Tawanda Chinengundu (University of Pretoria)

Analysis of the South African Construction Technology Curriculum and Assessment Policy Statement Vocational Didactics

Abstract

With an emphasis on vocational didactics, this paper analyses the South African Construction and Technology Curriculum and Assessment Policy Statement. This research aims to assess the curriculum's vocational didactics components for compatibility with industry expectations to assess how well they prepare students for employment in the construction industry. The main approach used was document analysis, which involved an analysis of the curriculum policy statement, pertinent educational frameworks, and industrial standards. The examination showed that the curriculum is well organised, with a smooth flow from simple to complex subject content. The topic categories include materials, equipment, graphics and communications, safety, and sustainable practices, among other important facets of building technology. The study observed some areas that needed improvement, though. Firstly, there is little emphasis on practical training, even though the programme combines theory and practical teaching. More comprehensive practical components would better prepare students for issues they would face in the real world. Second, content on digital tools that is essential for contemporary construction technology is limited. Findings highlight the necessity of ongoing curriculum review and enhancement. Subsequent studies should investigate the enduring consequences of students who successfully finish the construction technology curriculum, evaluating their professional paths and contributions to the sector. Furthermore, comparative studies of South African vocational curricular with those in other nations may yield insightful information for best practices in vocational didactics. This study has important implications on the body of knowledge for vocational didactics for educators and researchers working in construction technology and vocational education more broadly.

Keywords: *Curriculum, industry collaboration, practical skills, stakeholders*

1 Background and Introduction

1.1 Construction Technology

The construction sector contributes to economic growth, infrastructure development and poverty alleviation (Labour Research Service 2023). Spöttl and Windelband (2021) and Schröder and Dehnbostel (2020) highlight the importance of the dual vocational training system in differentiated learning venues. The learning venues are the company workplace, the training centre for practical vocational training, and the vocational school (Land, Menzel & Schröder 2022). Vocational didactics has the role of integrating technical innovations into the curricula of construction technology by supporting innovations from the initial stages of TVET offers at the school level. This paper analyses the South African Construction Technology Curriculum and Assessment Policy Statement (SACTCAPS) at the secondary school level. Different terminology is used to refer to Construction Technology. For example, in Zimbabwe, they refer to the subject as Building Technology, whilst South Africa uses the term Civil Technology. The term Construction Technology is used in this study to align with the call for this publication. However, in some cases, Civil Technology is used to align with the South African context. Construction Technology (CT) was introduced in 2004 as a subject as part of the National Curriculum Statement (NCS) in South African schools. The CT National Curriculum and Assessment Policy Statement (CAPS) for grades 10–12 was created due to a modification to the NCS made in 2011, and the changes took effect in January 2012 (Maeko & Makgato 2017). CT refers to Civil Technology throughout the entire document. To address the issues facing South African education, the CAPS document is a policy statement that aims to improve learning across all school sectors, both theoretically and practically (Maeko & Khoza 2018). This assertion concurs with Land, Menzel and Schröder (2022), who aver that instruction in vocational schools is theoretically oriented, though based on work processes typical of the respective occupation. They further indicate that apart from teaching vocational knowledge and skills, the schools focus on preparing learners for lifelong learning. The text lists the specific facts about each topic it covers, the relative importance of each idea, and the kinds of assignments that fall under each topic. The CT CAPS emphasises a blend of construction, civil services, and woodworking and values both technology and practical skills. CT promotes a solid technical foundation that combines theoretical knowledge with real-world skills. (Department of Basic Education (DBE) 2014). Through vital services like roads, bridges, water purification, waterborne sewage, railway lines, high-rise structures, factories, and housing in general, CT plays a crucial role in supporting the growth of a nation's environment (Madi 2022).

Workshop practice, safe working practices, and housekeeping are some of the skills that need to be refined and developed through the integrated completion of theory and practice (Mtshali Ramaligela 2019). As the CT course is meant to be practically orientated, less theory should be taught, according to Kennedy (2011). Practical work is a teaching and learning activity involving students observing or manipulating real objects and materials (Rosa & Feisel 2005). To integrate theory and practice in engineering education, Rosa & Feisel (2005) conclude that practical work creates learning experiences in which students use materials to check and observe phenomena in a practical workshop. They also believe lectures should be held in the workshop or laboratory to impart theory and practice.

