# Expanding student access to higher education: Examining the strategic processes for enhancing access to higher education from TVET colleges to universities of technology

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## ABSTRACT

In this article, the vexed issue of expanding access to higher education in South Africa is explored by investigating the pathways between technical and vocational education and training (TVET) colleges and universities of technology (UoTs). Central to this examination is the Unfurling Post-School Education and Training (UPSET) project, which seeks to formalise these pathways and establish a more inclusive and adaptable higher education system. Drawing on Hall's (1996) theory of articulation and the concept of relational autonomy, the article highlights the transformative potential of strategic collaborations between TVET colleges and UoTs. Using a qualitative case study conducted at a university of technology in the Western Cape province, South Africa, the article describes the complexities of developing jointly offered higher certificates (HCs) in the post-school sector. It emphasises the strategic role of the UPSET project in revitalising existing practices and cultivating deliberate processes and practices to expand access to vocational education. The article contends that UoTs are ideally positioned to facilitate jointly offered HCs based on their integration of theoretical and practical knowledge and their robust industry affiliations. Furthermore, the article highlights various epistemological approaches to developing HCs in UoTs. It argues for a more integrated higher education system that values both vocational and academic pathways and contributes to social justice and economic empowerment in South Africa.

## KEYWORDS

*Higher education access; articulation pathways; student mobility; technical and vocational education and training (TVET); universities of technology (UoTs); cross-sector partnerships*

## Introduction

This article focuses on the complex issue of student access to higher education, specifically exploring the alternative pathways for learners to follow in the technical and vocational education and training (TVET) sector. These alternative pathways, also known as 'articulation pathways' (Ndozyiya & Matsiliza, 2023), are a series of interconnected educational programmes and institutions that enable students to progress from one level of education to the next while acknowledging their prior learning and experiences. The research conducted centres on the Unfurling Post-School Education and Training (UPSET) project, an initiative aimed at formalising these articulation pathways between TVET colleges and universities of technology (UoTs). Such a project is significant, as it opens the door to a more inclusive and flexible higher education system in South Africa.

The present article argues that establishing articulation pathways between TVET colleges and the UoTs contributes to the public good of South African society at large. In this context, 'public good' refers to those behaviours, activities and material benefits that are 'non-rivalrous' and 'non-excludable', meaning that they benefit all members of society (Marginson, 2011:415–417). Marginson (2011) posits that access to knowledge and the facilitation of access to knowledge are considered 'non-excludable' public-good benefits that should be extended to all citizens. In South Africa, ensuring access for students from communities historically excluded from the benefits of university education is a crucial step towards achieving equity.

In the global context, the post-school sector has, for the past three decades, been grappling with the challenge of enhancing access for previously marginalised students. A joint report by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO) and the World Bank underscores the pivotal role of the TVET sector in accommodating learners from disadvantaged backgrounds, who often possess foundational skills that are relatively weaker than those of their counterparts in general education (Levin et al., 2023). The joint report indicates that the TVET sector currently absorbs disadvantaged students looking for second-tier opportunities. It emphasises that TVET college students are primarily from disadvantaged socio-economic backgrounds compared with their peers in general education (Levin et al., 2023:31). The report provides evidence in the form of results from the Programme for International Student Assessment (PISA) which indicate that, in most of the 35 lower- and middle-income countries (LMIC) participating in the assessment, the level of academic performance of secondary students in vocational programmes compared with their secondary school peers in subjects such as Mathematics is far lower (Levin et al., 2023:32). Despite their current challenges, TVET institutions hold the possibility of equipping young individuals with practical skills and knowledge that are directly applicable to the workforce.

Hazelkorn (2023) predicts a global surge in higher education participation, especially in the Global South. However, she warns that higher education pathways through TVET

participation are dwindling and calls for an urgent re-imagining of the tertiary education model, one which encompasses an ecosystem approach. This ecosystem approach, which integrates various educational, training and innovation actors into a mutually beneficial framework, is one such re-imagining that fosters a more inclusive and dynamic higher education system.

Expanding access to TVET colleges in South Africa can significantly enhance young people's readiness for the job market, in the process increasing their prospects of securing employment and contributing to the economy. However, there is a pressing need for more research on the way in which the qualifications structured by the National Qualifications Framework (NQF) and the learning pathways between TVET colleges and UoTs may be articulated more effectively.

