


Figure 4-3: Theme 2 and the produced sub-theme 2.1, 2.2 and 2.3

Source: Author's own construct

Sub-theme 2.1: Teaching strategies currently employed by special educators

The co-researchers had a focus-group meeting where they collaboratively discussed the current strategies they use to teach vocational education to special needs learners in special schools. The co-researchers improvise and make use of recycled material as there is currently inadequate resources to teach learners vocational skills such as arts and crafts.

C2 explained her picture as follows: *“And then this picture (see Figure 4.4) is how we are improvising. If you can look on the picture, it's flower pots. These flower pots are made from papers. We recycle newspapers. And inside, you can see there are paper bits. We also make paper bits from recycled newspapers.”*

This demonstrates an inventive approach to practical learning; whereby recyclable materials are repurposed to create functional learning aids. By turning everyday waste into teaching resources, educators are fostering sustainability while simultaneously engaging learners in hands-on activities.



Figure 4.4: Pots made from recycled material (C2)

C2 further explained: *“So, because of lack of material, we sometimes must source out, go to different sites, internet sites, and just check what the learners can do instead of just sitting.”* This remark underscores how material deprivation

pushes educators to proactively seek alternatives online, indicating a shift toward self-directed resourcefulness in the absence of institutional support. It also suggests that the lack of formal equipment does not halt learning, but rather reconfigures it through adaptation.

C1 further added: *“With regards to the equipment, we use the old wood, like we are using the roof wood (see Figure 4.5). And so, some of those, what can I call them? Wood or what? Yeah. So, some of them are old, you know, and not in good conditions.”* C1’s statement points to the use of outdated and potentially degraded materials in technical skills instruction, such as woodworking. While the improvisation allows for continuity in learning, it also exposes learners and educators to challenges related to safety, durability, and instructional quality.



Figure 4.5: A picture of old wood used for woodwork skills (C1)

Collectively, these findings illustrate how the utilisation of improvised aids is both a necessity and a pedagogical strategy in under-resourced environments. While such creativity keeps vocational training afloat, it also highlights the urgent need for proper investment in durable, fit-for-purpose materials to enhance learning outcomes and safety.

Most of the co-researchers further highlighted the limited and improvised resources they rely on to facilitate vocational education, underscoring the daily realities of navigating equipment shortages in under-resourced environments.

C4 stated: *“A bucket. The only materials that we are using for agriculture are a bucket and a fork spade to prepare the soil to be smooth. As well as a hose for*

watering.” This statement reflects the rudimentary nature of available agricultural tools, which restricts the scope and depth of practical learning activities. The reliance on basic items such as a bucket and spade indicate the absence of specialised or mechanised equipment necessary for comprehensive agricultural training.

C1 further stated: *“And this one, I think this old chainsaw (see Figure 4.6). Yes, these old ones, they can be very dangerous, it's a hard labour. Yes, especially because we are dealing with kids who have disabilities.”* Here, the educator raises serious concerns regarding the safety of outdated equipment. Using old and potentially hazardous tools not only compromises effective instruction but also exposes learners – particularly those with disabilities – to physical risk, highlighting the critical need for safe and adapted alternatives.



Figure 4.6: A picture of a chainsaw used for woodwork skill (C1)

C1 continued: *“So, the school tried to buy overalls, gloves, goggles, and glasses. PPE is still a shortage of hard hats, shoes, and safety shoes.”* Although some effort has been made to secure protective gear, the ongoing shortage of essential PPE reflects deeper institutional limitations. The lack of comprehensive safety equipment further reinforces the vulnerability of learners in practical sessions, undermining both pedagogical and ethical standards.

Together, these insights illustrate how educators must navigate an environment of scarcity by leveraging whatever basic resources are available. While this demonstrates commendable adaptability, it also underscores the urgent need for investment in modern, safe, and inclusive vocational materials and infrastructure.

Sub-theme 2.2: Incorporating technology-assisted learning to accommodate diverse needs

The data suggests that despite the recognised potential of technology-assisted learning in meeting diverse learner needs, significant infrastructural limitations hinder its full implementation. Educators acknowledge the importance of visual aids and digital tools in supporting learners – particularly those with special needs – but face daily challenges due to limited access.



Figure 4.7: Smart screen in the staffroom (C2)

C2 explained: *“Because I cannot expect them to draw a mountain if they’ve never seen a mountain. So, we use that screen for that (see Figure 4.7).”* This statement illustrates how the smart screen serves as a critical instructional tool, helping learners visualise unfamiliar concepts. For learners with cognitive, linguistic, or sensory barriers, such digital content can bridge comprehension gaps by offering visual context.

C2 continued: *“So, the screen is available by booking, so we must make arrangement that on a day I will use the screen. Because we just cannot go there, because everyone needs to use that screen.”*

This underscores the logistical difficulty of using shared technology. The fact that access requires advance booking reveals how overstretched the resource is, limiting spontaneous use and constraining lesson planning flexibility.

C2 further explained: *“For the smart screen you must go to the staff room to access this. Because we do not have that luxury or those screens in our classes. So, this is for visual aids, just for learners to see what we are talking about. When I say a mountain, they must see a mountain.”*

This elaboration reinforces how central technology is to effective concept delivery. However, the lack of classroom-integrated digital tools means educators must interrupt routines and relocate learners to a different space, adding strain to an already complex teaching environment. For learners with mobility challenges or attention difficulties, such transitions may further detract from instructional time and quality.

Sub-theme 2.3: Adapted learning environments for vocational training

The findings indicate that special educators face persistent constraints regarding spatial arrangements and infrastructural suitability when facilitating vocational education. Classrooms originally intended for scholastic subjects must routinely be repurposed into practical learning spaces, leading to inefficient transitions and compromised teaching conditions.

C2 explained: *“Okay, in my pictures, firstly, I have my classroom arrangement where I am teaching arts and crafts. But if you can see, I just lock everything inside. I just pick up everything. So, in the morning you must teach the curriculum in scholastic subjects, and then after we must move the tables around. My painting doesn't have space and other things, cleaning material doesn't have space. So that's why the class looks so clustered.”*

This statement highlights the daily logistical burden placed on educators who must physically rearrange the classroom to accommodate different subjects. The cluttered environment and lack of dedicated storage not only disrupt the flow of teaching but also limit learners' engagement and safety during practical sessions.

C1 further added: *“We are using classes for our subject, and then the space is small for those learners.”*

This reflects the broader issue of inadequate room dimensions, especially problematic in special needs contexts where learners may require additional space for mobility, support tools, or individualised instruction.

C3 explained her picture as follows: *“Okay, okay. The picture that I am having shows the learners sewing but the challenge is space (see Diagram 4.8). They use the room that is used by workers here at school. It’s congested in this room and there are even boxes of the workers on the floor. Even the desks we use for sewing are not suitable. Some are short, and some are tall. The room for sewing must be suitable and conducive.”*



Figure 4.8: Classroom used for a skill subject (C3)

This illustrates how alternative spaces, such as staff storage rooms, are used as makeshift workshops despite being ill-equipped for vocational learning. The mismatched furniture exacerbates the unsuitability, impairing learners’ ability to carry out tasks safely and effectively. Visual evidence such as figure 4.6 further reinforces these spatial limitations.

C3 further stated: *“Okay, the challenges that I’ve stated was that I work in a classroom, I think our problem is similar, we need space, working stations, workshops, so yeah most of the time I do needlework in classroom and needlework needs a lot of space and also storage where I can store equipment and so on, and the shortage of material, sometimes I bought material and it’s not enough, it runs out and then yeah, the project stops.”*

Here, the lack of designated vocational infrastructure and storage leads to interruptions in learning continuity. Educators are often forced to personally fund and manage resources, further adding to their workload and affecting the sustainability of practical learning projects.

C1 highlighted: *“We're doing the work in my class and, the tools are not in my class and, we are placing it somewhere. And then sometimes when we want to do some skill, I have to fetch those tools in the store room and then come back in my class.”* This reinforces the difficulty posed by fragmented learning environments, where essential equipment is housed offsite, delaying lesson transitions and diminishing instructional flow. These frequent disruptions not only challenge the educator's time management but also reduce effective hands-on learning for the students.

Taken together, the findings reveal that the adaptation of general-purpose classrooms into vocational spaces is neither structurally adequate nor pedagogically ideal. Purpose-built environments – equipped with appropriate furniture, accessible layouts, and integrated utilities – are essential to ensuring quality, inclusive vocational education for learners with special needs.

4.3.3 Cycle three: Actions stakeholders can take to improve vocational education in special schools

Theme 3: Opportunities for growth and innovation

The above theme and its sub-themes emerged from cycle three during the identification of actions stakeholders can take to improve vocational education in special schools. The purpose of this theme to explore actions stakeholders can take to improve vocational education in special schools. The co-researchers had a focus-group meeting to discuss the different actions that can be used to improve vocational education.

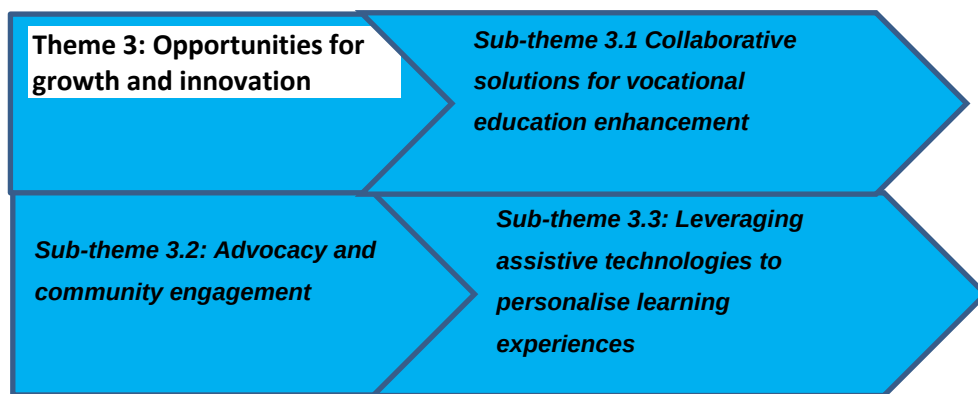


Figure 4.9: Theme 3 and the produced sub-theme 3.1, 3.2 and 3.3

Source: Author's own construct

The co-researchers created one collage consisting of different pictures representing solutions to resolve the identified challenges. The following approaches are presented in sub-theme 3.1: Collaborative solutions for vocational education enhancement, sub-theme 3.2: Advocacy and community engagement, and sub-theme 3.3: Leveraging assistive technologies to personalise learning experiences.



Figure 4.10: Collage depicting co-researchers' suggested solutions (All the co-researchers)

The above collage was collaboratively created by the 5 co-researchers as a representation of their suggested solutions to actions stakeholders can take to improve vocational education in special schools. The pictures used by the co-researchers show that they share a common understanding regarding the challenges faced by the school. The collage displays different pictures as suggested solutions, and are stated in the following sub-sections 3.1 to 3.3.

Sub-theme 3.1: Collaborative solutions for vocational education enhancement

- **Increased government funding to support infrastructure and training**

The findings reveal a shared understanding among educators that sufficient government funding is foundational to improving vocational education in special schools. Without adequate financial resources, schools are unable to procure materials, upgrade infrastructure, or provide appropriate training, thus limiting the quality of education and inclusion of learners with special needs.

C2 stated: *“I think when we talk about resources, we need funds. Because we cannot get resources without funds. So perhaps maybe if we can have a bigger allocation from the government, where we can buy enough resources for every skill subject. And improved infrastructure, because currently our infrastructure standards are a bit too little for these kids, or insufficient.”* This highlights a direct link between financial shortfalls and material deprivation across vocational subjects. C2's comments point to outdated infrastructure and limited resources as key constraints, reinforcing the call for targeted investment tailored to the specific needs of learners in special schools.

Beyond government support, educators have begun considering supplementary avenues to address funding gaps. **C1 suggested:** *“And then I think in terms of funds, maybe we can go out and ask for donations from neighbouring companies. Okay, donations. We can also fundraise, come up with initiatives and fundraise into these classes.”* This reflects a proactive stance within schools, where educators recognise the need for broader community involvement and alternative fundraising strategies to bridge resource deficits. The initiative underscores the

urgency of financial support and the educators' willingness to advocate for sustainable solutions.

C5 offered a more formalised view of government funding mechanisms: *"We are requesting funds from the government. Colleagues, when it comes to funding from the government, schools, they write business plans. Remember, every school receives a budget. Now, since we are a special school, we also receive special allocations for special schools. That is where you will write that budget, the business plan. Now, your business plan has different categories. You get funding for transport. You get funding for social services."* This explanation outlines the bureaucratic process through which schools must navigate budget allocations, particularly noting the specialised provisions for transport and social services – a reflection of the multifaceted needs in special education environments.

C5 further elaborated: *"You get funds for... So those are the allocations that you get. So, with regards to those funds for you to, for the government to tell you how much you're supposed to receive, it's based on the number of learners firstly. And it's also based on the business plan. What is it that you wrote on your business plan? What are you going to need? And then, to see if that's feasible enough to receive, all special schools they submit their business plans. And then, once they go to head office, they sit and scrutinise the business plans and then they allocate the funds."* This offers insight into how funding allocations are determined – based on enrolment numbers and the feasibility of items detailed in a school's budget proposal. Although the process is formalised, it depends heavily on strategic planning and accurate forecasting, which may pose challenges for schools already stretched thin on administrative capacity.

Together, these findings illustrate a pressing need for increased and more flexible government funding that aligns with the evolving requirements of vocational education in special needs contexts. While educators demonstrate initiative and resilience, systemic support remains critical to achieving inclusive, high-quality vocational outcomes.

- **Development of specialised training programmes for educators**

The findings reveal a recurring concern among co-researchers regarding the insufficient preparation of educators to teach vocational subjects, particularly within the context of special needs education. Teachers often enter the profession equipped with academic knowledge but lack hands-on training in specific skill areas, making it challenging to deliver practical instruction confidently and effectively.

C1 highlighted: *“For teachers to get the skills, okay, the solution, I'm thinking more in terms of teachers, but also the services. They can go to those people who maybe know about that job. Okay, and acquire some information....”*

This reflects an informal approach to skill acquisition, where educators rely on interpersonal networks to fill knowledge gaps. **C1 shared** a personal example: *“...for example, I'm teaching agriculture, and then there are some aspects of agriculture which I don't understand, and then I can approach someone who knows about agriculture, and then give me some skills and information about planting and helping learners with those kinds of things. So, I don't know, maybe go to that person over the weekend to teach me a few skills, how to do a job in the garden.”* Such improvisational learning underscores the urgency for structured, accessible training programmes that formally equip educators with vocational competencies.

C1 concluded: *“So, I think it will, like I said, it will acquire skills to another person.”*

This sentiment reinforces the belief that skill-sharing can be a meaningful solution, but it also exposes the limitations of informal training without institutional support.

C3 stated: *“Even attending a formal training because we are coming straight from schools, from high schools, primary schools and stuff, so we are using experience that we had, previous experience, so we need maybe something more specific like a formal training.”*

This statement brings attention to the gap between academic qualifications and vocational teaching requirements. Many educators enter special needs environments without exposure to skills-based learning, relying solely on prior classroom experience.

The need for targeted, formal programmes is essential to bridge this divide and build professional capacity for vocational instruction.

C1 further added: *“Okay, one more thing in terms of visual training for educators. I think the Department can put more training on vocational training for educators, especially novice teachers, because they need the skill to know the subject more, and then every term at least they can put at least 2 or 1 training for that skill.”*

This emphasises a systemic solution, by calling on educational departments to institutionalise regular, hands-on training sessions. Specifically, novice teachers stand to benefit from term-based exposure to subject-relevant skills, ensuring both practical confidence and curriculum alignment.