The construction industry in South Africa faces a significant challenge in meeting the demand for a skilled workforce capable of adapting to rapidly advancing technologies and evolving industry practices. The South African Council for the Project and Construction Management Professions (2022) and Madi (2022) concur that there are skills shortages in the construction industry, and tertiary institutions struggle to attract school leavers to the industry because of low passes. Despite the existence of vocational education programmes aimed at equipping learners with necessary competencies, there are concerns regarding the effectiveness of the current Construction Technology CAPS in addressing these needs. Maeko and Makgato (2017) and Mtshali and Ramaligela (2019) agree that there was little Civil Technology teachers could do to produce learners with good job attainment potential. Specifically, the curriculum has been critiqued for its limited integration of practical hands-on training. These gaps hinder the ability of vocational education to produce graduates who are well prepared for the demands of the construction industry, impacting both individual career prospects and the broader economic development of the country. Therefore, a thorough analysis of the CT CAPS is essential to identify its strengths and weaknesses and propose improvements that align with best practices in vocational didactics and industry standards. This study aims to provide such an analysis to enhance the quality and relevance of vocational education (Mtshali 2020) in construction technology in South Africa.

1.2 The Concept of Vocational Didactics

Vocational didactics is pivotal in addressing skills shortages in various industries (Gessler & Herrera 2015). Focusing on the specific competencies required for different occupations ensures that graduates are immediately employable and productive. Moreover, it supports lifelong learning and adaptability, which are crucial in today's rapidly changing job market (Cedefop 2015). The Construction Technology curriculum paves the way for students to continue studies at Technical Vocational Education and Training colleges or universities (DBE 2014). Furthermore, students will be ready to pursue learnerships or apprenticeships to prepare them for their trades (ibid). Vocational didactics refers to the principles and methods of teaching vocational education and training (VET) programmes (Gessler & Herrera 2015; Herrera 2015). It encompasses a range of pedagogical strategies designed to equip students with the practical skills and theoretical knowledge required to perform specific tasks and roles within various professions. This concept is crucial for developing competent, job-ready graduates who can meet the labour market demands. Vocational didactics is defined as the theory and practice of teaching and learning in vocational contexts. It involves the selection, organisation, and delivery of content, and the assessment of student learning to ensure that educational outcomes align with occupational standards and industry needs (Nore 2015; Rauner & Maclean 2008). The aim is to create a learning environment that simulates real-world conditions, thereby enabling students to transfer their learning directly to the workplace.

2 Methodology

The methodology employed in this study is document analysis, also referred to as content analysis. Content analysis is a qualitative research method used to interpret and analyse the content of textual, visual, or audio materials (Bowen 2009). This methodology allows researchers to systematically examine the content and context of documents to uncover patterns, themes, and meanings. It is particularly useful for analysing policy documents, curriculum statements, and other formal texts. This study uses this methodology to analyse the South African CT CAPS to identify the curriculum's vocational didactics components for compatibility with industry expectations.

Document/content analysis involves a systematic review or evaluation of printed and electronic (computer-based and internet-transmitted) documents. Bowen (2009) describes document analysis as a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning to an assessment topic. This method is highly applicable in educational research for analysing curriculum documents, policy statements, and instructional materials.

2.1 Data collection

Data collection involved identifying and gathering relevant documents such as the CT CAPS, national educational frameworks, industry standards, peer-reviewed journal articles, and other related policy documents. To address the research questions, authentic and credible documents were selected for the study (Bowen 2009). However, this study's data was based on one key document, the CT CAPS at the secondary school level. The other documents mentioned were used merely to confirm the content of the CT CAPS document.

2.2 Data Analysis

Initially, the documents were read to gain an overall understanding of the content. A coding scheme was developed to categorise the content. This involved identifying key themes, concepts, and patterns within the documents. Saldanha (2013) recommends using both a priori codes (predetermined based on the research questions) and emergent codes (arising from the data). Therefore, this study used both codes to avoid excluding critical emerging issues from the data. Four main themes were constructed: curriculum design, pedagogical approaches, assessment and evaluation, and industry alignment. The findings were interpreted within the broader context of the educational and industry landscapes. This involved considering the socioeconomic, cultural and technological factors that influence the curriculum. The Construction Technology CAPS document was compared to existing best practices in vocational didactics to identify gaps, strengths, areas for improvement, partnerships, and curriculum relevance.

3 Findings and Discussion

The following sections present and discuss the findings under curriculum design, pedagogical approaches, assessment and evaluation, industry collaboration, and challenges. The curriculum design mainly focuses on logical structure, progression and content areas. Pedagogical approaches analysed hands-on training, project-based learning, and blended learning. The assessment and evaluation of learners' work were also analysed. The industry alignment component was analysed to determine whether it aligns with vocational didactics.