## Policy context for the provision of education in the post-school field

The NQF was developed in South Africa to ensure more nuanced access and pathways within the educational ecosystem. It does so by setting national standards for academic and vocational achievements in South Africa. Furthermore, the South African Qualifications Authority (SAQA) is an important role player in the post-school sector. According to the NQF Act 67 of 2008, SAQA must perform specific functions that advance the NQF objectives. SAQA oversees the development and implementation of the NQF, a comprehensive system designed to integrate and align qualifications and quality assurance in education and training (SAQA, nd). The NQF classifies, coordinates and ensures the quality of national qualifications. It is divided into three subframeworks: the General and Further Education and Training Qualifications Sub-framework (GFETQSF) for general and further education up to Grade 12; the Higher Education Qualifications Sub-framework (HEQSF) for higher education, including undergraduate and postgraduate programmes; and the Occupational Qualifications Sub-framework (OQSF) for workplace-based training and qualifications tied to specific job functions.

Articulation within and across the three NQFs is pivotal to expanding student access to higher education by increasing their mobility within the tertiary education ecosystem. However, a gap remains between vocationally oriented programmes and academic programmes (Needham, 2018; Papier & Needham, 2022). Although policy instruments such as the Ministerial Committee Report on Articulation Policy (2013), the National Plan for Post-School Education and Training (NPPSET) (2019–2030) and the recent Council on Higher Education's (CHE) Policy on Articulation into and within Higher Education (March 2023) have been introduced to integrate and diversify the post-school system between these sectors, there is a demand for strong articulation strategies. The NPPSET is a comprehensive road map for realising the goals outlined in the White Paper for Post-School Education and Training. The plan lists several outcomes, one of which is increased articulation for students between and within the NQF sub-frameworks and institutions and also the review of the N4, N5 and N6 and their replacement by higher certificates (HCs) and advanced certificates (ACs) at NQF Levels 5 and 6 (NP PSET:48).

N'gethe, Dzvimbo and Kembo (2007) emphasise that student mobility within the tertiary education ecosystem is a crucial component of articulation in the post-school sector. Moreover, Needham and Papier's (2018) research draws attention to the intermittent articulation initiatives between TVET colleges and universities, thus emphasising the pressing need for more systematic approaches. Similarly, Themane, Mabasa and Mahlo (2022:187) characterise the relationship between vocationally oriented programmes and academic programmes as being 'disparate and binary'. Essop (2020) highlights the critical point that the funding framework incentivises all universities to prioritise research and postgraduate programmes. Consequently, some universities, particularly those reliant solely on government funding, have not adequately focused on their teaching mission and vision. Nevertheless, despite these difficulties, there is a growing recognition of the need for articulation between TVET colleges and universities.

The foundational policy documents of the Department of Higher Education and Training (DHET) – the White Paper on Higher Education of 1997 and the subsequent White Paper for Post-School Education and Training of 2013 – envisaged an integrated education system and stressed the critical role of TVET colleges in fostering vocational education and skills development. The emphasis on TVET colleges is particularly noteworthy because they are centrally positioned to prepare students for employment and entrepreneurship. In fact, the policy framework acknowledges the dynamic interplay between education and the broader economy: the imperative for partnerships with industry and Sector Education and Training Authorities (SETAs) speaks to the need for a collaborative approach to education that seeks to bridge the gap between academic preparation and the realities of the labour market.

Although the policy framework for TVET colleges is well intentioned, one of the significant problems with it is the gap between the policy objectives and their implementation. For instance, the envisaged collaboration between TVET colleges and industry is often hindered by a mismatch of the skills taught and those required by employers (Needham, 2018). Moreover, relying on SETAs for workplace-based training is not without its own complexities, including bureaucratic hurdles and varying levels of effectiveness across different sectors (Needham, 2018).