Taken together, these insights point to an urgent need for policy-driven professional development programmes. The provision of specialised vocational training would empower educators to deliver content competently and inclusively, improving educational outcomes for learners in special needs environments.

The findings indicate that educators recognise the value of forming partnerships with external stakeholders – such as companies, non-profit organisations (NPOs), and government departments – to support curriculum implementation and vocational skill development. These collaborations are both practical and strategic solutions to fill resource gaps and provide curriculum enrichment.

C3 stated: *“Okay. I don't know whether it doesn't fall under donor funds, donations from other sites. I was going to say we can also approach those people who are doing the same skill that we are doing. Like we are doing needlework, we are doing sewing. There are people who are willing to help. We can approach them. Helping to? Maybe by donating to us so material.”* This quote emphasises the potential of engaging stakeholders with shared vocational interests to assist with material provision. It highlights that leveraging shared expertise and goodwill can play a significant role in strengthening practical learning.

C4 added: *“It depends, like for instance, there's a Department of Agriculture. So, it's where we're supposed to go, you know.”* This response points to formal pathways through governmental departments that could be explored more proactively. In this

case, the Department of Agriculture is seen as a key stakeholder in agricultural training efforts.

C5 elaborated: *“Maybe liaise with teachers from schools who have been in existence for the longest time as we are still a young school, if I may put it like that. So, like I said, liaise teachers from other schools, from school’s development, NPOs maybe, working with whatever we are offering at school, because the NPOs come together. A guy working at agriculture came to the school, they also have a bakery to train learners. As well as things like woodwork.”* This contribution underscores the importance of inter-school collaboration and cross-sector involvement in shaping a sustainable vocational curriculum. Established schools and NPOs provide valuable networks, expertise, and practical opportunities that newer institutions can adopt to enrich their offerings.

C2 added further insight: *“Agriculture, bakery, and hospitality. I think he also spoke about hairdressing as well. But then he said that other skills we can mitigate on our behalf. To get us those companies that are needed. So, yeah. I think that answers the question. Forming partnerships. Yes. What’s the point of having partnerships? Partnerships, formulating partnerships, because partnerships will also assist us with skills development. If we know the company X is coming maybe once a month to train kids, one, two, three, it’s a partnership. At the end of the year, maybe they gain an employee or anything of that sort. Partnership can assist.”*

This quote offers a compelling argument for long-term, structured partnerships that not only support curriculum delivery but also create pathways for learner employment. Bringing industry practitioners into the classroom enriches instruction and provides learners with exposure to real-world skill applications.

During the last day of Cycle 3, a researcher noted the practical efforts underway to prepare for future planting, despite limited resources – highlighting both hope and reliance on promised external support. **C4 stated:** *“We have a challenge of the seeds and stuff, but now we are busy preparing the soil and stuff. So, when we reopen next term, we will get the school to buy the seeds, the greenhouse, and stuff. And, the donation that we’ll get from, if I’m not mistaken, a private company. Yes. Yeah, so that we can continue with agriculture. But for now, we are busy preparing the soil so that*

when we reopen, the soil will be ready. And then if anyone has the seeds and stuff, they can come with it. And then when we reopen, we start to plant.” This statement illustrates the tangible impact of pending stakeholder engagement, revealing both the proactive steps educators are taking and the reliance on promised donations to sustain vocational activities such as agriculture.

Collectively, these insights affirm the necessity of strategic partnerships for aligning the vocational curriculum with real-world practices and available resources. By expanding networks to include government departments, industries, community organisations, and peer institutions, schools can foster more inclusive, skill-oriented, and sustainable learning environments for their learners.

- **Parental involvement**

The findings highlight that limited parental involvement remains a significant barrier to enriching vocational education in special needs schools. Co-researchers noted that parents may be unaware of their children's learning activities, particularly in vocational subjects, which contributes to minimal participation and engagement. Enhancing communication and visibility around learners' practical skills was viewed as a potential remedy.

C2 stated: *“Inform parents what skills learners are doing, and then show them what learners are doing. That will encourage them to be more involved because of their growing interest in seeing what the learners are actually doing. So maybe now the lack of parental involvement is informed by them not being informed on what exactly a learner is doing, when you speak about woodwork, agriculture, and, and, and.”*

This insight underscores the idea that visibility fosters engagement. When parents understand and observe the vocational progress of their children, it may spark genuine interest and lead to increased participation. The lack of involvement may stem, not from apathy, but from insufficient information.

Building on this, **C3 added:** *“Okay, on ways to improve parental involvement. I think that you know, maybe we can have a market day or something like that. Invite them, invite parents. So, parents should participate maybe by buying what their*

kids are doing.” This suggestion introduces a tangible strategy of, for example, market days, to bridge the gap between learners’ vocational activities and parental support. Such events can serve as celebratory showcases, empowering learners while providing parents with meaningful opportunities to engage and contribute.

C4 stated: *“And then to add on, at least if we can create a page on social media. Yeah, we will post everything, and then it will be easier for the parents to check. And instead of coming to school, it will be much easier for everyone to access it, and to see what the kids are doing at school.”* Here, digital platforms emerge as an inclusive solution for sharing school updates and learners’ achievements. Especially for parents who are geographically distant or face transport challenges, online visibility ensures ongoing access to educational progress and fosters a virtual sense of involvement.

C1 reinforced this by noting practical constraints: *“Yeah, and again on that point, I like the point of social media because most of the parents are living a distance from our school. And even though they can come with their own transport, maybe using a public transport, they cannot reach here at school because it’s distance from where they get off to school. So, the social media one, I think they will be part of whatever that we are doing at school here.”* This statement affirms that physical barriers, such as transportation and location, often hinder parental engagement. However, leveraging digital platforms could create a more accessible communication channel, helping parents feel involved despite the limitations.

C5 further stated: *“It’s just an additional platform. Those who have access to social media can access via social media platforms.”* While acknowledging that not all parents may have digital access, C5 supports the idea of social media as a complementary tool. It enhances transparency and provides updates that can inform, involve, and inspire families.

Together, these reflections point to a broader recommendation: schools should prioritise consistent, inclusive communication strategies that celebrate learner achievements and integrate parents into the learning journey. By showcasing vocational progress through events and virtual platforms, educators can strengthen the home-school partnership and reinforce a community of support around each learner.

Sub-theme 3.2: Advocacy and community engagement

The findings emphasise the importance of engaging the broader community to increase visibility and support for vocational education in special schools. A lack of public understanding regarding the potential and relevance of vocational learning for learners with special needs was identified as a barrier to meaningful community involvement and advocacy.

C2 stated: *“When it comes to raising awareness for the general public or the community, we can have those roadshows, many roadshows, where we are informing parents, we are informing the community what the... what actually the school is doing or maybe invite your community leaders.”*

This statement reflects an active desire to bridge informational gaps through interactive events. Roadshows are envisioned as platforms to communicate the purpose and achievements of vocational programmes directly to families and community members. By involving faith-based and civic leaders, such as those from churches and local organisations, the co-researcher proposes a non-political approach to foster community buy-in and sustained support.

C2 continued: *“Also, the general public, not only leaders, also the general public, where we invite them to the school and have those roadshows and then those workshops, participate, in fact, have smaller games, informative games, I don't know, 10 seconds, 30 seconds, what, what, where they actually get to know in a very entertaining way of what the school is about, what the school is doing. Yes, I think.”* This elaboration highlights the need to deliver awareness in a way that is not only informative but also engaging and accessible. By incorporating games, workshops, and interactive activities, the school could demystify vocational learning while creating enjoyable experiences that resonate with various age groups. These strategies aim to shift community perception and showcase the capabilities and creativity of special school learners.

Overall, the findings suggest that raising awareness through inclusive and community-oriented initiatives has the potential to strengthen societal recognition of vocational education as a meaningful path for learners with diverse needs. In doing so, schools may

build stronger partnerships, secure broader resource support, and affirm the dignity and skills development of every learner.

Sub-theme 3.3: Leveraging assistive technologies to personalise learning experiences

The data illustrates an encouraging shift toward integrating assistive and accessible technologies to tailor vocational learning experiences for learners in special schools. These digital tools not only support differentiated instruction but also present opportunities for creativity, economic empowerment, and social inclusion.

C2 remarked: *“Technology. Yes. With technology, yeah, we, we need to keep our learners on par with the rest of the world with regards to technology. Teach them simple apps like your TikTok, where then maybe they can advertise their work and hopefully become their own entrepreneurs.”*

This statement suggests that teaching learners how to use social media platforms extends beyond entertainment becomes a gateway to entrepreneurship and self-representation. TikTok, for example, can be used to showcase vocational projects in accessible, engaging formats.

C2 continued: *“Things like, Facebook, teach them how to use them in a profitable way, not only for the things they are using for, but in a profitable way.”* This highlights the importance of digital literacy in practical terms, where platforms can serve as marketing tools or customer engagement spaces, transforming vocational training into real-world application.

C2 elaborated further: *“Things like, I forgot the others. YouTube where they are showing step-by-step videos of they are doing their project, they can generate a lot of money for themselves, especially considering that they are from special school wherein the general public they normally undermine the special schools. Yes, and there’s a Pinterest also it’s very good for skills, DIY projects.”* Here, C2 underscores how visibility on platforms like YouTube and Pinterest can help learners challenge societal perceptions of special schools while building confidence and digital

competencies. Sharing step-by-step content promotes learner agency and can attract external validation or income.

The educator also stressed the importance of starting with foundational tools to demystify technology: **C2 stated:** *“We can start in the classroom, mmmhh it doesn’t take more than 30 minutes to show learners what is WhatsApp, how do you start, how do you download WhatsApp, step-by-step....”* This reveals how even basic digital training, such as using WhatsApp, can empower learners to connect, communicate, and engage meaningfully in a tech-driven world. WhatsApp is presented, not just as a tool for messaging, but as an entry point into broader technological literacy. The instruction continues incrementally over several days: *“Second day we are going back to WhatsApp.... Third day, this is how you update your status....”* This approach reflects a scaffolded method where learners build confidence through repetition and routine. Each interaction with the app becomes a building block toward mastering digital communication.

C2 then proposed extending these lessons to include WhatsApp communities: *“That can be a later training where we teach them how to make or create communities... Communities is just segment of groups, whereby you group people together.”* This example highlights how virtual platforms can simulate real-world networks, encouraging learners to explore entrepreneurial roles such as sourcing clients, creating partnerships, and sharing relevant information within purpose-built groups.

C2 concluded with an insightful observation: *“...the nice thing about the technology is that, the current technology is that you are really forced to type as our learners cannot really write and you always use option of voice note instead of typing which is very convenient.”* This acknowledges the inclusive nature of modern digital tools. Voice notes offer an alternative for learners with literacy barriers or physical impairments, enabling them to participate fully in communication without relying on written text.

Taken together, these findings illustrate how assistive and widely available technologies, when embedded purposefully into the curriculum, can transform vocational training into a personalised, future-oriented, and inclusive learning experience. Beyond their technical utility, such tools are positioned as vehicles for empowerment, self-expression, and lifelong agency.

4.4 Discussion of findings

Below, I interpret the findings against existing literature that emerged in response to sub-questions 1, 2 and 3 to answer my primary question: How can vocational education collaboratively be improved in special schools? I discuss three major themes supported by literature flowing from the findings reported for sub-questions 1 to 3: namely, obstacles to enhancing vocational education, existing approaches, and methods and opportunities for growth and innovation.

Cycle one focused on understanding the challenges the special educators are experiencing to improve vocational education in this SID school. Theme 1 and its subsequent themes emerged during the identification of challenges. The purpose of this theme was to explore the institutional challenges, such as inadequate funding and limited resources, lack of specialised training for educators to address diverse needs, transportation and logistical issues, and fragmented communication and cooperation between stakeholders; also insufficiently adapted learning environments for vocational training and insufficient technology-assisted learning to accommodate diverse needs.

Cycle two focused on the current strategies used by the special educators to teach vocational education. The co-researchers explored how they incorporate technology-assisted learning, and how they utilise the learning environments for vocational training.

Cycle three focused on actions stakeholders can take to improve vocational education in special schools. I will now discuss the findings in relation to related literature.

Theme 1: Obstacles to enhancing vocational education

Sub-theme 1.1: Root causes of challenges faced by special educators

According to Solomon et al. (2024), research has shown that special educators in various special schools usually have a lack of adequate resources. The findings revealed that special needs educators are faced with challenges regarding the resources and not enough funding to enable them to fully implement vocational education. Fajri and Jauhari (2024) contend that special schools frequently encounter limited resources, which increases the challenges of providing vocational education. Furthermore, this shortfall of resources hinders the improvement of a supportive educational environment that caters to the diverse needs of learners (Solomon et al., 2024). As a result, budget constraints

prevent special schools from obtaining the facilities and equipment needed for the learners. This aligns with broader literature on educational equity, which consistently identifies resource scarcity as a structural barrier to inclusive education (UNESCO, 2024). The findings reinforce the argument that systemic underfunding perpetuates educational exclusion, particularly in vocational contexts where material resources are essential.

The findings also pointed out a lack of training for the special educators who teach skills subjects to address the different needs of learners. Special educators highlighted that they do not have the confidence to teach the learners skills subjects due to lack of their own skills training (Fajri & Jauhari, 2024). A study carried out in the KwaZulu-Natal Province discovered that special schools are faced with multiple challenges, and one of them is a lack of skills training for special educators (Solomon et al., 2024). Makhalemele and Tlale (2021) argue that most of the special educators assert that they are not well equipped to handle special needs learners, and the SMT can assist by organising training or workshops to address the issue of untrained special educators. Solomon et al. (2024) further explain that untrained special educators may have a negative impact on the delivery of vocational education. Therefore, there should be enough funding towards skills training for special educators to be able to teach skills to special needs learners (Himasha, 2024). These findings challenge the assumption in some policy frameworks, that a teaching qualification alone ensures readiness for vocational instruction. Instead, they highlight the need for ongoing, context-specific professional development. This resonates with transformative learning theory, which posits that educators must undergo reflective and experiential learning to adapt effectively to diverse learner needs (Rojo, 2023).

This observation increases the concern beyond the school, noting how the limitation of resources and lack of skills training for special educators can have a huge impact on the delivery of vocational education. Special educators are also losing the confidence in their teaching capabilities (Dahalan & Toran, 2023). Addressing these challenges requires a coordinated support across both educational and community structures. The erosion of educator confidence is particularly significant, as it may contribute to diminished instructional quality and learner outcomes (Dahalan & Toran, 2023). This underscores the importance of systemic interventions that integrate capacity-building with psychosocial support, thereby fostering resilience among educators (Lyonga, 2025).

Sub-theme 1.2: Transportation and logistical issues, fragmented communication and cooperation between stakeholders

Himasha (2024) stresses that it is important to emphasise that parental and educator cooperation plays a crucial role in determining special learners' academic success. Moreover, parents play an important role in selecting educational programmes for learners. This author further states that cooperation encourages a conducive atmosphere where special needs learners can reach their full abilities. The study revealed that there is a big gap regarding communication between the parents and the school, which affects the academic progress of the special learners (Chauke et al., 2025). Therefore, factors such as parents coming from disadvantaged backgrounds and the school being secluded from the townships contributes to lack of parental involvement. This finding is consistent with Bronfenbrenner's ecological systems theory, which emphasises the interplay between microsystemic (family) and institutional (school) factors in shaping learner development. The lack of communication and logistical support reflects a breakdown in mesosystemic linkages, which are critical for holistic educational engagement (Crawford, 2020).