3.1 Curriculum Design

Vocational Didactics involves designing curricula that integrate theoretical and practical components (Nore 2015). This ensures that students not only understand the underlying principles of their trade but also acquire hands-on experience. The curriculum should be responsive to changes in technology and industry practices to remain relevant (Billet 2011). Whilst one of the aims of the South African Construction Technology curriculum indicates valuing Indigenous knowledge systems, the Construction Technology CAPs document does not include content on Indigenous materials like thatching (DBE 2014). The Civil Services and Construction specialisations indicate that the content is "environmentally friendly" (green energy) (DBE 2014). The curriculum further states that good housekeeping principles require that all workshops be cleaned regularly, and a suitable waste removal system should be in place to accommodate refuse, off-cut materials, and chemical waste.

Greening the curriculum is defined as adapting training disciplines to sustainability concepts and practices in the curriculum used in formal TVET, as well as non-formal or informal learning (UNESCO-UNEVOC 2017). However, the content overview of the South African Construction Technology Curriculum Policy Statement is unclear on the concept of greening the curriculum. UNESCO-UNEVOC (2017) states that environment-related content and green skills development are part of an evolving TVET curriculum. Therefore, learners must acquire the basic skills at school and hone these skills as they proceed to TVET colleges or universities. Enhancing vocational didactics for green skills ensures that learners are well-informed and guided in learning about sustainability. Table 1 shows the content of the Construction Technology Curriculum and Assessment Policy Statement according to the area of specialisation.

Table 1: **Main topics in Civil Technology according to area of specialisation (DBE 2014, 11)**

CIVIL SERVICES	CONSTRUCTION	WOODWORKING
Safety	Safety	Safety
Materials	Materials	Materials
Equipment	Equipment	Equipment
Graphics and communications	Graphics and communications	Graphics and communications
Terminology	Terminology	Terminology
Quantities	Quantities	Quantities
Joining	Joining	Joining
Construction	Foundations	Casement
Cold water supply	Concrete	Doors
Stormwater	Formwork	Wall panelling
Hot water supply	Reinforcements	Centring
Roof work	Cavity walls	Formwork
Drainage (Sewerage)	Lintels	Shoring
Sanitary fitments	Waterproofing	Ironmongery
	Concrete staircases	Suspended timber floors
	Roof coverings	Ceiling
	Brickwork	Staircases
	Piling	Roofs
	Rib and block floors	Cupboards
	Arches	
	Scaffolding	
	Plaster and screed	

The content aligns with some of the knowledge and skills required to enforce the highest environmental standards and practices for sustainable construction processes as espoused by UNESCO-UNEVOC (2017). Some of the skills are:

- Sustainable building design;
- Sustainable building technologies and construction materials;
- Water supply and sanitation;
- Decentralisation of electricity generation and the integration of renewable energy generation methods into buildings;
- Energy efficiency in buildings;
- Solid waste treatment;
- Reuse of materials and controlled demolitions.

Topics, including sustainable building technologies, energy efficiency in buildings, material reuse, and controlled demolitions, must be included in construction technology curricula as the construction industry is the primary cause of environmental pollution globally. Table 2 shows an extract of the content overview for the generic part of the Civil services specialisation of the SACTCAPS document. The generic part was considered because the learners complete the content in the three specialisations of the curriculum. As shown in Table 2, the content develops in complexity from Grades 10 to 12.