Similarly, Makura and Nkonki (2017) identify a lack of clear policy and awareness of articulation routes as significant obstacles and therefore posit that most students and educators need to be better informed about the existing articulation pathways. Policy implementation is required to deal with one of the significant challenges in the post-school field. These policies aim to create institutions that impart vocational education, enhance employability and meet industry demands. However, the success of these policies hinges on effective implementation, which requires overcoming challenges such as industry alignment and resource allocation and ensuring that the education in TVET institutions is of the required quality. According to Themane et al. (2023), in the face of these challenges and of implementing them, some universities still need to commit themselves to taking the policies and guidelines on board. This apparent lack of interest in implementation on their part creates a significant barrier to articulation. Themane et al. (2023) therefore recommend that the DHET develop indicators

and establish targets to help the universities evaluate their progress towards articulation, as currently these do not exist.

While policy frameworks are essential to understanding expanded access, it is also necessary to understand the specifics of the articulation between TVET colleges and UoTs. In this regard, developing specific articulation through HCs as a collaborative process between TVET colleges and UoTs is vital to understanding the expanded access between the two sectors. The UPSET project, facilitated by SAQA and the Durban University of Technology (DUT), emerged as a mechanism through which to facilitate this collaboration.

## Brief background to the UPSET project

The UPSET project, a unique strategic initiative, was developed under the auspices of the DHET, with the DUT leading the way and supported by SAQA. This project is a significant step towards fortifying South Africa's post-school education and training (PSET) sector. Its primary objective is the coordinated implementation of the Articulation Policy in and across the PSET sector. In this respect, the UPSET project is distinctive in its design to create a more integrated educational system, one that enables transitions and connections between various levels of post-school education by establishing provincial and regional articulation hubs. The project is in its early stages, with new institutions being incorporated annually.

The UPSET project, as indicated, emerged from collaboration between the DUT and SAQA. Together, they conducted a five-year study from April 2015 to March 2020, which included seven in-depth case studies of individual experiences and institutional contexts of articulation initiatives. The study was titled 'Developing an understanding of the enablers of student transitioning between technical and vocational, education and training (TVET) colleges and HEIs (higher education institutions) and beyond'. In 2017, the National Articulation Baseline Survey (NABS) reported on the country's current articulation initiatives and the developing and emerging articulation networks. The NABS offered a broader perspective on the then current articulation initiatives across South Africa. One of the survey's key findings was that expanded access from TVET institutions to UoTs improves the quality of education and increases the diversity of educational provision (SAQA, 2017).

The SAQA (2017) finding is significant because it draws attention to the role of TVET institutions in broadening educational opportunities and contributing to a more diverse and skilled workforce. The survey showed that all the TVET colleges reported being involved in articulation activities and that more than two-thirds of public higher education institutions were also participating in these articulation pursuits (SAQA, 2017:4).

The NABS highlighted three instances of articulation initiatives: the first included several TVET colleges and a UoT; the second involved a traditional rural university, TVET colleges and a SETA; and the third featured a comprehensive university and numerous agreements with colleges for transitions between HCs and national diplomas (SAQA, 2017:6–7). These

articulation initiatives indicated the complexity of the articulation routes from TVET colleges to UoTs. Based on the survey, the UPSET project proposed the development of jointly held HCs between TVET colleges and universities.

The UPSET project aims to establish articulation implementation champions (AICs) and offices at UoTs in South Africa whose primary purpose would be to develop an articulation implementation plan (AIP). The AICs would be tasked with crafting an AIP through collaborative efforts with existing and prospective articulation partners. The AICs would also establish a community of practice among the UoTs, and each region would have a hub leader to coordinate the jointly offered HC.

Central to UPSET's strategy is promoting access to higher education by introducing HCs – a joint venture between UoTs and TVET colleges. This approach facilitates articulation, offering a structured pathway for students transitioning through the PSET sector. The UPSET project intends to conduct a detailed cohort analysis to evaluate the academic performance of students who articulate into university settings as opposed to those who gain direct entry from high school to university.

A significant challenge they identified in the study was the lack of comprehensive data tracking the performance of students who articulate between TVET colleges and UoTs. This gap in the data limits the ability to compare the outcomes of students who articulate from high school to UoTs with those transitioning from TVET colleges. It indicates the need for robust tracking systems to enable a better understanding of student trajectories and outcomes.

The collaboration between the DUT, SAQA and the DHET through the UPSET project highlights the possibility of creating cross-sector partnerships in the higher education landscape. The present article is based on a qualitative case study conducted at a UoT in the Western Cape province of South Africa. It draws on policy documents, official reports, and dialogues and workshops with academics at the UoT and TVET colleges in the context of the UPSET project.