In alignment with Salisu (2025), the research found that the main challenge with parental involvement is a lack of finances to enable parents to attend meetings, so the school needs to come up with a flexible plan to cater to the different needs of parents, especially those coming from the underprivileged communities. This suggests that parental disengagement is not a matter of apathy but of structural exclusion (Chauke et al., 2025). The findings call for a reconfiguration of school-community partnerships that are responsive to socioeconomic realities, thereby challenging deficit-based narratives often found in mainstream educational discourse.

Sub-theme 1.3: Environmental and accessibility constraints

The study revealed the frustration the co-researchers experience regarding appropriate learning environments for vocational skills. They indicated that the learning spaces are not user-friendly for skills, as they utilise classrooms to teach skills subjects instead of workshops. This hinders the delivery of practical skills for special needs learners. According to Himasha (2024), for the benefit of special needs learners, special schools

should invest in workshops for teaching skills. Research has revealed that several schools are still in need of essential facilities necessary to adequately support special needs learners (Fajri & Jauhari, 2024). This finding highlights a critical disconnect between curriculum intent and infrastructural reality. It challenges the assumption that vocational education can be effectively delivered within traditional academic spaces, reinforcing the need for purpose-built environments that support experiential learning.

- **Insufficient technology-assisted learning to accommodate diverse needs**

The findings reveal a critical concern regarding the absence of technology-assisted learning in special needs vocational education. This gap not only limits learner exposure to digital competencies essential for economic participation, but also undermines efforts to cater for diverse learning needs through accessible and adaptive tools. Developments in technology have impacted many aspects of life, especially in the education sector. Assistive technology promotes independence, learning, and improving the general quality of life (Himasha, 2024). With assistive technology, special needs learners are increasingly learning to be independent, thus preparing them for the workforce (Saleem & Sajjad, 2019). This finding contributes to the growing body of literature advocating for digital inclusion in special education. It underscores the transformative potential of assistive technologies, not only in enhancing learning outcomes but also in promoting social and economic empowerment (Saputra et al., 2025). The absence of such tools reflects a digital divide that must be addressed through targeted policy and investment.

Theme 2: Existing approaches and methods

Sub-theme 2.1: Teaching strategies currently employed by educators

The findings suggest that special educators are creatively adapting to material shortages by implementing improvised practical aids in classroom and workshop settings. This form of resourcefulness reflects both resilience and innovation in the face of institutional limitations, particularly within special needs vocational training environments. The special educators stated the different practical aids and ways to teach vocational education, such as using recycled material in arts and crafts, and utilising the classrooms to teach both skills subjects and academic subjects. According to Kassim and Nordin (2024), practical aids form an integral part of vocational education to assist special needs learners in fully

understanding what is being delivered to them. These adaptive strategies illustrate the principles of action learning theory, where educators engage in problem-solving through experiential and reflective practices (Ling, 2019). By repurposing materials and spaces, educators are not only responding to immediate constraints but also modelling iterative learning processes that are central to vocational education (Jama & Wood, 2024).

Moreover, this aligns with social constructivism, which emphasises learning as a socially mediated process (Chano, 2024). The use of recycled materials and collaborative classroom adaptations fosters shared meaning-making and contextualised learning, enabling learners to co-construct knowledge through hands-on engagement.

The findings challenge traditional pedagogical models that rely on standardised resources, suggesting that innovation and contextual responsiveness may be more effective in special needs settings. This contributes to the literature by highlighting the potential of low-cost, high-impact strategies in enhancing vocational learning outcomes.

Sub-theme 2.2: Incorporating technology-assisted learning to accommodate diverse needs

The findings highlight a pressing need to decentralise technological resources and embed them directly into classrooms to promote equitable access. While special educators show ingenuity in their efforts to make lessons engaging, systemic upgrades are required to integrate assistive technologies in ways that are seamless and inclusive. According to Ahmad et al. (2024), technology is a way of improving learning experiences for special needs learners, leading to better results and increased competence in education. These authors further state that technology caters to different learning abilities, ensuring that every learner obtains tailored support. This finding reinforces the significance of inclusive digital infrastructure in special education, echoing global calls for equitable access to educational technology. It also supports social constructivist views that technology can serve as a mediating tool for collaborative learning, enabling learners to interact with content, peers, and educators in dynamic ways (Amna et al., 2021).

From an action learning perspective, the integration of assistive technologies allows educators and learners to engage in cycles of experimentation, feedback, and adaptation, which are key processes for developing vocational competencies (Serrat, 2017).

The findings contribute to existing literature by emphasising that technology must not only be available but also contextually embedded and pedagogically aligned. They challenge assumptions that digital tools alone can bridge learning gaps, highlighting the need for intentional design and educator training (Saputra et al., 2025).

Sub-theme 2.3: Adapted learning environments for vocational training

The findings revealed that there is a limitation of appropriate learning environments for vocational skills, as the classrooms are used for both academic and skills subjects, which affects teaching and learning time. The co-researchers indicated that they normally must go to the storeroom to collect the material they use for skills, and take them back when the skills period ends. Moreover, the furniture utilised for skills are not user-friendly to accommodate the needs of the special learners. Kombe (2024) asserts that many special needs learners encounter environmental limitations that hinder their active participation in the learning process. These constraints underscore the disconnect between curriculum goals and infrastructural realities, particularly in vocational education, where physical space and tools are integral to experiential learning (Adebisi et al., 2014). The findings highlight how logistical inefficiencies and non-adaptive environments disrupt the flow of learning and reduce opportunities for skills acquisition.

Social constructivism suggests that learning is situated and context-dependent (Chano, 2024); thus, the inadequacy of physical spaces undermines the creation of meaningful learning experiences. Learners are unable to fully engage in collaborative and hands-on tasks that are essential for vocational development.

Action learning theory further emphasises the importance of real-world problem-solving within authentic contexts (Han et al., 2016). The lack of dedicated, accessible workshops limits learners' ability to engage in iterative cycles of doing, reflecting, and improving, which are core to mastery of vocational skills.

This finding contributes to the literature by calling attention to the need for spatial justice in education. It challenges the assumption that pedagogical innovation alone can overcome infrastructural deficits, advocating instead for holistic reforms that include physical, technological, and human resources (Navas-Bonilla et al., 2025).

Theme 3: Opportunities for growth and innovation

Sub-theme 3.1: Collaborative solutions for vocational education enhancement

- **Increased government funding to support infrastructure and training**

On the 23rd of April 2025, the South African Democratic Teacher's Union (SADTU) released a memorandum to the Hon. Minister of Basic Education, to inform the DBE that special schools are facing challenges regarding infrastructure and lack of resources, and this has a negative impact on the entire school environment. They further highlighted that the infrastructure of special schools has deteriorated to such an extent that even animals would struggle to survive in those conditions (South African Democratic Teacher's Union, 2025).

The co-researchers explained that sufficient funding from the government may serve as a solution to address the issues of lack of resources and provide skills training for special educators. According to Tebele and Chaka (2023), professional growth is essential since special educators must possess the knowledge and practical abilities to assist special needs learners. These authors further state that professional growth consists of training initiatives such as workshops, in-service training, and peer mentoring programmes. In the vocational learning context, special educators must be proficient in the technical skills; however, they must teach these with appropriate techniques for special needs learners (Rashid & Anne, 2024). These findings underscore the systemic nature of vocational education challenges, and highlight the transformative potential of targeted investment. From an action learning perspective, professional development initiatives represent iterative cycles of learning, reflection, and application, which are essential for equipping educators with adaptive strategies in resource-constrained environments (Serrat, 2017).

Moreover, social constructivism supports the notion that learning is co-constructed through social interaction and contextual engagement (Akpan et al., 2020). Government

funding that enables collaborative training environments fosters shared meaning-making among educators, enhancing their ability to scaffold learning for diverse learners.

This contributes to existing literature by reinforcing the argument that vocational education reform must be multi-layered, addressing both infrastructural deficits and pedagogical capacity. It challenges policy frameworks that treat educator training and infrastructure as separate domains, advocating instead for integrated solutions.

- **Parental involvement**

The co-researchers suggested that to improve parental involvement, certain measures must be taken by the school. Since distance serves as a challenge, parents must be informed through various platforms (Saputra et al., 2025), such as creating a website and other social media platforms, to post the skills the learners do, and have a market day whereby parents are invited to the school to buy the items the learners made in their respective skills classes, such as flower pots (see Figure 4.4). Together, these solutions suggested by the co-researchers may improve parental involvement somewhat.

According to Tebele and Chaka (2023) studies indicate that parents and special educators are the main components of a special learners' microsystem, and their collaborative efforts can significantly enhance developmental learning. Therefore, it is essential to foster strong communication between the entire school and families. Musekiwa (2025) argues that active participation from parents enables learners with disabilities to steady support at home as well as at school. When parents play an active role in their children's education, and work alongside special educators, they play a vital role in the comprehensive development of the learners.

Musekiwa (2025) further states that skills taught by the special educators need to be supported by parents for the child to master them. These findings reinforce Social Constructivist principles, which view learning as embedded within social relationships and cultural contexts. Parental involvement creates a bridge between home and school, allowing learners to internalise vocational skills through consistent reinforcement across settings (Boonk et al., 2021).

Additionally, the proposed strategies, such as digital platforms and market days, reflect Action Learning in practice, where stakeholders collaboratively identify problems and

implement context-sensitive solutions. This participatory approach not only enhances engagement but also builds community ownership of the learning process (Jama & Wood, 2024).

The findings contribute to the literature by challenging deficit narratives around parental disengagement, but instead highlighting structural barriers, and proposing inclusive, culturally responsive interventions (Chauke et al., 2025).

Sub-theme 3.2: Advocacy and community engagement

The co-researchers suggested that raising awareness within the community about special schools and the skills the learners display will change the perception they have regarding people with a disability, and roadshows are a great way to start. According to Musekiwa (2025), the community's engagement has been a negative one regarding special needs learners, especially towards their education. Throughout history, varying perceptions and views surrounding disabilities have led to the marginalisation of individuals with disabilities. Communities have engaged in discrimination, segregation, and isolation of children with disabilities, particularly in educational settings (Babik & Gardner, 2021). Engaging the community through awareness initiatives, mentoring programmes, or the creation of inclusive policies may promote a culture of acceptance and empowerment.

This research project has motivated the co-researchers to start a vegetable garden again, regardless of the shortage of resources. The co-researchers reached out to some external organisation for assistance and they will be coming to the school to donate seeds. A request letter has also been sent to Thusong Community project to request donations to start a vegetable garden. Figure 4.11 shows pictures of the special learners preparing the soil to start planting seeds for a vegetable garden.



Figure 4.11: Learners cleaning the space for a vegetable garden

These findings illustrate the power of community-based action to challenge stigma and foster inclusion. The vegetable garden initiative exemplifies Action Learning, where learners and educators collaboratively engage in real-world problem-solving, reflecting on outcomes and adapting strategies (Ling, 2019).

From a social constructivist lens, community engagement facilitates the co-construction of meaning around disability and capability, reshaping societal narratives through shared experiences and visible learner contributions (Saleem et al., 2021).

These challenges dominant discourses of dependency and exclusion, contributing to literature that advocates for asset-based approaches to disability and education. It also highlights the importance of relational and place-based strategies in driving systemic change.

Sub-theme 3.3: Leveraging assistive technologies to personalise learning experiences

The data illustrated the desire to integrate assistive technological devices into skills subjects to enhance the learners' development of comprehensive understanding of skills subjects. The digital world will enable the learners to get a clear view of the projects they need to engage in. Most importantly, the digital world has now become a centre of attention and attracts today's generation (Saputra et al., 2025). According to Ayao et al. (2024), technology could potentially improve learners' involvement and motivation in vocational education compared to traditional approaches. According to Bhardwaj et al.

(2025), traditional approaches generally depend significantly on textbooks and practical experience. Although these methods can benefit some learners, they may not adequately accommodate the unique learning requirements of every learner (Bhardwaj et al., 2025). This is where the transformative capabilities of technology become relevant. The interactive and flexible characteristics of technology offer a promising path for improving vocational education. These findings support the growing body of literature advocating for inclusive digital pedagogies. Assistive technologies offer differentiated pathways for learners to engage with vocational content, aligning with social constructivist principles that emphasise learner agency and contextualised knowledge construction (Abiatal & Howard, 2020).

Furthermore, the integration of technology into vocational subjects reflects action learning cycles, where educators and learners experiment with tools, reflect on their effectiveness, and iterate based on feedback (Ling, 2019). This dynamic process fosters deeper engagement and skill mastery.

The findings challenge traditional vocational education models that rely on uniform instructional methods, advocating instead for personalised, tech-enabled approaches that accommodate diverse learner profiles. They also highlight the urgency of bridging the digital divide to ensure equitable access to transformative learning experiences.

4.5 Chapter summary

In this chapter, I reported the findings of the study. The research question that served as a guide for cycle one was: What are the challenges experienced to improve vocational education in special schools? The co-researchers identified the challenges through the symbolic drawing method and discussion groups. The theme and its subsequent sub-themes identified are as follows: Theme 1: Obstacles to enhancing vocational education, sub-theme 1.1: The root causes of challenges faced by special educators, sub-theme 1.2: The impact of challenges on learners' outcomes, and sub-theme 1.3: Environmental and accessibility constraints. These findings revealed systemic barriers that hinder the effective delivery of vocational education, highlighting the need for targeted interventions in training, infrastructure, and inclusive practices (Mohd et al., 2023).

Cycle two was guided by the following research question: What current strategies are in place in special schools to provide vocational education? In this cycle, the co-researchers utilised the photo-voice method whereby they took photos that represented their stories and challenges. The theme and its subsequent sub-themes identified were: Theme 2: Existing approaches and methods; sub-theme 2.1: The teaching strategies currently employed by special educators, sub-theme 2.2: Institutional initiatives to support vocational education, and sub-theme 2.3: The challenges in implementing current strategies. This cycle illuminated the resourcefulness of educators and the limitations of current institutional support, offering insight into both the strengths and gaps within existing vocational education practices.

Lastly, Cycle three was guided by the following research question: What action can stakeholders take to improve vocational education in special schools? In this cycle, the co-researchers created one collage consisting of different pictures summarising the outcome of the study. The theme and its subsequent sub-themes identified were; Theme 3: Opportunities for growth and innovation, sub-theme 3.1: Collaborative solutions for vocational education enhancement, sub-theme 3.2: Innovative teaching models and practices, sub-theme 3.3: Advocacy and community engagement, sub-theme 3.4: Technological advancements and their role. This final cycle offered a forward-looking perspective, showcasing practical and community-driven solutions that can transform vocational education into a more inclusive and empowering experience for special needs learners. Together, these findings present a coherent narrative of challenges, current practices, and future possibilities, grounded in participatory methodologies and the lived experiences of co-researchers. In the next chapter, I present the conclusion, and propose reflective questions to assist researchers and practitioners in extending this work and deepening its impact.