Table 2: **Extract of Content Overview-Civil Services (DBE 2014, 17)**

TOPIC	GRADE 10	GRADE 11	GRADE 12
INTRODUCTION	Introduction and orientation to the subject and the three specialisation areas in Civil Technology	Introduction and orientation to the subject civil services	Introduction and orientation to the subject civil services
OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS) (Generic)	Requirements of the OHS Act pertaining to: Personal safety, general safety, safety and health aspects associated with storage of materials, HIV/ Aids and awareness of substance abuse	Application of the OHS Act pertaining to: Personal safety, general safety, safety and health aspects associated with storage of materials, HIV/ Aids and awareness of substance abuse	Application of the OHS Act pertaining to: General health and safety related risks in the workplace
OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS) (Specific)	Requirements of the OHS Act pertaining to: Health and safety related risks associated with excavations and safe manual handling of heavy loads	Requirements of the OHS Act pertaining to: Health and safety related risks associated with Infections and exposure to raw sewerage and soldering	Application of the OHS Act pertaining to: Health and safety related risks associated with deep manholes, safeguarding of openings and the use of safety harnesses
MATERIALS (Generic)	Basic properties of materials and ingredients of concrete, screed, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Application and uses of the following: concrete, screed, mortar, timber, bricks and blocks, metals, alloys, glass and synthetic materials	Preservation and sustainability of materials
MATERIALS (Specific)	Knowledge of the different classes of copper and high density polyethylene pipes	Application and uses of solder and ceramics	Explain chemical reactions between dissimilar materials
EQUIPMENT AND TOOLS (Generic)	Identification and proper use of the following: basic site equipment, bricklaying tools, setting out tools, jointing tools, woodworking tools and plumbing tools	Identification, proper use and care of the following: basic site equipment, hand tools, brick cutting tools, plastering tools, woodworking tools, plumbing tools, power tools and construction machinery	Identification, proper use and care of specialised tools

It is commendable that the curriculum covers the Occupational Health and Safety Act 85 of 1993 (OHS). This is in line with the International Labour Organisation (ILO) (2010) Convention Number 167 (Safety and Health in Construction Convention and its Recommendation Number 175. The recommendation highlights that health and safety standards must start at the design stage and continue throughout the construction phases, hence the need for vocational didactics to cover the content at the school level.

3.2 Pedagogical Approaches

The CAPS document stipulates various teaching methods, including direct instruction and project-based learning simulations. These approaches are chosen based on their ability to facilitate experiential learning and develop problem-solving ability skills (Kansanen 2009; Lucas, Spencer & Claxton 2012). The CAPS document states that a topic specialist is needed in civil technology. The civil technology instructor should also be a technician, artisan, or technical educator in a relevant field. Industry-related experience and workshop management skills are essential, and tertiary qualifications in technical teaching are needed. The civil technology teacher must, among other things, manage the classroom, plan for theory and practical work, create practical PAT projects in collaboration with students, administer the school-based assessment (SBA), use creative teaching strategies to keep the material engaging and stay up to date with current technological advancements.

The need to provide TVET instructors and trainers with top-notch, pertinent digital skills and the assistance they require to incorporate technology into their teaching and training methods successfully was emphasised by Subrahmanyam & Elson-Rogers (2022). The curriculum stipulates that each learner should have access to a computer with simulation and Computer Aided Design software. However, the curriculum does not mention other construction technologies impacting the industry, i.e., Building Information Modelling (BIM), Drones and Virtual Reality. These cutting-edge technologies drastically impact the construction industry (Planradar 2023). Planradar further highlights that adopting emerging construction technologies streamlines processes, reduces waste, and enhances efficiencies. At the secondary school level, it is important to make learners aware of these technologies, although they might not be used at school since the software is expensive.

3.3 Assessment and Evaluation

Assessing learner performance in vocational education requires both formative and summative approaches. Practical assessments, such as skills demonstrations and project evaluations, are essential to gauge students' competency in applying what they have learned (Grollmann & Rauner 2007). Schools must comply with all assessment standards regarding the Practical Assessment Task (PAT) and school-based assessment (SBA). SBA shows the learner's progress during the year, constituting 25% of the learner's promotion mark. Every assessment assignment included in a formal assessment schedule for the year is considered a formal assessment. Based on the document analysis findings, the common assessment techniques used in the Construction Technology programme are shown in Table 3.

Table 3: **Assessment techniques used in the Construction Technology programme**

Assessment Technique	Description	Purpose	Percentage of Promotion Mark
School-Based Assessment (SBA)	Formal assessments conducted throughout the academic year. Examples include tests, projects, practical tasks	Track learner progress during the year; contributes to formal assessment for advancement.	25%
Practical Assessment Task (PAT)	Hands-on activities requiring learners to demonstrate and refine practical skills, such as	Develops and evaluates technical skills in real-world applications.	25%

	simulations and workshop tasks.		
Informal Daily Evaluation	Activities include checklists, verbal feedback, and simple evaluations by the teacher.	Provides immediate feedback for learning improvement; outcomes are not always formally recorded.	Not applicable
Peer and Self-Assessment	Learners evaluate their own or peers' work to learn from their performance.	Promotes self-reflection and active engagement in the assessment process.	Not formally counted
Formal Tests and Examinations	Written assessments that include theoretical content and cognitive skill levels (knowledge, comprehension, application, analysis, evaluation, and synthesis).	Validates learning outcomes and theoretical understanding.	50% (final examination)
Moderation	Internal and external review of assessment tasks and marks at school, district, provincial, and national levels.	Ensures fairness, validity, and reliability of assessments.	Not applicable

For advancement and certification, teachers mark and officially record formal assessment activities. All formal assessment assignments are moderated for quality control and to guarantee that appropriate standards are upheld. Formal assessment gives teachers a methodical technique to gauge how well students are doing in a specific grade and topic. Examples of formal assessments include projects, oral presentations, demonstrations, performances, tests, examinations, and practical tasks. Formal assessment tasks form part of a year-long formal Programme of Assessment in each grade and subject (DBE 2014).