## Theory of articulation

This article uses the theory of articulation as posited by Hall (1996). In the context of educational policies and practices, 'articulation' refers to the process by which different educational systems, such as universities and technical colleges, collaborate to create an educational pathway between them for students. Hall (1996) discusses the concept of articulation in relation to cultural and social practices in society. He suggests that the concept of articulation is useful for understanding the way different social forces within the education sector come together to influence educational policies. Hall (1996:141) explains:

> An articulation is thus the form of the connection that can make a unity of two different elements under certain conditions. It is a linkage which is not necessary,

determined, absolute and essential for all time. You have to ask, under what circumstances can a connection be forged or made? So[,] the so-called 'unity' of a discourse is really the articulation of different, distinct elements which can be rearticulated in different ways because they have no necessary 'belongingness'. The 'unity' which matters is a linkage between that articulated discourse and the social forces with which it can, under certain historical conditions, but need not necessarily, be connected.

In the context of this article, the concept of articulation will enable an understanding of the way UoTs and TVET colleges, which are regarded as different subsystems within the post-school system, may collaborate to implement articulation policies. According to Hall (1996:143), a theory of articulation is both a way of understanding how, under certain conditions, ideological elements come to cohere in a discourse and a way of asking how they do or do not become articulated.

Slack (1996:115) emphasises the process of articulation:

Articulation is, then, not just a thing (not just a connection) but a process of creating connections, much in the same way that hegemony is not domination but the process of creating and maintaining consensus or of coordinating interests.

She points out the importance of the context in which articulation takes place and explains:

[T]he context is not something out there, within which practices occur or which influences the development of practices. Rather, identities, practices, and effects generally constitute the very context within which they are practices, identities, or effects (1996:126).

Slack (1996) suggests that practices, identities and effects are intimately intertwined with their contexts, engaging in a reciprocal relationship with the prevailing social, cultural and historical conditions. This interdependence implies that educational processes and mechanisms – exemplified by the NQF and policies such as credit accumulation transfer and the recognition of prior learning – are embedded in these contexts rather than merely being shaped by the socio-economic and political landscape.

Furthermore, Slack (1996) suggests that articulation occurs at different levels in society: the epistemological, the political and the strategic. As she explains:

Epistemologically, articulation is a way of thinking about the structures of what we know as a play of correspondences, non-correspondences and contradictions, as fragments in the constitution of what we take to be unities. Politically, articulation is a way of foregrounding the structure and play of power that entail in relations of dominance and subordination. Strategically, articulation provides

a mechanism for shaping intervention within a particular social formation, conjuncture or context (1996:113).

She points out that, from an epistemological perspective, articulation is a method of understanding how our knowledge is structured and the way different types of knowledge fit or do not fit together or may even contradict one another. She questions the traditional idea of unity, indicating that what we consider unified or whole often comprises various, often unrelated parts.

As suggested by SAQA (2017:34), Slack's analysis corresponds to the definitions of articulation in SAQA–DUT (2017) and the Ministry of Higher Education and Training (MHET) (2017), which refer to 'vertical', 'horizontal' and 'diagonal' articulation that can occur either within or between the NQF sub-frameworks.

Slack's (1996) explanations help us to understand the multiple layers of the meaning of articulation. Similarly, the Organisation for Economic Co-operation and Development (OECD) describes articulation as follows:

> Articulation is not a mechanical matter of formal recognition of qualifications or of prior learning experiences, necessary as these may be. It is also a *learning concept, implying complementarity*, continuous enhancement or development of competencies, achievement and progression along a pathway that is personally meaningful and has social recognition and status (OECD, 1998:51).

The OECD highlights articulation as a 'learning concept' that aligns with development qualifications and mobility between higher education institutions.