Chapter 5: Summary, Findings, and Recommendations

5.1 Introduction
5.2 Summary of the study
5.3 Answering the primary research questions
5.4 Contribution of the study
5.5 Personal reflection
5.6 Limitation of the study
5.7 Recommendation for further study
5.8 Concluding remarks

Figure 5.1: Chapter 5 overview

5.1 Introduction

Building on the findings presented in chapter 4, co-researchers were afforded an opportunity to discuss the challenges they face regarding the improvement of vocational education in special schools. This was done through the symbolic drawing method. Next, they made use of a photovoice method to discuss the current strategies they utilise to provide vocational education. Lastly, they created a collage suggesting actions stakeholders can take to improve vocational education in special schools. My motivation behind this study was the special needs learners to whom I am teaching vocational education in the special school where I currently work. They once informed me that they no longer have the passion to attend school as they do not do much in skills subjects, and they cannot say that they enjoy writing because most of them were enrolled at a special school mainly because they cannot read and write. The other concern they mentioned was there were not enough resources to learn skills. This was a concern for me, and I thought about how I can collaborate with other special educators teaching skills subjects to come up with solutions that may assist in improving vocational education. I then decided to enrol with NWU for a master's degree in Special Needs Education, and PALAR was a perfect design as it encourages collaboration among a group of people to resolve any issue at hand. The purpose of this study was to explore the challenges the special educators face when teaching vocational education, the current strategies they use to provide vocational education, and the actions that could improve vocational education in special schools. In this chapter, I provide the readers with a summary of the preceding chapters, while providing a summative answer towards the primary research

question by providing a summary towards the three secondary research questions, followed by the limitations and recommendations for further study.

5.2 Summary of the study

5.2.1 Chapter 1: Overview of the study

In this chapter, I presented a summary of the research study. I explored the introduction, context, and justification, along with the problem statement that included the research questions guiding this study. I detailed the three cycles integral to the PALAR methodology, and the chapter concluded with a contribution to the overall research.

5.2.2 Chapter 2: A critical review of the concepts and theories guiding this study

In this chapter, I examined both South African and international viewpoints on vocational education, with an emphasis on special needs learners. I also described the implications of severe intellectual disabilities for education, and collaborative strategies to address the challenges identified. Finally, I explored integrated theoretical frameworks to explain how they can aid co-researchers in creating solutions to enhance vocational education in special schools.

5.2.3 Chapter 3: A theoretical discussion of the methodological choices

In this chapter, I presented the research methodology that guided the PALAR design for this study. I addressed ethical considerations to clarify the co-researcher's rights, safety, and confidentiality. The PALAR design facilitated collaboration among the co-researchers, enhancing their relationships. Consequently, this study aimed to investigate current strategies for delivering vocational education, and identify actions that stakeholders can implement to enhance vocational education in special schools. The co-researchers participated in the discussion groups, employing techniques such as symbolic drawing, photovoice method, and collages during data collection across cycles one, two, and three.

5.2.4 Chapter 4: Data analysis and interpretation

In this chapter, I reported the findings of the study. The research questions that served as a guide for cycle one, two, and three were answered through the identified themes and their subsequent sub-themes. In cycle one, the co-researchers identified the challenges

through the symbolic drawing method and discussion groups. In cycle two, the co-researchers had discussion groups and utilised the photovoice method whereby they took photos that represented their stories and challenges. Lastly, in cycle 3, the co-researchers had a discussion group and created a collage consisting of different pictures summarising the outcome of the study.

5.3 Answering the primary research question

The answer to the primary research question will be inferred from the next section that summarises integrated responses and references to the secondary research questions findings that emerged from the thematic analysis.

5.3.1 What are the challenges experienced in improving vocational education in special schools?

Theme 1: Obstacles to enhancing vocational education

The above theme and its sub-themes emerged from cycle one during the identification of challenges experienced by the co-researchers to improving vocational education in special schools. The purpose of this theme was to explore the institutional challenges, such as inadequate funding and limited resources, as illustrated in diagrams 4.1 and 4.2, and lack of specialised training (see diagram 4.3) for educators to address diverse needs, transportation and logistical issues, and fragmented communication and cooperation between stakeholders (see diagram 4.4). There were also challenges such as insufficiently adapted learning environments for vocational training (see diagram 4.5) and insufficient technology-assisted learning to accommodate diverse needs (see diagram 4.6).

The initial step was to assess whether the co-researchers understood the idea of collaboration, for them to understand that no one will be dominant over others, and that everyone's opinions matters. They worked together with one spirit and identified the challenges within vocational education. They made use of a symbolic drawing to draw pictures of challenges they face. After identifying the challenges, the co-researchers could now reflect on the current strategies they use to teach vocational education. Based on these findings, it is recommended that special schools prioritise professional development for educators in vocational pedagogy and inclusive technologies, and establish structured collaboration platforms among stakeholders to address resource

gaps and logistical barriers. These recommendations were motivated by the co-researchers' symbolic representations and shared narratives of systemic constraints.

5.3.2 What current strategies exist at special schools to provide vocational education?

Theme 2: Existing approaches and methods

The above theme and its sub-themes emerged from cycle two during the identification of the current strategies in place to provide vocational education. The purpose of this theme was to explore the current strategies used by the special educators to teach vocational education, how they incorporate technology-assisted learning as illustrated in Figure 4.7, and how they utilise the learning environments for vocational training (see Figure 4.8). The co-researchers made use of a photovoice method to take pictures of the current strategies they use to teach vocational education. In addition to the current resources the school has (see Figures 4.5 and 4.6), the co-researchers also improvise and make use of recycled material to teach skills (see Figure 4.4). Taking different pictures of the current strategies/resources opened a gap, which enabled the co-researchers to suggest the actions stakeholders can take to improve vocational education. Drawing from these insights, it is recommended that schools formalise and expand the use of low-cost, locally sourced materials and technology-enhanced learning environments, supported by the co-researchers' photo documentation and reflections on adaptive teaching practices, to ensure vocational education remains accessible and contextually relevant.

5.3.3 What action can stakeholders take to improve vocational education in special schools?

Theme 3: Opportunities for growth and innovation

The above theme and its sub-themes emerged from cycle three during the identification of actions stakeholders can take to improve vocational education in special schools. The purpose of this theme was to explore actions stakeholders can take to improve vocational education in special schools. The co-researchers had a focus group meeting to discuss the different actions that can be taken to improve vocational education. They designed a collage outlining different solutions to resolve the challenges they identified (see Figure 4-10). PALAR methodology encouraged the co-researchers to work collaboratively and assist each other every step of the way. They highlighted that this project helped them to

be aware of the things they never thought of that served as challenges, and they even reached out to the community for assistance, as they realised that waiting for funding from the government delays the learners' progress. In conclusion, through the PALAR process, the co-researchers acknowledged the benefits of working as a team, and stated that they are motivated to further their studies for their personal development and improving the quality of vocational education. Based on the findings from cycle 3, it is recommended that special schools establish formal partnerships with community organisations to address resource gaps. This emerged from the co-researchers' collage activity, which highlighted the role of external support in enhancing vocational training.

In summary, the following primary research question that guided this research study was: How can vocational education be improved in special schools? The answer to the primary research question is: Vocational education in special schools can be collaboratively improved by addressing systemic obstacles, such as educator capacity, learner-specific barriers, and environmental constraints, that currently hinder equitable outcomes. While existing teaching strategies and institutional initiatives offer a foundation, their impact is limited by implementation challenges and a lack of contextual responsiveness. Sustainable improvement lies in co-designed, community-driven approaches that leverage technological innovation and inclusive advocacy to foster meaningful, accessible vocational pathways for all learners.

5.4 Contribution of the study

This study contributes to the special needs school system by offering a contextually grounded model for inclusive vocational education, rooted in participatory ethics and collaborative inquiry. The use of PALAR methodology not only empowered co-researchers but also demonstrated how reflective practice can lead to systemic change. The findings have implications for:

- Educational theory: Reinforcing the value of transformative learning and participatory methodologies in special needs education. Moreover, skills educators build resilience where there are insufficient resources through the PALAR process, and assume the role of being agents of change.

- Policy: Highlighting the need for targeted funding and stakeholder collaboration to support vocational education.
- Practice: Encouraging educators to adopt creative, resourceful strategies and build community partnerships to enhance learning environments.
- Team building: Fostering good relations amongst the special educators teaching skill subjects, collaboratively working together towards building sustainable vocational skills.

5.5 Personal reflection

At the beginning of the study, I immediately emphasised to the co-researchers that this study is collaborative, meaning that I am not dominant, nor going to judge their opinions. I clarified that my role was not to lead from above, but to walk alongside them as a fellow learner and facilitator. We were therefore free to state our opinions freely but with respect. This foundational principle of mutual respect and shared ownership created a safe space for authentic dialogue, although it took time to cultivate. Initially, some co-researchers were hesitant to speak openly, possibly due to unfamiliarity with the participatory approach, or fear of being misunderstood. However, as trust deepened through repeated sessions, they gradually found their voice and began to engage more confidently and meaningfully. PALAR design personally challenged me during the process of writing, but reading different articles about it and getting some clarity from my supervisors eased the anxiety I had. The complexity of PALAR – its cyclical nature, emphasis on co-construction, and ethical depth – required me to unlearn traditional research hierarchies and embrace vulnerability in my own practice. This design encouraged the co-researchers to strengthen their relationship, and work as a team. I witnessed how shared reflection and creative methods fostered solidarity among participants, transforming individual insights into collective understanding. Fortunately, the sessions went smoothly throughout the entire process. While logistical challenges occasionally arose, such as scheduling conflicts or emotional fatigue, the overall rhythm of the inquiry remained steady and purposeful. Sometimes one or two people would be absent or committed elsewhere when we had to meet for our session; as a result, one of the co-researchers suggested creating a WhatsApp group for easy communication. This simple yet effective solution enhanced coordination, allowed for ongoing dialogue between sessions, and reinforced the sense of community among us. The school principal was excited when I

explained to her what the study was about, and she wanted me to include all the educators at the school, but I explained to her that the study requires only a limited number of participants. Her enthusiasm affirmed the relevance of the research to the broader school context, and her request reflected a genuine interest in inclusive professional development. I therefore made a promise to the principal that once I have submitted my thesis, I will compile a report to conduct a workshop about my study and report the findings to all the educators. This commitment not only honours the collaborative spirit of the study but also extends its impact beyond the research participants, fostering a culture of shared learning and systemic change.

5.6 Limitation of the study

Sessions held between the researcher and the co-researchers were conducted after the learners' contact time, and ended exactly when the school was dismissed for the day. This scheduling constraint limited the depth and continuity of discussions. Prolonged meetings would likely have produced more data regarding the declarations made by the co-researchers. Extended engagement could have facilitated richer insights and deeper reflection on vocational education practices. Some of the co-researchers were sometimes unavailable due to other commitments, and the prolonged period of inactivity caused some of them to forget what they needed to do. This intermittent participation disrupted the momentum of the participatory process. We constantly had to conduct reflections to refresh their memories. While these reflective sessions were valuable, they often served a remedial function rather than advancing the inquiry. This study was piloted on a small number of special educators teaching vocational education in one special school; therefore, the results might not be relevant to other special educators or special schools. The limited sample size and single-site context constrain the generalisability of the findings. Future studies involving multiple schools and diverse educator profiles would enhance the transferability of insights.

Although the researcher explained thoroughly at the beginning of the study that the co-researcher's identities and names would be protected, and this study aims to allow them to voice their opinions and assist the school to improve vocational education, the dual role of the researcher as both facilitator and colleague may have influenced the openness of responses. The fact that the researcher works at the same school as the co-researchers might have caused them to omit some of the challenges they are facing, as

some of them would only state one challenge, although there was more. This positionality may have introduced social desirability bias, leading co-researchers to underreport sensitive or systemic issues. Such dynamics underscore the importance of reflexivity and trust-building in participatory research.

5.7 Recommendations for further study

I recommend the following questions for further research.

a) How can neighbouring special schools collaboratively share innovative ideas to improve vocational education? This question invites exploration into inter-school collaboration models that promote knowledge exchange, resource sharing, and peer learning.

Future research could:

- Investigate existing networks or partnerships between special schools and assess their effectiveness.
- Use participatory case studies or action research to co-develop frameworks for collaborative innovation.
- Examine barriers such as geographical distance, policy constraints, or institutional silos, and propose strategies to overcome them.

b) How can DBST collaborate with SMT and special educators to improve vocational education in special schools? This question focuses on the interplay between district-level support structures (DBST), school leadership (SMT), and classroom practitioners.

Future research could:

- Map current collaboration practices and identify gaps in communication, planning, and implementation.
- Explore how DBSTs can provide targeted support, such as curriculum adaptation, professional development, and monitoring.
- Apply PALAR or PAR methodologies to co-design collaborative models that align with inclusive education policies.

c) How can PALAR design be incorporated at special schools to improve vocational education? This question seeks to understand how PALAR can be embedded within the culture and pedagogy of special schools. Future research could:

- Pilot PALAR cycles with educators, learners, and community members to co-create vocational learning experiences.
- Examine how PALAR fosters empowerment, reflection, and transformation among stakeholders.
- Evaluate the sustainability and scalability of PALAR within institutional constraints.

d) How can the special schools engage parents and the community in the vocational education for special needs learners? This question addresses the critical role of families and communities in supporting vocational pathways. Future research could:

- Explore perceptions, expectations, and experiences of parents regarding vocational education.
- Investigate community-based learning opportunities, such as internships, mentorships, or enterprise projects.
- Use ethnographic or narrative approaches to understand cultural and socioeconomic factors influencing engagement.

5.8 Concluding remarks

In this chapter, I provided a summary of the preceding chapters and focused on the findings, followed by recommendations for further study, and the limitations of the study. This study explored how stakeholders can improve vocational education in a special school to optimise the teaching and learning of special learners. The co-researchers established a relationship with an external organisation to assist the school with some of the skills resources. They were thankful to be part of the study and acknowledged that it made them aware of the shortfalls within the vocational education. This is what was stated by C1: ***“Since we have started this project of Ma’am Solomons, I learned two or three things regarding the vocational skill. This project gave me a lot of ideas on what to improve on my skill that I’m teaching, I learned a lot from this project.”*** C5 added: ***“Thank you for involving us in your study. It’s not been an easy journey, obviously for yourself, but it’s been nice to be part of your study. I also gained some insight regarding research, but some of us are even motivated to go on to further our studies, it’s been nice. Thank you for involving us.”*** My wish regarding the PALAR Methodology is that it can be piloted and be part of the curriculum at a tertiary level within the education sector and implemented by educators in schools to enhance

development, cooperation, and critical thinking. Moreover, the GDE should provide more funding for all the resources needed for vocational education in special schools, especially in a new special school. This study has shown that vocational education in special schools can be meaningfully improved through collaborative, reflective engagement among educators. The PALAR methodology fostered a sense of agency and solidarity among co-researchers, enabling them to identify challenges, share strategies, and co-create solutions.

The implications of these findings extend beyond the immediate school context. They suggest that participatory approaches can enhance professional development, strengthen community ties, and inform policy decisions that prioritise inclusive education. By integrating PALAR into teacher training and school development plans, educational institutions can cultivate environments that support both learner growth and educator empowerment. The co-researchers' reflections affirm the transformative potential of this process—not only for vocational education, but for the broader pursuit of equity and inclusion in South African schools.