Peer- and self-assessment are crucial because they enable learners to evaluate and learn from their performance. The outcomes of the informal daily evaluation assignments are not formally documented unless the educator requests it. Teachers may, however, utilise the students' performance on these evaluation assignments to give parents, the school administration, and learners written or spoken comments. This is crucial if learning obstacles or low participation rates exist.

Schools oversee providing the materials for the PAT and should ensure enough time and money are available for the task's completion. These workshops help learners refine their skills including simulations and practical skills, machine skills, and workshop practice, so they can participate in the activities assigned for that term. 25% of the learner's promotion mark is determined by the PAT. It is, therefore, essential to plan practical sessions so that learners have adequate time to practise the skills to complete the PAT (DBE 2014).

For all practical work, there is one teacher for every fifteen learners or a portion of that number to allow differentiated instruction and easy monitoring of learners in technical skills requiring one-on-one interaction between teachers and learners. The official evaluation for Grade 12 is set and graded internally, although it is monitored externally. Activities completed during the year are included in the assessment. Both informal (assessment for learning) and formal (assessment of learning) (DBE 2014) forms of assessment should be used in grades 10-12. A range of learners' cognitive capabilities and talents should be accommodated via formal assessments, including:

- Lower order: knowledge;
- Middle order: comprehension and application;
- Higher order: analysis, evaluation and synthesis.

After each academic year, learners complete a final test designed to reflect all the theoretical material studied thus far. The final test, which is externally set, graded and monitored, makes up 50% of the learner's promotion mark. The assessment methods used must be suitable for the grade and stage of development. The student should be allowed to show some originality and invention when working on a design project. These assignments should be structured to cover the subject material and incorporate a range of tasks intended to meet the subject objectives. The educator should decide what information, skills, and topics must be covered before creating the assignment. The method that guarantees the validity, fairness, and dependability of the assessment tasks is known as moderation. Moderation should be used at the national, provincial, district, and school levels. All topic evaluations should have thorough and suitable moderation procedures in place to ensure their quality. To confirm the quality of internal moderation, the curriculum adviser or facilitator must moderate a sample of these assignments when visiting the schools. Written assessments are moderated to verify that the teacher's assessment of the learner's work is accurate.

3.4 Industry Collaboration

Collaboration with industry stakeholders is vital for vocational didactics. Industry partnerships can provide insights into current skills requirements and trends, enabling educators to tailor their programmes accordingly. Additionally, such collaborations can offer students opportunities for internships and on-the-job training (Grollmann & Rauner 2007). Table 4 summarises the types of industry collaboration involved in the Construction Technology programme based on the document analysis findings:

Table 4: **Collaboration between the Construction Technology programme and industry stakeholders**

Type of industry Collaboration	Description	Purpose
Curriculum Development	Aligning the curriculum with industry requirements, including adherence to SANS standards (e.g., SABS 10252, SANS 10143).	Ensures that learners acquire relevant skills and knowledge aligned with industry expectations.
Knowledge Sharing	Schools are recommended to subscribe to building and civil engineering journals and publications.	Keeps educators and students informed about the latest advancements in the built environment.
Standards Compliance	Teaching learners to apply building codes and regulations (e.g. SANS 10143, SABS 10252).	Prepares learners to meet national and industry standards in the construction sector.

Table 4 highlights the multifaceted collaboration between the Construction Technology programme and industry stakeholders to ensure the programme remains relevant, practical, and aligned with industry needs. Dwiyanti and Ridwan (2024) posit that collaboration between vocational schools is essential for addressing the persistent challenge of skills mismatch and high unemployment rates among vocational school graduates. Vocational schools can also benefit by better aligning their curriculum to industry needs. The International Labour Organisation (2021) recommends inviting industry professionals to deliver guest lessons at schools. These interactions would expose learners to best practices and career pathways and enrich their learning experience within the context of the construction sector field (ILO 2021). Vocational didactics is a comprehensive approach to teaching and learning tailored to vocational education and training (Herrera 2015). Integrating theoretical knowledge with practical skills, employing diverse pedagogical strategies, and collaborating with industry prepare students for successful careers in their chosen fields.