Whereas external demands such as political and economic pressures influence articulation practices, Maton's (2005) concepts of autonomy help us to understand why some universities might be more successful in establishing robust articulation pathways. Maton (2005) suggests that higher education institutions have a high degree of autonomy and distinguishes between positional and relational autonomy to explain the degree of autonomy in the higher education field. Using Maton's (2005) concept of autonomy helps to explain how TVET colleges and UoTs are positioned in the post-school field. The concept of autonomy also illuminates the challenges and opportunities that articulation between the different university sectors face. According to Maton (2005), positional autonomy describes the way academics focus on their roles as independent academic experts to shape their research and scholarly identities. In contrast, relational autonomy involves the connections with areas beyond academia, such as the economy and job market, and the ways in which these connections influence academics' ability to define their academic responsibilities.

The concept of relational autonomy also helps us to understand how TVET colleges and UoTs are positioned within the educational ecosystem. Both sectors have engagements

and interdependent relations with economic interests to meet broader economic needs and advance their educational mandates. Employing theoretical frameworks such as Hall's (1996) theory of articulation and the concept of relational autonomy, the present research highlights the transformative ability inherent in forging dynamic and effective linkages between TVET colleges and UoTs. Hall's (1996) theory offers insights into the way these institutions can form temporary unities to influence educational policies and practices, thereby promoting student mobility and access. The theory of articulation focuses on the way that disparate social forces in the education sector can join together under specific circumstances. It highlights the flexible, contingent nature of educational pathways that adapt to evolving socio-economic conditions. This theoretical approach supports the argument that articulation is not merely a policy imperative but a strategic process that is crucial to enhancing student mobility and broadening access to education, therefore serving the public good.

## Research design and methodology

This research adopted a qualitative interpretive methodology emphasising the need to understand social phenomena through the meanings individuals ascribe to them (Babbie & Mouton, 2001). The qualitative paradigm was chosen because it facilitates in-depth participant engagement, illuminating the learning pathways between TVET colleges and UoTs.

A case study design was employed (Yin, 2018) to enable an understanding of TVET college and UoT articulation initiatives. Yin (2018) posits that case studies are particularly potent when they rely on multiple sources of evidence and when delineating a phenomenon and its nebulous context (Yin, 2018:15). The UoT in the Western Cape was chosen for the case study because the researcher is the regional hub coordinator for the UPSET project. The researcher employed a descriptive approach to provide a detailed account of the specific articulation between TVET colleges and UoTs.

Data were gleaned from various sources, including workshop discussions, webinars, meetings, policy documents, official reports, and dialogues with faculty members at UoTs and TVET colleges, during a period of 28 months from October 2021 to February 2024. These diverse sources were instrumental in broadening the understanding of articulation and mobility in the post-school sector.

The author was a participant observer and engaged with lecturers at the UoTs and TVET colleges to explore widening access and participation through the UPSET project. Participant observation is a qualitative research method commonly used in the social sciences; it involves researchers immersing themselves in the community or social setting they wish to study, often participating in the participants' daily activities to better understand their behaviours, cultures, practices and interactions. Patton (2015:33) suggests that participant observers 'gather a great deal of information through informal, naturally occurring conversations'. The observations were made during online webinars, meetings between staff at TVET colleges and the UoT, and specific meetings organised in the UoT; these observations included the

interactions between lecturers at the UoT and conversations between the lecturers of the TVET colleges and UoT lecturers.

The author observed and collected data from workshop discussions, meeting minutes, webinars, policy documents and official reports. I then undertook a systematic data analysis and subjected the data to coding and thematic categorisation. The data revealed three themes: (a) strategic processes to cultivate the development of HCs; (b) variability and disjunctions between the TVET colleges and the UoTs; and (c) diverse approaches to curricula in the UoT. These three themes signify the complex factors in the post-school sector as it strives to express the various components of the higher education system.

## Strategic processes to cultivate connections in the post-school sector

This section focuses on the strategic processes integral to the UPSET project. A series of meetings, official engagements and legal agreements with various stakeholders in the higher education sector was crucial to establishing connections in the PSET sector.

A core component of the UPSET project was the legal agreement between the collaborating universities. The legal department identified that the UoTs concluding the agreement with the DUT would assume subcontractor status. Consequently, a Memorandum of Agreement (MOA) was adopted instead of a Memorandum of Understanding. The MOA was essential to fostering collaboration between the institutions and formalising the UPSET project.