REFERENCE LIST

- Abiatal, L.K.S., & Howard, G.R. (2020). 'Constructivism-led assistive technology: An experiment at a Namibian special primary school'. *South African Journal of Childhood Education*, 10(1), Article 794. <https://doi.org/10.4102/sajce.v10i1.794>
- Adams, D., Harris, A., & Jones, S.M. (2016). Teacher-Parent Collaboration for an Inclusive Classroom: Success for Every Child. *Journal of Educational Sciences*, 4(3), 58-72.
- Adebisi, R.O., Jerry, J. E., Rasaki, S.A., & Igwe, E.N. (2014). Special Needs Education in Nigeria. *International Journal of Education and Research*, 2(11), 451-462.
- Adekola, G., & Olumati, E.S. (2023). Focus Group Discussion: A Research Method in Community Development. *International Journal of Research and Innovation in Social Science*, 7(5), 392-399.
- Ademolu, E. (2022). A pictured Africa: drawing as a visual qualitative research methodology for examining British African Diaspora imaginings of their ancestral 'home'. *Visual Studies*, 37, 296–310.
- Ahmad, I., Sharma, S., Singh, R., Gehlot, A., Gupta, L.R., Thakur, A.K., & Twala, B. (2024). Inclusive learning using industry 4.0 technologies: addressing student diversity in modern education. *Cogent Education*, 11(1), 1-19.
- Ahmed, A.M. (2019). Student's reflective journaling: an impactful strategy that informs instructional practices in an ELF writing university context in Qatar. *Reflective Practice*, 20(4), 483–500.
- Ahmed, S.K., Mohammed, R.A., Nashwan, A.J., Ibrahim, R.H., Abdalla, A. Q., Ameen, B.M.M., & Khahir, R.M. (2025). Using thematic analysis in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 6(1), 1-6.
- Akpan, V., Igwe, U.A., Mpamah, I.B.I., & Okoro, C.O. (2020). Social Constructivism: Implications on Teaching and Learning. *British Journal of Education*, 8(8), 49-56.

Albulescu, P., Macsinga, I., Rusu, A., Sulea, C., Bodnaru, A., & Tulbure, B.T. (2022). "Give me a break!" A systematic review and meta-analysis on the efficacy of micro-breaks for increasing well-being and performance. *PLOS ONE*, 17(1), 1-27.

Altrichter, H., Kemmis, S., McTaggart, R., & Zuber-Skerritt, O. (2022). Defining, confining or refining action research? In O. Zuber-Skerritt (Eds.), *Action Research for Change and Development* (pp. 3-9). Routledge Revivals.

Amna, S., Huma, K., & Farah, D. (2021). Social Constructivism: A New Paradigm in Teaching and Learning Environment. *Perennial Journal of History*, 2(1), 403-421.

Anon. (2023). List of Special Schools in South Africa. *Za Recruitment*. Retrieved October 31, 2023, 0-1, from <https://zarecruitment.com/list-of-special-schools-in-south-africa/>

Avotina, A. (2021). Drawing as a Research Method in the Process of Art History Studies, *Human, Technologies and Quality of Education*, 78, 988-1001.

Ayao, D., Gunarhadi, G., Yasin, M.H., Bin M., & Subagya, S. (2024). The Impact of Digitalisation on Improving Vocational Skills Mastery for Learning Disabilities Special Education Needs Students (SENS): A Literature Review Analysis. *Proceeding of International Conference on Special Education in South East Asia Region*, 3(1), 476–482.

Babik, I., & Gardner, E.S. (2021). Factors Affecting the Perception of Disability: A Developmental Perspective. *Frontier in Psychology*, 12(1), 1-26.

Bandauko, E., & Arku, G. (2023). The Power of a Camera: Fieldwork Experiences from using Participatory Photovoice. *International Journal of Qualitative Methods*, 22(1), 1-13.

Bhardwaj, V., Zhang, S., Tan, Y.Q., & Pandey, V. (2025). Redefining learning: student-centered strategies for academic and personal growth. *Frontiers in Education*, 10(1), Article 1518602. <https://doi.org/10.3389/feduc.2025.1518602>

Boonk, L.M., Ritzen, H., Gijssels, H.J.M., & Brand-Gruwel, S. (2021). Stimulating parental involvement in vocational education and training (VET): A case study based on learning histories of teachers, principals, students, and their parents. *Teaching and Teacher Education*, Article 103279. <https://doi.org/10.1016/j.tate.2021.103279>

Botha, M., Mogensen, K.F., Ebrahim, A., & Brand, D. (2023). In search of a landing place for persons with disabilities: A critique of South Africa's skills development programme. *International Journal of Discrimination and the Law*, 23(1-2), 163–180.

Bozkurt, G. (2017). Social Constructivism: Does it Succeed in Reconciling Individual Cognition with Social Teaching and Learning Practices in Mathematics? *Journal of Education and Practice*, 8, 210–218.

Brailas, A. (2020). Using Drawings in Qualitative Interviews: An Introduction to the Practice. *Qualitative Report*, 25, 4447-4460.

Braun, V., & Clarke, V. (2006). 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), 77–101.

Chano, J. (2024). Socio-cultural and Social Constructivist Theories and Its Application in EFL Classroom for Thai Pre-service Teachers: A Review for Further Research. *International Journal of Language Education*, 8(3), 564-572.

Chauke, T.A., Ngozwana, N., Machobane, A., & Maphuthi, L.A.M. (2025). Parental involvement in rural schools: A case study in Limpopo Province. *International Review of Social Sciences Research*, 5(2), 102-125.

Chitiyo, A., & Dzenga, C. (2021). Special and Inclusive Education in Southern Africa. *Journal of Special Education Preparation*, 1(0), 55-66.

Choi, Y., Lee, Y., Kwon, D.Y., Kim, D., Park, W.H., & Chang, S.O. (2024). The development and effects of a social constructivist approach in an interprofessional discomfort care online education program. *BMC Medical Education*, 24(1), Article 1363. <https://doi.org/10.1186/s12909-024-06342-w>

Chukwuere, J, E. (2021). Theoretical and conceptual framework: A critical part of information systems research process and writing. *Review of International Geographical Education (RIGEO)*, 11, 2678-2683.

Cibane, Z.Z. (2020). The role of district officials in supporting under-performing schools: perspectives of school principals (Master's thesis).

<https://researchspace.ukzn.ac.za/server/api/core/bitstreams/c1ad06f5-715e-4287-b0f9-20c8a3aafec7/content>

Chukwuere, J, E. (2021). Theoretical and conceptual framework: A critical part of information systems research process and writing. *Review of International Geographical Education (RIGEO)*, 11, 2678-2683.

Choi, Y., Lee, Y., Kwon, D.Y., Kim, D., Park, W.H., & Chang, S.O. (2024). The development and effects of a social constructivist approach in an interprofessional discomfort care online education program. *BMC Medical Education*, 24(1), Article 1363. <https://doi.org/10.1186/s12909-024-06342-w>

Coghlan, D., & Rigg, C. (2012). Action Learning as Praxis in Learning and Changing. Research in Organizational Change and Development. *Research in Organisational Change and Development*, 20(1), 59-89.

Coleman, P. (2021). Validity and Reliability within Qualitative Research in the Caring Sciences. *International Journal of Caring Sciences*, 14, 1-2041.

Cornish, F., Breton, N., Moreno-Tabarez, U., Delgado, J., Rua, M., Aikins, A.D., & Hodgetts, D. (2023). Participatory action research. *Nature reviews methods primers*, 34(3), 1-14.

Cram, W.A., Templier, M., & Paré, G. (2020). (Re)considering the Concept of Literature Review Reproducibility. *Journal of the Association for Information Systems*, 21(5), 1103-1114.

Crawford, M. (2020). Ecological Systems theory: Exploring the development of the theoretical framework as conceived by Bronfenbrenner. *Journal of Public Health Issues and Practices*, 4(2), 1-170.

Creswell, J. W. (2007). Qualitative inquiry & research design: choosing among five approaches. India: SAGE Publications.

Culshaw, S. (2019). The unspoken power of collage? Using an innovative arts-based research method to explore the experience of struggling as a teacher. *London Review of Education*, 17, 268-283.

Dahalan, K., & Toran, H. (2023). Teaching Vocational Skills to Students with Low Functioning Disabilities. *International Journal of Academic Research in Progressive Education and Development*, 12(2), 1650–1666.

Das, M. (2025). Empowering Children with Special Needs Through Vocational Education: Addressing Specific Needs, Challenges, and Potential Solutions in School Education. *Journal of Emerging Technologies and Innovative Research*, 12(1), 114-122.

Dawadi, S. (2020). Thematic Analysis Approach: A Step-by-Step Guide for ELT Research Practitioners. *Nelta Journal*, 25, 1-2.

Department of Basic Education (South Africa). (2016). Draft policy for the provision of quality education and support for children with severe to profound intellectual disability. Pretoria. Department of Basic Education. Retrieved May 28, 2023, from <https://www.education.gov.za/Portals/0/Documents/Legislation/Call%20for%20Comments/DraftCSPIDPolicyOct2016.pdf?ver=2016-11-07-092618-000>

Department of Basic Education (South Africa). (2018). Curriculum and Assessment Policy Statement Grade R-5 for Learners with Severe Intellectual Disability. Msmonline. Retrieved April 13, 2023 from <https://msmonline.co.za/wp-content/uploads/2021/04/CAPS-SID-Beauty-and-Nail-Technology.pdf>

De Rijke, V. (2024). The and Article: Collage as Research Method - Abstract Qualitative Inquiry, *Sage Journals*, 30, 301 –310.

Donkoh, S., & Mensah, J. (2023). Application of triangulation in qualitative research. *Journal of Applied Biotechnology and Bioengineering*, 10(1), 6-9.

Ellman, E., Sondag, A., & Buchanan, H. (2020). Transition from special school to post-school life in youths with severe intellectual disability: Parents' experiences. *South African Journal of Education*, 40(2), 1-9.

Essays. (2018). Resources in Teaching and Learning. Retrieved January 13, 2024, from <https://www.ukessays.com/assignments/resources-in-teaching-and-learning.php?vref=1>

Etikan, I., Musa, S.A., & Alkassim, R.S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4.

Fajri, B.R., & Jauhari, M.N. (2024). Challenges and Opportunities for Special-Needs Children in Elementary Schools. *Jurnal Pendidikan Sekolah Dasar*, 5(1), 1-8.

Fauzian, M., Kania, D., & Elan. E. (2023). The role of special schools in providing services and fulfilling the right to education for children with special needs. *Educenter: Jurnal Ilmiah Pendidikan*, 2(1), 314-323.

Gameiro, S., De Guevara, B.B., Refaie, E.E., & Payson, A. (2018). Drawing Out - An innovative drawing workshop method to support the generation and dissemination of research findings. *PLOS ONE*, 13(9),1-19.

Garcia-Melgar, A., Hyett, N., Bagley, K., McKinstry, C., Spong, J., & Iacono, T. (2022). Collaborative team approaches to supporting inclusion of children with disability in mainstream schools: A co-design study, *Research in Developmental Disabilities*, 126(1), Article 104233. <https://doi.org/10.1016/j.ridd.2022.104233>

Goertzen, B.J. (2019). *Action Learning in a graduate online course* (Doctoral thesis). <https://www.emerald.com/insight/content/doi/10.12806/v18/i2/a1/full/pdf?title=action-learning-in-a-graduate-online-course>

Göran, G. (2019). The Generation of Qualitative Data in Information Systems Research: The Diversity of Empirical Research Methods. *Communications of the Association for Information Systems*, 44, 572-599.

Gyasi, M.N.K., Okrah, A.K., & Anku, J.S.A. (2020). Teachers' Knowledge of Special Educational Needs and Disability Students and Their Classroom Management Approaches. *World Journal of Education*, 10(4), 160-172.

Han, E.H., Zhang, Y., Lin, B.L., & Zhang, J.G. (2016). Advances in the application of action learning in nursing practice. *Chinese Nursing Research*, 3(1), 101-104.

Haradhan, M. (2017). Two Criteria for Good Measurements in Research: Validity and Reliability. Retrieved April 16, 2023, from https://mpa.ub.uni-muenchen.de/83458/1/MPRA_paper_83458.pdf

Haris, M., & Inga, B. (2023). Enhancing the skills of special education teachers: a scoping review of professional development approaches. *Multidisciplinarni Pristupi u Edukaciji i Rehabilitaciji*, 5(1), 199-210.

Hay, J., & Joubert, C. (2021). 'Theoretical perspectives underpinning psychosocial, educational support services' in J. Hay, M.J. Malindi & T. Makhalemele (eds.), *Reconceptualizing education support services in South Africa*, pp. 3–36, AOSIS, Cape Town. <https://doi.org/10.4102/aosis.2021.BK208.01>

Hayes, A. M., & Bulat, J. (2017). Disabilities-Inclusive Education Systems and Policies Guide for Low- and Middle-Income Countries. RTI Press Publication No. OP-0043-1707. Research Triangle Park, NC: RTI Press.
<https://doi.org/10.3768/rtipress.2017.op.0043.1707>

Herr, K., & Anderson, G.L. (2015). *The Action Research Dissertation: A Guide for Students and Faculty*. SAGE.

Himasha, N.A. (2024). Challenges Faced by Educators in Supporting Children with Special Educational Needs and Disabilities in England. *International Journal of Education and Research*, 12(12), 63-84.

Hove, N., & Phasha, N.T. (2024). 'Support services for learners with learning disability in mainstream classroom using capability theory'. *South African Journal of Childhood Education*, 14(1), Article 1418. <https://doi.org/10.4102/sajce.v14i1.1418>

James, T.G., Ph.D., DeJonckheere, M., & Guetterman, T.C. (2024). Integrating Transformative Considerations and Quantitative Results through a Participant Selection Joint Display in Explanatory Sequential Mixed Methods Studies. *J Mix Methods Research*, 18(1), 14–30.

Jama, P.P., & Wood, L. (2024). The power (and caveats) of body mapping as a visual methodology with vulnerable youth. *Qualitative Research Journal*, 1(0), 1443-9883.

Jamaluddin, R., Sapak, M.F.M., Kadir, S.A., Hajaraih, S.K.M., & Kamis, A. (2021). The Implementation of Vocational Skills in Teaching and Learning of People with Disabilities in the Community-Based Rehabilitation Center (CBRC): A Review from Ecological Environments Perspective. *Universal Journal of Educational Research*, 9(11), 1877-1885.

Jauhari, M.N., Irvan, M., Sunarya, P.B. (2020). Vocational Education Services in Schools for Children with Special Needs. *Advances in Social Science, Education, and Humanities Research*, 508(1), 665-668.

Joyce, J. B., Benwell, B., Parry, R., & Rhys, C. S. (2025). Accessing and Using Data without Informed Consent: Guiding Principles from Conversation Analysis. *Research on Language and Social Interaction*, 58(2), 113–120.

Juma, R.K., & Ntulo, G.R. (2024). The Availability and Use of Assistive Technologies among Pupils with Hearing and Visual Impairments in Zanzibar. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 20(1), 63-77.

Jardinez, M. J., & Natividad, L. R. (2024). The Advantages and Challenges of Inclusive Education: Striving for Equity in the Classroom. *Shanlax International Journal of Education*, 12(2), 57–65.

Kagan, J (2023). Special needs child. *Investopedia*.
<https://www.investopedia.com/terms/s/specialneedschild.asp>

Kassu, J. (2019). Research Design and Methodology. *School of Mechanical and Industrial Engineering*, 1-12. DOI:<http://dx.doi.org/10.5772/intechopen.85731>

Keyton, J. (2017). Collaboration. Retrieved January 2, 2024, from <https://DOI:10.1002/9781118955567.wbieoc026>

Khan, J.A., Rama, A.M., Sambamoorthy, N., & Prashanth, K. (2023). Research Methodology (Methods, Approaches, And Techniques). *San International Scientific Publications*, 10(1), 1-186.

Kivunja, C., & Kuyini, A.B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6(5), 26-41.

Kombe, N.A., Mwakasangula, E., & Masue, O. (2024). The Adequacy of Physical Learning Facilities Supporting Students with Physical Disabilities (SWPDs) In Tanzania Secondary schools. *International Journal of Social Science and Economic Research*, 9(8), 2672-2686.