According to the content overview, learners are expected to explain the correct layout and installation of the water supply to buildings as prescribed in the Code of Practice South African Bureau of Standards (SABS) 10252 Part 1 Installation of water supply to buildings (DBE 2014, 33). Furthermore, basic drawing symbols relating to the built environment following the South African National Standards SANS 10 143 for building drawings are also taught. Applying SANS 10143 Building regulations in all drawings shows that vocational didactics comply with the national standards.

Learners are introduced to computer-aided drawings and taught to interpret advanced drawings related to the building industry. To keep teachers abreast of the most recent advancements in the built environment, it is recommended that schools subscribe to building and civil engineering journals and other publications.

3.5 Challenges

Civil Technology (CT) is a subject that requires sustained support. The Civil Technology workshop requires regular resourcing for completion of practical work and maintenance. The SACTCAPS document stipulates that the Construction Technology subject should be supported with safety equipment, tools and equipment, consumable materials, PAT resources, and teaching, and learning support materials (TLSM). Implementing effective vocational didactics can be challenging due to several factors, such as the need for up-to-date resources and equipment, ongoing professional development for educators, and the necessity of maintaining strong ties with industry partners. Mtshali (2020) observed that teachers did not have adequate resources for the PAT. Furthermore, ensuring that vocational programmes are accessible and inclusive for all students, including those with disabilities, is essential for equitable education (Avis 2014).

Mtshali (2020) found that because the practical assessment for CT was scenario-based and did not focus on technological or design issues, it did not promote critical thinking. This runs counter to the goal of the South African curriculum for CT education, which is to provide students with the problem-solving, flexibility, inventiveness, creativity, and practical skills necessary for technical literacy. Because of how the scenarios were written, learners could only come up with one answer. This prevented the PAT from covering critical thinking skills including analysis, assessment, inference, and self-regulation.

4 Conclusion

This study undertook a comprehensive document analysis of the South African Construction Technology Curriculum and Assessment Policy Statement in order to evaluate its effectiveness in preparing students for the construction industry. The analysis focused on the curriculum design, pedagogical approaches, alignment with industry needs, and inclusivity.

The findings indicate that while the curriculum is well structured and covers essential aspects of construction technology, some areas require enhancement. The integration of practical, hands-on training remains inadequate, limiting learners' readiness for real-world challenges. Furthermore, the curriculum's incorporation of modern construction technologies and digital tools is insufficient, raising concerns about its relevance in a rapidly evolving industry.

Industry collaboration emerged as a critical component of effective vocational education. However, the current level of engagement between educational institutions and construction firms is lacking. Strengthening these partnerships could provide valuable work-integrated learning opportunities, thereby enhancing students' practical skills and employability.

Ongoing research and development in vocational didactics are essential to keep pace with technological advancements and evolving industry requirements. The South African Construction Technology Curriculum and Assessment Policy Statement exhibits several strengths but also some gaps that must be addressed to optimise its effectiveness. Enhancing practical training components, integrating contemporary technologies, fostering industry partnerships, ensuring equitable resource distribution, and promoting inclusivity are pivotal steps towards improving the curriculum. Continuous evaluation and iterative improvements informed by feedback from educators, learners, and industry stakeholders are essential to maintain the curriculum's relevance and efficacy in preparing students for successful careers in the construction industry. While document analysis provides valuable insights, it lacks the depth and real-time relevance that could be obtained through primary data collection methods such as interviews, surveys, or direct observation. The research findings are specific to the South African context and standards, such as SANS and SABS codes, which may not be generalisable to other regions or international construction practices. The research identifies the need for resources like CAD software and journal subscriptions but does not explore the financial and logistical challenges schools face in acquiring these. These limitations suggest opportunities for future research to adopt a more holistic, data-driven, and participatory approach to deepen insights into vocational education in construction technology.

Further studies should investigate the enduring consequences of students who successfully finish the construction technology curriculum, evaluating their professional paths and contributions to the sector. Furthermore, comparative studies of South African vocational curricula to those in other nations may yield insightful information for best practices in vocational didactics.

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Author(s) Profile

Dr. Tawanda Chinengundu

University of Pretoria, Department of Science, Mathematics & Technology Education, South Africa

E-mail: tchinex2@gmail.com