Kumatongo, B., & Muzata, K.K. (2021). Research Paradigms and Designs with their Application in Education. *Journal of Lexicography and Terminology*, 5(1), 16-32.

Kearney, J., Wood, L., & Zuber-Skerrit, O. (2013). University–community partnerships through Participatory Action Learning and Action Research (PALAR). *Gateways: International Journal of Community Research and Engagement*, 6(1), 113–30.

Kalu, M. E. (2019). Using Emphasis-Purposeful Sampling-Phenomenon of Interest–Context (EPPiC) Framework to Reflect on Two Qualitative Research Designs and Questions: A Reflective Process. *The Qualitative Report*, 24(10), 2524-2535.

Kraus, S., Breier, M., Lim, W.M., Dabić, M., Kumar, S., Kanbach, D., Mukherjee, D., Corvello, V., Piñeiro-Chousa, J., Liguori, E., Palacios-Marqués, D., Schiavone, F., Ferraris, A., Fernandes, C., & Ferreira, J.J. (2022). Literature reviews as independent studies: guidelines for academic practice. *Review of Managerial Science*, 16(1), 2577–2595.

Kennya, N., McCoyb, S., & Mihut, G. (2020). Special education reforms in Ireland: changing systems, changing schools. *International Journal of Inclusive Education*, 1(0), 1-20.

Kassim, A., & Nordin, M.N. (2024). An Effective Teaching Aids Using Visual, Auditory And Kinesthetic Learning Styles For Students With Special Needs. *Special Education*, 2(1), 1-14.

Korkie, Y., Beyers, C., & Swanepoel, E. (2025). Teaching inclusive education: a contextual higher education analysis. *Frontiers in Education*, 10(1), Article 1445612. <https://doi:10.3389/feduc.2025.1445612>

Linneberg, M., & Korsgaard, S. (2019). Coding qualitative data: a synthesis guiding the novice. *Qualitative Research Journal*, 10(1), 1-14.

Lyonga, F. I. N. (2025). Building a positive school culture within the socio-political crises in the South West and Northwest regions of Cameroon: Strategies for Administrators. *Journal of developmental issues in education and humanities (Dieh)*, 1(3), 129-157.

Ling, Y., Chung, S.J., & Wang, L. (2021). Research on the reform of the management system of higher vocational education in China based on personality standards. *Current Psychology*, 42(1), 1225-1237.

Ling, L. (2019). An Instructional Action Learning Model for Strengthening Business Students' English Learning Community. *International Journal of Advanced Research and Publications*, 10(3), 13-27.

Li, S., & Mao, Y. (2022). Advantages and Disadvantages of Special Needs Children in Regular Classroom. *Advances in Social Science, Education, and Humanities Research*, 664(1), 834-839.

Largent, E.A., Eriksen, W., Barg, K., Greysen, R., & Halpern, D. (2022). Participants' Perspectives on Incentives for Research Participation: A Qualitative Study. *Ethics Human Research*, 44(6), 11-22.

Lusha, E. (2024). National and International Collaboration and its Impact on Economic Development. *Interdisciplinary Journal of Research and Development*, 11, 76-83.

Musekiwa, L. (2025). Community and parental involvement in the education of learners with disabilities in a Rwandan community. *International Journal of Research in Social Science and Humanities*, 6(6), 1-10.

Mwanda, Z. (2022). Text, Voice-notes, and Emojis: Exploring the use of WhatsApp as a responsive research method for qualitative studies. *Critical Studies in Teaching and Learning*, 10(1), 78-92.

Mahlaule, A.P., McCrindle, C.M.E., & Napoles, L. (2024). 'Inclusive education and related policies in special needs schools in South Africa'. *African Journal of Disability*, 13(0), Article 1358. <https://doi.org/10.4102/ajod.v13i0.1358>

Makwana, D., Engineer, P., & Dabhi, A., & Chudasama, H. (2023). Sampling Methods in Research: A Review. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 7(3), 762-768.

McGregor, S.L.T. (2023). Ethical Considerations in Research about Organisations: Compendium of Strategies. *Ethics in Progress*, 2, 4-23.

Manandhar, N., & Joshi, S.K. (2020). Importance of consent in the research. *International Journal of Occupational Safety and Health*, 10(0), 89-91.

Mackworth-Young, C.R.S., Wringe, A., Clay, S., Chonta, M., Chiiya, C., Konayuma, K., Sievwright, K., Mbewe, M., Mwale, M., Stangl, A.L., & Bond, V. (2022). Critical Reflections on Individual Collages as a Research Method with Young Women Living with HIV in Zambia. *Emerging Adulthood*, 10(5), 1161-1172.

Martinez-Vargas, C. (2022). Democratising Participatory Research: Pathways to Social Justice from the South. Cambridge, UK: Open Book Publishers, <https://doi.org/10.11647/OBP.0273>

Mahadew, A. (2023). Reimagining Inclusion in Early Childhood Care and Education: A Posthuman Perspective. *Educational Research for Social Change*, 12(1), 1-16.

Mohamed, A. (2023). Action Learning Literature Review. *Department Action Learning MBA*, 1(0), 1-13.

Marín-Suelves, D., Ramón-Llin, J., & Tijeras-Iborra, A. (2023). Effects of Physical Education on students with intellectual disabilities. A systematic review. *Cultura, Ciencia y Deporte*, 18(58), 139-161.

Makhalemele, T., Payne-van Staden, I., & Masunungure, A. (2021). 'Inclusive education and education support services: Global and local trends' in J. Hay, M.J. Malindi & T. Makhalemele (eds.), *Reconceptualising education support services in South Africa*, pp. 39–96, AOSIS, Cape Town. <https://doi.org/10.4102/aosis.2021.BK208.02>

Maree, K., & Pietersen, J. (2016). Sampling. In K. Maree (eds.), *First steps in research* (pp.198). Van Scaik.

Maree, K. (2016). Planning a research proposal. In K. Maree (eds.), *First steps in research* (pp.44). Van Scaik.

McIntyre, A. (2008). *Participatory action research*. SAGE Publications, Inc. <https://doi.org/10.4135/9781483385679>

MacDonald, C. (2012). Understanding participatory action research: A qualitative research methodology option. *Canadian Journal of Action Research*, 13, 34-50.

Mthiyane N.P., Malema, D., & Madonda, N. (2023). Promoting the Well-Being of Supervisors for Sustainable Early Childhood Development in an Informal Settlement. *Educational Research for Social Change*, 12(1), 52-68.

Mirza, H., Billable, F., & Mirza, C. (2023). Ethical Considerations in Qualitative Research: Summary Guidelines for Novice Social Science Researchers. *Social Studies and Research Journal*, 11(1), 441-449.

Merriam-Webster. (2021). Merriam-Webster dictionary. Retrieved October 27, 2023, from <https://www.merriam-webster.com/dictionary/special%20needs>

Mertens, D. M. (2015). *Research and evaluation in education and psychology: integrating diversity with quantitative, qualitative, and mixed methods*. (4th ed.). Sage Publications, Inc.

McKenzie, J., Kelly, J., Moodley, T., & Stofile, S. (2023). Reconceptualizing teacher education for teachers of learners with severe to profound disabilities. *International Journal of Inclusive Education*, 27(2), 205–220.

Mohd, K., Amin, A., Akhir, M.D., Abdul, R., Zambri, M., Sutan, R., Khairuddin., K & Abdullah, W.A. (2023). Independent Living Skills Needed by Students with Special Educational Needs (SEN) Towards Inclusive Education: A Systematic Literature Review. *Special Education*, 1(0), 610-623.

Mohd, S.A.M.N., Yoon, S.J., & Muhammad, Z.K. (2023). An ongoing discussion about validity and quality in action research. *Malaysian Journal of Action Research*, 1(1), 23-34.

McMullin, C. (2021). Transcription and Qualitative Methods: Implications for Third Sector Research. *VOLUNTAS: International Journal of Voluntary and Non-profit Organisations*, 34(1), 1-15.

Makhalemele, T., & Tlale, L.D.N. (2021). Managing inclusive schools in South African schools: A transformational leadership perspective. In Tsediso Michale Makoelle, Thabo Makhalemele & Pierre du Plessis (eds). *School Leadership for Democratic Education in South Africa*. Routledge Publisher. New York. (pp.149-171).

New World Encyclopaedia. (2022). *Jean-Marc-Gaspard Itard*. *Encyclopaedia Britannica*. Retrieved April 02, 2023, from <https://www.britannica.com/biography/Jean-Marc-Gaspard-Itard>

Nieuwenhuis, J. (2016). Analyzing qualitative data. In K. Maree (eds), *First steps in research* (pp.109-125). Van Scaik.

Nowell, L.S., Norris, J.M., White, D.E., & Moules, N.J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 1–13.

Nykiforuk, C.I.J., Vallianatos, H., & Nieuwendyk, L.M. (2016). Photovoice as a Method for Revealing Community Perceptions of the Built and Social Environment. *International Journal Quality Methods*, 10(2), 103-124.

Neethling, M. (2015). *Assisting Foundation Phase teachers to implement inclusive education in the classroom: A Participatory Action Learning and Action Research (PALAR) approach*. (Unpublished doctoral dissertation). North-West University. Potchefstroom Campus.

Neethling, M., & Nel, M. (2021). Addressing a theory-practice gap in teacher education by using a participatory action learning and action research (PALAR) approach. *South African Journal of Education*, 41(4), Article 1942.

<https://doi.org/10.15700/saje.v41n4a1942>

Nikolopoulou, K. (2023). What is Purposive Sampling? *Scribbr*. Retrieved July 10, 2024, from <https://www.scribbr.com/methodology/purposive-sampling/>

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22(1), 1–18.

Nelson, D. (2014). Participatory action research: A literature review. (Unpublished manuscript). https://www.researchgate.net/profile/Dorothea-Nelson/publication/321398218_Participatory_Action_Research_A_Literature_Review/links/5feb827492851c13fed36de3/Participatory-Action-Research-A-Literature-Review.pdf

Nyman, A., Rutberg, S., Lilja, M., & Isaksson, G. (2022). The process of using Participatory Action Research when Trying out an ICT Solutions in Home-Based Rehabilitation. *International Journal of Qualitative Methods*, 21(1), <https://doi.org/10.1177/16094069221084791>

Nyimbili, F., & Nyimbili, L. (2024). Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. *British Journal of Multidisciplinary and Advanced Studies: English Language, Teaching, Literature, Linguistics & Communication*, 5(1), 90-99.

Navas-Bonilla, C.R., Guerra-Arango, J.A., Oviedo-Guado, D.A., & Murillo-Noriega, D.E. (2025). Inclusive education through technology: a systematic review of types, tools and characteristics. *Frontiers in Education*, 10(1), 1-22.

Okon, U.I., & Lovina, O.N. (2021). Entrepreneurship and socio-economic inclusiveness of physically challenged: a survey of selected special needs schools in rivers state. *African Journal of Business and Economic Development*, 1(10), 122-137.

Opoku, M.P. (2016). The State of Special Schools in Ghana: Perceptions of Special Educators in Ashanti and Brong Ahafo Regions of Ghana. *Turkish International Journal of Special Education and Guidance & Counselling*, 5, 22-38.

Özbek, A.B., Girli, H., & Öztürk, A. (2017). Investigating the Opinions of Teachers on the Processes of Vocational Counselling, Training and Employment of Special Needs Students. *Journal of Education and Training Studies*, 5(12), 41-59.

Omar, M., & Farzeeha, D. (2019). A review of vocational education for special needs learners. *School of Education, Faculty of Social Sciences and Humanities*, 8(1), 58-65.

Ofori-Attah. (2021). Early Childhood Education and Instructional Ecology: A Vygotskian Approach in Teaching Early Childhood Social Studies. *Athens Journal of Education*, 8, 139–160.

Othman, M. F., Rahmat, N. E., Aziz, N. A., Hak, N. A., & Kamarudin, D. (2022). Children with Disabilities in Malaysia and Their Educational Rights. *International Journal of Academic Research in Progressive Education and Development*, 11(2), 360–372.

Omodan, B.I. (2022). A Model for Selecting Theoretical Framework through Epistemology of Research Paradigms. *African Journal of Inter/Multidisciplinary Studies*, 4, 275-285.

Omodan, B.I. (2020). The Trajectory of Transformative Research as an Inclusive Qualitative Research Approach to Social Issues. *Multicultural Education: African Journal of Inter/Multidisciplinary Studies*, 6, 34-44.

Phala, T.A., & Hugo, A. (2022). 'Difficulties in teaching Grade 3 learners with reading problems in full-service schools in South Africa', *African Journal of Disability*, 11(0), Article 906. <https://doi.org/10.4102/ajod.v11i0.906>

Pasaribu, M., & Harfiani, R. (2021). Vocational Education at the Special School in North Sumatra. *Al-Ishlah: Jurnal Pendidikan*, 13(2), 1335-1347.

Piggot-Irvine, E. (2012). Creating authentic collaboration: A central feature of effectiveness. In O. Zuber-Skerritt, *Action research for sustainable development in a turbulent world* (pp.89-107). Bingley, UK: Emerald.

Payne-van Staden, I., & Van der Merwe, W., (2021). 'Repositioning full-service schools and special schools as resource centres' in Hay, J., Malindi, M.J., & Makhalemele, T. (eds.), *Reconceptualising education support services in South Africa*, pp. 279–320, AOSIS, Cape Town. Retrieved October 31, 2023, from <https://doi.org/10.4102/aosis.2021.BK208.08>

Palit, K. (2020). Social constructivism in the classroom. *International Journal of Recent Research Review*, 25, 9-11.

Puri, G. (2023). Participatory Action Research in Social Sciences and Education. *Journal of NELTA Gandaki*, 6, 66-77.

Point, S., & Baruch, Y. (2023). (Re)thinking transcription strategies: Current challenges and future research directions. *Scandinavian Journal of Management*, 39(1), Article101272, <https://doi.org/10.1016/j.scaman.2023.101272>

Rojo, J., Ramjan, L., George, A., Hunt, L., Heaton, L., Kaur, A., & Salamonson, Y. (2023). Applying Mezirow's Transformative Learning Theory into nursing and health professional education programs: A scoping review. *Teaching and Learning in Nursing*, 18(1), 63-71.

Republic of South Africa. (2013, November 26). No 4 of 2013: Protection of Personal Information Act, 2013. Government Gazette. No. 37067. Pretoria: Government Printer.

Reason, P., & Bradbury, H. (2008). *Handbook of Action Research. Participative Inquiry and Practice* (2nd ed). London: SAGE Publications.

Rens, J., & Louw, H. (2021). Teachers' Experiences in Implementing the Life Skills CAPS for Learners with Severe Intellectual Disability. *Educational Research for Social Change*, 10(2), 105-123.

Romm, N.R.A. (2015). Reviewing the Transformative Paradigm: A Critical Systemic and Relational (Indigenous) Lens. *Systemic Practice Action Research*, 28, 411–427.

Rina, F.R., Laily, N.A., & Ketut, M.S. (2023). The process of forming knowledge: In the study of ontology, epistemology, and axiology. *International Journal for Educational and Vocational Studies*, 5(1), 13-18.

Revans, R. (1984). Action Learning: Are we getting there? *Management Decision*, 22(1), 45-52.

Rashid, S.M.M., & Anne, N.H. (2024). Understanding and Enhancing Special Education Teachers' Competencies for Inclusive Practice: A Comprehensive Analysis. *International Journal of Learning, Teaching and Educational Research*, 23(6), 189-214.

Reyes-Ortiz, A. (2019). "Motivating Students with Learning Disabilities to Succeed in Education": Capstone Projects (Master's Thesis).

https://digitalcommons.csumb.edu/caps_thes_all/470

Shree, A., & Shukla, P.C. (2016). Intellectual Disability: definition, classification, causes and characteristics. *Learning Community – An International Journal of Educational and Social Development*, 7(1), 19-20.

Strydom, L., Nortjé, N., Beukes, R., Esterhuyse, K., & Van der Westhuizen, J. (2012). Job satisfaction amongst teachers at special schools. *South African Journal of Education*, 32(1), 255-266.

Solomon, E.T. (2023). *Challenges faced by Occupational Therapists and Teachers in the implementation of Vocational Programmes in selected special needs schools for learners with Severe Intellectual Disability in the metro district within the City of Cape Town* (Master's thesis). <https://scholar.sun.ac.za/bitstreams/8ec9388b-d267-4bec-9746-8a299c11f13c/download>

- Solomon, E.T., Luger, R., & Ned, L. (2024). 'Experiences of teachers in vocational programmes in special needs schools, City of Cape Town'. *African Journal of Disability* 13(0), Article 1333, <https://doi.org/10.4102/ajod.v13i0.1333>
- Sonia, A., & Sarungbam, D. (2023). People with intellectual disabilities – an approach towards management issues. *International Journal of Advanced Research*, 11(0), 1125-1130.
- Sachdeva, S., Tamrakar, K.A., Perwez, E., Kapoor, P., & Gupta, D. (2024). Focus group discussion: an emerging qualitative tool for educational research. *International Journal of Research and Review*, 11(9), 302-308.
- Smith, E., & Carter, M., & Walklet, E., & Hazell, P. (2021). What are Photovoice studies? *Evidence Based Nursing*, 25(1), 6-7.
- Scoular, C., Duckworth, D., Heard, J., & Ramalingam, D. (2020). Collaboration: Definition and structure. *Australian Council for Educational Research*. 1-8. Retrieved October 27, 2023, from https://research.acer.edu.au/ar_misc/39
- Saleem, A., Kausar, H., & Deebea, F. (2021). Social Constructivism: A New Paradigm in Teaching and Learning Environment. *Perennial Journal of History*, 2(2), 403-421.
- Scribbr. (2024). Research Methods, Definitions, Types, and Examples. Retrieved July 21, 2024, from <https://www.scribbr.com/category/methodology/>
- Scribbr. (2023). Data collection, Definitions, Methods and Examples. Retrieved January 12, 2025, from <https://www.scribbr.com/methodology/data-collection/>
- Stark, L. (2021). Photovoice Facilitation Guide: Fostering Adolescent Wellbeing. Retrieved July 22, 2024, from <https://sites.wustl.edu/salama/files/2022/09/Photovoice-Facilitation-Guide-compressed.pdf>
- Suprpto, N., Sunarti, T., Suliyanah, S., Wulandari, D., Nuurul, H., Hasan, N., Syaiful, A., & Mubarak, H. (2020). A systematic review of photovoice as participatory action research strategies. *International Journal of Evaluation and Research in Education (IJERE)*, 9(1), 675-683.

Serrat, O. (2017). Action Learning. In: Knowledge Solutions. Springer, Singapore.
https://doi.org/10.1007/978-981-10-0983-9_62

Salisu, N. (2025). Exploring the Role of Parental Involvement in Building Educational Foundations for Children. *International Journal of Research in Education and Sustainable Development*, 5(1), 19-27.

Saputra, M.P.A., Nurnisaa, A.S., & Alim, J.W. (2025). Education Revolution: Leveraging Technology to Improve Learning Quality. *International Journal of Ethno-Sciences and Education Research*, 5(1), 30-36.

Saleem, S., & Sajjad, S. (2019). Training Facilities Provided by Special Education Schools to Students with Visual Impairment and Teachers to Use Assistive Technology. *Journal of Economics and Sustainable Development*, 10(1), 91-100.

South African Democratic Teacher's Union (SADTU). (2025). Memorandum of Demands. Retrieved June 30, 2025, from <https://www.sadtu.org.za/wp-content/uploads/2025/05/DBE-MEMORANDUM-TO-SADTU-MARCH.pdf>

Tracy, S.J. (2019). Qualitative research methods: Collecting evidence, crafting analysis, communicating impact (2nd ed.). John Wiley & Sons, Inc.

Taherdoost, H. (2021). Data Collection Methods and Tools for Research; A Step-by-Step Guide to Choose Data Collection Technique for Academic and Business Research Projects. *International Journal of Academic Research in Management*, 10(1), 10-38.

Tremblay, P., & Belley, S. (2017). Individualised Education Plans in Canada: A Comparative Analysis. *International Journal for Cross-Disciplinary Subjects in Education*, 8(1), 3017-3024.

Tegan, G. (2021). What is a focus group? Step-by-step Guide and Examples. Retrieved July 20, 2024, from
<https://www.scribbr.com/methodology/focus-group/#:~:text=Step%201%3A%20Choose%20your%20topic%20of%20interest%20Step,focus%20group%20Step%207%3A%20Host%20your%20focus%20group>

Tebele, N., & Chaka, J. (2023). Exploring teachers' perceptions when supporting learners with dysgraphia and dyslexia in a rural school. *International Journal of Studies in Psychology*, 4(1), 15-28.

University of Gloucestershire. (2018). Research Ethics: A Handbook of Principles and Procedures. Retrieved July 07, 2024, from <https://www.glos.ac.uk/docs/download/Research/handbook-of-principles-and-procedures.pdf>

UNESCO. (2024). Education leaders meet at UNESCO to take stock of transformative actions in education and accelerate progress in SDG 4. Retrieved August 30, 2024, from <https://www.unesco.org/SDG4education2030/en/articles/education-leaders-meet-unesco-take-stocktransformative-actions-education-and-accelerate-progress>

Vinz, S., & George, T. (2022). What is a Theoretical Framework? / Guide to Organising. Retrieved April 17, 2023, from <https://www.scribbr.com/dissertation/theoretical-framework/>

Wang, J. (2024). The Importance of Special Education and Life-oriented Teaching. *Lecture Notes in Education Psychology and Public Media*, 33, 121-125.

Wang, J. (2020). Using Photovoice as Methodology, Pedagogy and Assessment Tool in Education: Graduate Students' Experiences and Reflections. *Beijing International Review of Education*, 2, 112-135.

Williams, L.M., Bettini, E., Peyton, D., Harvey, A., Rosenberg, M., & Sindelar, P.T. (2020). Rethinking Shortages in Special Education: Making Good on the Promise of an Equal Opportunity for Students with Disabilities. *Journal of Teacher Education and Special Education*, 43(1), 45–62.

Wood, L., Waddington, R., Kahts-Kramer, S., & Neethling, M. (2023). Lessons Learnt From Facilitating Action Learning With Youth Facing Multiple Adversities. *Educational Research for Social Change*, 12(2), 1-14.

Weng, M.L. (2024). A typology of validity: content, face, convergent, discriminant, nomological and predictive validity. *Journal of Trade Science*, 12, 155-179.

Wood, L., & Zuber-Skerritt, O. (2013a). PALAR as a methodology for community engagement by faculties of education. *South African Journal of Education*, 33(4),1-15.

Wood, L., & Zuber-Skerritt, O. (2013b). Community–University Partnerships: Using Participatory Action Learning and Action Research (PALAR). *Gateways: International Journal of Community Research and Engagement*, 6(1),113–30.

Wood, L. (2020). Participatory action learning and action research: Theory, practice, and process. Retrieved August 18, 2023, from https://books.google.co.za/books?hl=en&lr=&id=KFyvDwAAQBAJ&oi=fnd&pg=PP1&dq=info:CLUdMJloawJ:scholar.google.com&ots=FOoJYLpDPJ&sig=r5NhLTfk7Hg4VQW WY3wwdS8hSq&redir_esc=y#v=onepage&q&f=false

Wood, T., Essop, F., Watermeyer, B., & McKenzie, J. (2019). “Access to Education for Children with Severe to Profound Intellectual Disability in South Africa: The Potential and Limits of Social Action.” In the Palgrave Handbook of Disability and Citizenship in the Global South, edited by Watermeyer Brian, Swartz Leslie, and McKenzie Judith, 135–145. Cham: Palgrave Macmillan.

Walton, E., & Engelbrecht, P. (2022). Inclusive education in South Africa: path dependencies and emergences. *International Journal of Inclusive Education*, 28(1),1-19.

Willocks, K. (2022). Developing Leaders Using On-Line Action Learning: An Activity Theory Analysis. *Advances in Developing Human Resources*, 25, 27–44.

Wilson, P.A. (2021). Sensing the Social Field through Action Research: What’s Important, What’s Valid. *Journal of Awareness Based Systems Change*, 1, 119-124.

Xu, A., Baysari, M.T., Stocker, S.L., Leow, L.J., Day, R.O., & Carland, J.E. (2020). Researchers’ views on, and experiences with, the requirement to obtain informed consent in research involving human participants: a qualitative study. *BMC Medical Ethics*, 21(93), 2-11.

Zwane, S.L., & Malale, M.M. (2018). Investigating barriers teachers face in the implementation of inclusive education in high schools in Gege branch, Swaziland. *African Journal of Disability*, 7(0), 1-12. Article 391. <https://doi.org/10.4102/ajod.v7i0.391>

Zabek, F., Lyons., M.D., Alwani, N., Taylor, V.J., Brown-Meredith, E., Cruz, M.A., & Southall, V.H. (2023). Roles and Functions of School Mental Health Professionals Within Comprehensive School Mental Health Systems. *School Mental Health*, 15(1), 1–18.

Zaid, N.N., Wahab, R., Kamaralzaman, S., Toran, H., & Ilias, K. (2021). Perceptions of Special Educators Towards Occupational Therapy Trainees in a School Setting. *Malaysian Journal of Medicine and Health Sciences*, 17(1), 154-161.

LIST OF ANNEXURES

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ANNEXURE B: PERMISSION LETTERS SENT TO STAKEHOLDERS

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ANNEXURE D: ETHICS CLEARANCE LETTER

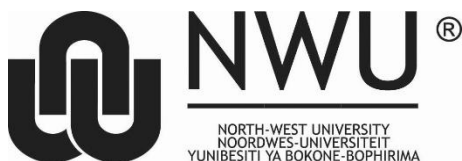
ANNEXURE E: EXAMPLE OF SEMI-STRUCTURED INTERVIEW TRANSCRIPTION

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ANNEXURES H: IRIMS CERTIFICATE OF ATTENDANCE

ANNEXURES A: INFORMED CONSENT FORM



(Recipient name)
(Recipient address)
(Recipient address)
(Recipient address)

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: <http://www.nwu.ac.za>

Faculty of Education

(Research entity details)

Tel: 018 111 1111
Email: Name.Surname@nwu.ac.za

Date

PARTICIPANT INFORMATION AND CONSENT FORM

I herewith wish to request your consent to participate in this research. Before you give consent, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

A participatory process to improve vocational education in special schools.

ETHICS APPLICATION NUMBER

NWU-00291-24-A2

PROJECT SUPERVISOR: Carmen Joubert

CO-SUPERVISOR: Johnnie Hay

ADDRESS: 1174 Hendrick Van Eck Boulevard, Vanderbijlpark, 1900

CONTACT NUMBER: 016 910 3096

MEMBER OF PROJECT TEAM Med-Student: Mmamokho Mirriam Solomons

ADDRESS: 1113, Kolgans Street, Eligwa Estate, Three Rivers East

CONTACT NUMBER: 0781377283

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656

This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also asked from the provincial Department of Basic Education/other relevant body (please describe) as well as the school principal (if relevant).

What is this research about?

This research aims to explore and identify the current strategies to provide vocational education and actions that stakeholders can take to further improve vocational education in special schools.

This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also obtained from the provincial Department of Basic Education.

Participants

- Four special educators teaching vocational education at the participating SID school.
- One SMT member working at the participating SID school.

What is expected of you as a participant?

- To collaboratively work together and share ideas to bring about positive change in the improvement of vocational education.

Benefits to you as a participant

- The participants will benefit from this study as they will voice their views on improving vocational education that will benefit special needs learners.

Risks involved for participants

- Low

Confidentiality and protection of identity

- Every participant will be given a consent letter to gain an understanding of the purpose of the research study, and most importantly, anonymity and confidentiality of data collection by the rules within the Protection of Personal Information Act (POPIA), 4 of 2023 will be adhered to. Therefore, the confidentiality and privacy of the participants will always be protected. Participation is voluntary, and the participants may withdraw at any time, without giving any reason, and withdrawal will not be held against them.

Dissemination of findings

Findings will be made available to all co-researchers of the school. Findings will also be used as part of a master's dissertation and might be used to publish articles and/or presenting at conferences.

If you have any further questions or inquiries regarding your participation in this research, please contact the researchers for more information.

Yours sincerely
Mmamokho Mirriam Solomons

DECLARATION BY PARTICIPANT:

By signing below, I agree to take part in a research study entitled: A participatory process to improve vocational education in special schools.

I declare that:

- I have read this information and consent form and understand what is expected of me in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the research process before it has finished, if the researcher feels it is in my best interests, or if I do not follow the research procedures, as agreed to.

Signed at (place)_____ on (date) ____/____/20____

Signature of participant

ANNEXURES B: PERMISSION LETTERS SENT TO STAKEHOLDERS



12 Anton Stegman Road
Roodstuine
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Tel: 018 299-1111/2222
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Faculty of Education

Community-Based Educational Research
(COMBER)

Tel: 018 111 1111
Email: Carmen.Joubert@nwu.ac.za

14 August 2024

PERMISSION LETTER: SCHOOL PRINCIPAL

I herewith wish to request your permission for educators and SMT members to participate in this research, which involves group discussions. Before granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

A participatory process to improve vocational education in special schools.

ETHICS APPLICATION NUMBER: **NWU-00291-24-A2**

PROJECT SUPERVISOR: Carmen Joubert

CO-SUPERVISOR: Johnnie Hay

ADDRESS: 1174 Hendrick Van Eck Boulevard, Vanderbijlpark, 1900

CONTACT NUMBER: 016 910 3096

MEMBER OF PROJECT TEAM MEd-Student: Mmamokho Mirriam Solomons

ADDRESS: 1113 Kolgans Street, Eligwa Estate, Three Rivers East

CONTACT NUMBER: 0781377283

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656

This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also obtained from the provincial Department of Basic Education/other relevant bodies.

What is this research about?

This research study aims to explore and identify the current strategies to provide vocational education and actions that stakeholders can take to further improve vocational education in special schools.

Participants

- Four special educators teaching vocational education at the participating SID school.
- One SMT member working at the participating SID school.

What is expected of the participants?

- To collaboratively work together and share ideas to bring about positive change in the improvement of vocational education.

Benefits to the participants

- The participants will benefit from this study as they will voice their views on improving vocational education that will benefit special needs learners.

Risks involved for participants

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Dissemination of findings

Findings will be made available to all co-researchers of the school. Findings will also be used as part of a master's dissertation and might be used to publish articles and/or presentations at conferences.

If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

DECLARATION BY PRINCIPAL

By signing below, I M. L. MABUKA agree to permit the research to take place with the identified participants in the study entitled:

A participatory process to improve vocational education in special schools.**I declare that:**

- I have read this information and consent form and understand what is expected of the participants in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and participants will not be pressurised to take part.
- Participants may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- Participants may be asked to leave the research process before it is completed, if the researcher feels it is in their best interests, or if they do not follow the research procedures, as agreed to.

Signed at (place) ISIZWE SETHABA on (date) 14 / 08 / 2024



Signature of School Principal



12 Anton Stegman Road
Roodstuine
Vereeniging
1939

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: <http://www.nwu.ac.za>

Faculty of Education

Community-Based Educational Research
(COMBER)

Tel: 018 111 1111
Email: Carmen.Joubert@nwu.ac.za

14 August 2024

GOODWILL PERMISSION: SCHOOL GOVERNING BODY

I herewith wish to request your permission for educators and SMT members to participate in this research, which involves group discussions. Before granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

A participatory process to improve vocational education in special schools.

ETHICS APPLICATION NUMBER: **NWU-00291-24-A2**

PROJECT SUPERVISOR: Carmen Joubert

CO-SUPERVISOR: Johnnie Hay

ADDRESS: 1174 Hendrick Van Eck Boulevard, Vanderbijlpark, 1900

CONTACT NUMBER: 016 910 3096

MEMBER OF PROJECT TEAM MEd-Student: Mmamokho Mirriam Solomons

ADDRESS: 1113 Kogans Street, Eligwa Estate, Three Rivers East

CONTACT NUMBER: 0781377283

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

Contact person: Ms Erna Greyling, E-mail: Erna.Greyling@nwu.ac.za, Tel. (018) 299 4656

This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also obtained from the provincial Department of Basic Education/other relevant body.

What is this research about?

This research study aims to explore and identify the current strategies to provide vocational education and actions that stakeholders can take to further improve vocational education in special schools.

Participants

- Four special educators teaching vocational education at the participating SID school.
- One SMT member working at the participating SID school.

What is expected of the participants?

- To collaboratively work together and share ideas to bring about positive change in the improvement of vocational education.

Benefits to the participants

- The participants will benefit from this study as they will voice their views on improving vocational education that will benefit special needs learners.

Risks involved for participants

- Low

Confidentiality and protection of identity

- Every participant will be given a consent letter to gain an understanding of the purpose of the research study, and most importantly, anonymity and confidentiality of data collection by the rules within the Protection of Personal Information Act (POPIA), 4 of 2023 will be adhered to. Therefore, the confidentiality and privacy of the participants will always be protected.

Dissemination of findings

Findings will be made available to all co-researchers of the school. Findings will also be used as part of a master's dissertation and might be used to publish articles and/or presentations at conferences.

If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

DECLARATION BY SGB CHAIRPERSON/RELEVANT RESPONSIBLE PERSON:

By signing below, I Gadner Kubheka agree to permit the research to take place with the identified participants in the study entitled:

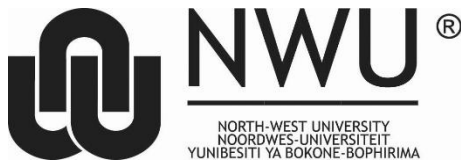
A participatory process to improve vocational education in special schools.**I declare that:**

- I have read this information and consent form and understand what is expected of the participants in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and participants will not be pressurised to take part.
- Participants may choose to leave the study at any time and will not be penalized or prejudiced in any way.
- Participants may be asked to leave the research process before it is completed if the researcher feels it is in their best interests, or if they do not follow the research procedures, as agreed to.

Signed at (place) Isizwe Setjhaba (date) 14 / 08 / 2024



Signature of SGB Chairperson/Relevant responsible person



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222

Web: <http://www.nwu.ac.za>

Faculty of Education

**Community Based Educational Research
(COMBER)**

Tel: 018 299 1871

Email:

Date: 19 March 2025

Department of Basic Education (Gauteng)

**RE-APPLICATION OF PERMISSION/ APPROVAL OF CONTINUATION TO CONDUCT
RESEARCH AT ISIZWE SETJHABA SID SCHOOL**

My name is Mmamokho Mirriam Solomons, student number: 27024695. I am a master's student in Education at the North West University (NWU). I am conducting my master's research under supervision of Professor Johnny Hay and Dr Carmen Joubert (contact details provided).

The title of my research project is: A participatory process to improve vocational education in special schools: *A PALAR approach*.

My research proposal was approved by the MEd and PhD Committee of the Faculty of Education in the NWU.

I hereby request your permission to continue with data collection (fieldwork) at Isizwe Setjhaba SID School. All our sessions will be interactive, and these sessions will be audio-recorded for transcription and analysis. Photovoice and collages will be made by participants. The research will adhere to the ethical prescriptions of the Research Ethics Committee of the NWU. All information collected will be treated in the strictest confidence. Neither the school nor the individual participant will be identifiable in any publications stemming from the research unless they prefer to make their identity known. The role of the participants is voluntary, and they may decide to withdraw at any time without any fear or penalty.

Should you have any questions related to the study please do not hesitate to call me on these numbers, **0781377283** or Dr. Carmen Joubert at **016 910 3096**.

Thank you very much for considering my request.

Yours sincerely,

Mmamokho Mirriam Solomons

Masters student

North-West University

ANNEXURE C: APPROVAL OF RESEARCH



GAUTENG PROVINCE

Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	06 September 2024
Validity of Research Approval:	08 February 2024– 30 September 2024 2024/355
Name of Researcher:	Solomons MM
Address of Researcher:	1113 Kolgans Street Eligwa Estate/ Three Rivers
Telephone Number:	078 1377 283
Email address:	smmamokho@gmail.com
Research Topic:	A participatory process to improve vocational education in special schools
Name of University:	North-West University
Type of qualification	Masters
Number and type of schools:	1 LSEN school
District/s/HO	Sedibeng East

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.

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

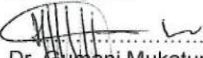
Email: Faith.Tshabalala@gauteng.gov.za

Website: www.education.gpg.gov.za

1. 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. **Because of the relaxation of COVID 19 regulations researchers can collect data online, telephonically, physically access schools or may make arrangements for Zoom with the school Principal. Requests for such arrangements should be submitted to the GDE Education Research and Knowledge Management directorate.**
4. **The Researchers are advised to wear a mask at all times, Social distance at all times, Provide a vaccination certificate or negative COVID-19 test, not older than 72 hours, and Sanitise frequently.**
5. 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.
6. A letter / document that outline 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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



Dr. Gumanzi Mukatuni

DCES: Education Research and Knowledge Management

DATE: 06/09/2024

2

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



GAUTENG PROVINCE

Department: Education

REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	25 March 2025
Validity of Research Approval:	08 February 2025– 30 September 2025 2024/355A
Name of Researcher:	Solomons MM
Address of Researcher:	1113 Kolgans Street Eligwa Estate/ Three Rivers
Telephone Number:	078 1377 283
Email address:	smmamokho@gmail.com
Research Topic:	A participatory process to improve vocational education in special schools
Name of University:	North-West University
Type of qualification	Masters
Number and type of schools:	1 LSEN school
District/s/HO	Sedibeng East

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.

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1

Making education a societal priority

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7th Floor, 17 Simmonds Street, Johannesburg, 2001

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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. **Because of the relaxation of COVID 19 regulations researchers can collect data online, telephonically, physically access schools or may make arrangements for Zoom with the school Principal. Requests for such arrangements should be submitted to the GDE Education Research and Knowledge Management directorate.**
4. **The Researchers are advised to wear a mask at all times, Social distance at all times, Provide a vaccination certificate or negative COVID-19 test, not older than 72 hours, and Sanitise frequently.**
5. 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.
6. A letter / document that outline 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.
7. 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.
8. 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.
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11. It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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



Mr. David Bapela

CES: Education Research and Knowledge Management

DATE: 25/03/2025

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

ANNEXURE D: ETHICS CLEARANCE LETTER



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: <http://www.nwu.ac.za>

Senate Committee for Research Ethics
Tel: 016 103 4440
Email: Feziwe.Mseleni@nwu.ac.za

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the Education Sciences Research Ethics Committee (EduREC) on 25 July 2024, the Education Sciences Research Ethics Committee hereby approves your application as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-SCRE) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: A participatory process to improve vocational education in special schools			
Study Leader/Supervisor (Principal Investigator)/Researcher: Dr C Joubert			
Student / Team: Ms MM Solomons (MEd student – 27024695), Prof J Hay			
Ethics number:	N	W	U - 0 0 2 9 1 - 2 4 - A 2
	Institution	Study Number	Year Status
<u>Status:</u> S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation			
Application Type: Single study			
Commencement date: 25/07/2024	Risk: Low Risk		
Expiry date: 25/07/2025			
Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.			

Special in process conditions of the research for approval (if applicable):

General conditions: <i>While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:</i> • The study leader/supervisor (principle investigator)/researcher must report in the prescribed format to the ES-REC: – annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and – without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study. • The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the ES-REC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited. • Annually a number of studies may be randomly selected for an external audit. • The date of approval indicates the first date that the study may be started. • In the interest of ethical responsibility, the NWU-SCRE and ES-REC reserves the right to: – request access to any information or data at any time during the course or after completion of the study; – to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;
--

-
- *withdraw or postpone approval if:*
 - *any unethical principles or practices of the study are revealed or suspected;*
 - *it becomes apparent that any relevant information was withheld from the ES-REC or that information has been false or misrepresented;*
 - *submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or*
 - *new institutional rules, national legislation or international conventions deem it necessary.*

The ES-REC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the ES-REC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely



Prof CP van der Vyver
Chairperson NWU Education Sciences Research Ethics Committee

Original details: (22351930) C:\Users\22351930\Desktop\ETHICS APPROVAL LETTER OF STUDY.docm
8 November 2018

Current details: (22351930) M:\DSG\18533\Monitoring and Reporting Cluster\Ethics\Certificates\Templates\Research Ethics Approval Letters\9.1.5.4.1 ES-REC Ethical Approval Letter.docm
5 December 2018

File reference: 9.1.5.4.2

ANNEXURE E: EXAMPLE OF SEMI-STRUCTURED INTERVIEW TRANSCRIPTION

C1: Okay, one more thing in terms of visual training for educators. I think the Department can put more training on vocational training for educators, especially novice teachers, because they need the skill to know the subject more. And then every term at least they can put at least 2 or 1 training for that skill. Yes. Okay.

C4: On my side, we have a challenge of the seeds and stuff, but now we are busy preparing the soil and stuff. So, when we reopen, next term we will get the school to buy the seeds, the greenhouse and stuff. And also the donation that we'll get from, if I'm not mistaken, Chicama (private organisation). Yes. Yeah, so that we can continue with agriculture. But for now, we are busy preparing the soil so that when we reopen, the soil will be ready.
And then if anyone has the seeds and stuff, we can come with it. And then when we reopen, we start to plant.

Researcher: Okay. The next point is on solutions. Yeah, on solutions.

C3: Okay, on ways to improve parental involvement. I think that, you know, maybe we can have a market day or something like that. Invite them. Invite parents. So, parents should participate maybe by buying what their kids are doing.

C4: And then to add on, at least if we can create a page on social media. Yeah, we will post everything and then it will be easier for the parents to check. And instead of coming to school, it will be much easier for everyone to access it and to see what the kids are doing at school.

Researcher: So, in a way, that would improve parental involvement.

C3: What about those who are not in school? What about parents who haven't done school?

Researcher: Good question.

C4: Yeah, they will come and see. What I was trying to say is that it's just too limited. So for parents to come to school, to check if their kids are doing one thing, they will go to see it via online. But for those who don't have social media, this is a matter they have to come.

C1: Yeah, and again on that point, I like the point of social media because most of the parents are living distance from our school. And even though they can come with their own transport, maybe using a public transport, they cannot reach here at school because it's distance from where they get off to school. So, the social media one, I think they will be part of whatever that we are doing at school here.

C3: Social media is not about excluding those who can't.

C1: They have access for internet.

C4: Yeah, that's why I was saying, if they don't have access to social media stuff, they have to come.

C5: It's just an additional platform. Those who have access to social media can access via social media platforms and those who don't have.

Researcher: C4 has already touched on the agriculture, is there anything you want to add?

C5: I don't know what he said.

Researcher: Maybe we can review.

C4: There I think there's nothing that he can add because I had already mentioned about the donation we received from Chicama.

Researcher: So, there's nothing that you want to add?

C5: No.

Researcher: I think we are done. Unless if there is something you want to add. Anything, colleagues? Regarding the entire research, anything that you want to say, since this is our last day? Any comment?(phone rings) It can be a constructive criticism or a compliment, anything at all that you want to say.

C1: Okay, I want to say something. It's just a comment. Since we have started this project of Ma'am Solomons, I learned two or three things regarding the skill, the vocational skill. This project gave me a lot of ideas on what to improve on my skill that I'm teaching. And I saw that, I learned that even if I don't have a knowledge, since we have discussed, I have a knowledge that I can take some points that we have discussed to improve my training. I learned a lot from this project.

Researcher: Thank you so much.

C5: Thank you for involving us in your study. It's not been an easy journey, obviously, for yourself, but it's been nice to be part of your study. I also gained some insight regarding research, but some of us are even motivated to go on to further our studies. It's been nice. Thank you for involving us.

Researcher: Thank you, thank you so much. Okay, colleagues, from my side, I would like to thank you so much for your participation. I know sometimes it was not easy for us to meet due to your other commitments, but you always ensure that you make time for us to meet and for your inputs. Thank you so much. You have contributed so much into this project. I truly appreciate it. God bless you.

Co-researchers: Thank you. Thank you.

ANNEXURE F: TURN IT IN REPORT



Page 2 of 148 - Integrity Overview

Submission ID: trn:oid::1:3335881503

9% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text

Match Groups

- 159 Not Cited or Quoted** 5%
Matches with neither in-text citation nor quotation marks
- 95 Missing Quotations** 3%
Matches that are still very similar to source material
- 0 Missing Citation** 0%
Matches that have quotation marks, but no in-text citation
- 0 Cited and Quoted** 0%
Matches with in-text citation present, but no quotation marks

Top Sources

- 7% Internet sources
- 7% Publications
- 0% Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

ANNEXURE G: DECLARATION OF LANGUAGE EDITOR

House 367

Hex River Lifestyle Estate

Waterkloof East Ext 12

Rustenburg 0299

20/10/2025

This is to certify that the dissertation entitled

A PARTICIPATORY PROCESS TO IMPROVE VOCATIONAL EDUCATION IN SPECIAL SCHOOLS

Submitted by

MM SOLOMONS



orcid.org/0000-0002-7597-0410

For the degree of

**MASTER OF EDUCATION
(SPECIAL NEEDS EDUCATION)
NORTH-WEST UNIVERSITY**

At

Has been edited for language by

Mary Helen Thomas (B.Sc. Hons. PGCE)



Email: thomashelen212@gmail.com

Cell: 072 242 9066

ANNEXURES H: IRIMS CERTIFICATE OF ATTENDANCE



Dear Mmamokho Mirriam, Solomons

COMBER

Student Number:27024695

We are pleased to confirm your attendance of the training on the Integrated Research Integrity Management System (IRIMS) held on **31-October-2023** on Microsoft Teams. This serves as a letter of proof of attendance to formally acknowledge your attendance of the IRIMS training session.

It was a pleasure to have you join us for this enriching and informative session. The attendee's participation contributed significantly to the success of the training, and we hope that the knowledge and insights gained will prove valuable to you in your research endeavours. We wish you continued success in your research endeavours.

We sincerely appreciate your interest and engagement in our training, and we look forward to welcoming you to future trainings and workshops.

If you have any questions or require further assistance, please do not hesitate to contact.

Prof Minrie Greeff:

Minrie.greeff@nwu.ac.za

, student number

Sincerely,

Prof Minrie Greeff