Information and perspectives were exchanged through annual hub meetings and workshops with AICs, and AIPs were discussed. At these get-togethers, AICs presented their AIPs, engaged in constructive dialogue, and collectively expressed challenges with a view to overcoming them. They provided mutual advice, shared networks and connections appropriate to the development of HCs in specific fields, and recommended academics who could offer specialised expertise.

The meetings were attended by representatives of the hub and time was dedicated to the group's sharing their AIPs and reflecting on what had worked or not worked during the previous year; the representatives also proffered suggestions for the way forward. A significant part of the meetings entailed discussions about systemic matters such as the National Student Financial Aid Scheme (NSFAS) and SETA funding and those involving first-time entering students (FTEN). Lecturers were concerned about NSFAS funding, in particular whether NSFAS would fund two concurrent qualifications. The policy standards applicable to NSFAS eligibility criteria and the conditions for financial aid revealed that 'the N+ Rule for university students will continue to be based on the number of years in higher education rather than the number of years funded' (NSFAS, 2024:46). This means that funding is possible for HCs and the subsequent qualification to a maximum of N + 1; future HCs would therefore enable students to register with a UoT using NSFAS funding.

It is crucial to raise and resolve these issues when advocating HCs, as they were also the primary concerns raised by academics. The hub meetings included other role players, such as the Quality Council for Trades and Occupations (QCTO) sector, government and academics who had been invited to share their perspectives and discuss policy-related matters.

The regional endorsement at the launch of the UPSET project in the Western Cape demonstrated a pronounced interest on the part of most universities in establishing articulation pathways. At the project's commencement, senior leaders from higher education institutions and TVET colleges signalled their readiness to contribute to its objectives and to implement the articulation policies. The regional support for the UPSET project demonstrated collective recognition of the importance of establishing robust articulation pathways, one that reflected a commitment from senior leaders across the higher education landscape.

At the first regional hub meeting on 14 June 2023 with lecturers of the UoT and TVET colleges, lecturers at the UoT presented their ideas for proposed HCs in Science and Engineering, and the DUT shared its HC in Science. This opportunity enabled the lecturers to compare programmes and share best practices.

These processes provide an outline of the formal engagements with various stakeholders, signifying the strategic initiatives essential to effective collaboration between the two sectors in higher education. The national UPSET meetings have served the educational and strategic purpose of bringing together relevant stakeholders to develop consensus, identify differences and shape the UPSET project in the post-school sector. Hall (1996) describes such connections as linking different entities to form a temporary unity to influence policymaking. Similarly, the AICs developed a network between lecturers at TVET colleges and UoTs and shared perspectives that would serve to achieve their common goals.

The UPSET project relies heavily on the pivotal role of individual AICs, who are typically a part of centres for higher education development at universities and are positioned outside of faculties. These AICs are instrumental in driving the articulation between the two sectors and advocating an HC as an alternative access route into higher education.

Although the project is managed through various executive committees at the UoTs, lecturers perceive it as an external, university-driven initiative. This perception stems from the project's positioning in centres for higher education development, which are often separate from the faculties.

The AICs are decentralised to regions across South Africa and are represented at most universities. They convene nationally and annually to discuss their articulation plans. However, the success of the UPSET project will depend on the willingness, commitment and continued mutual engagement of senior university leaders, TVET college leaders and the AICs to advance the articulation efforts.

Monitoring progress and outcomes is limited to annual engagements that form part of the UPSET project. More stringent measures are needed to ensure accountability at universities. Significant work remains in order to promote articulation and expand its implementation. This requires both robust and decisive leadership and the political will to ensure the success of the articulation initiatives (Themane et al., 2023).

The national UPSET meetings serve as both educational and strategic initiatives, bringing together as they do relevant stakeholders to develop consensus, identify differences and shape the UPSET project in the post-school sector. However, Themane et al. (2023) argue that higher education institutions must continuously review their strategic plans to meet local communities' educational needs effectively. They emphasise the need to re-evaluate and enhance articulation policies and guidelines to help institutions to establish effective mechanisms to facilitate student mobility between undergraduate-focused institutions and those offering postgraduate programmes.

## Collaborative engagements between TVET colleges and UoTs: Diverse priorities and pathways

TVET college principals and lecturers were willing to engage in discussions and share their ideas about HCs. TVET college leaders have prioritised employment outcomes for their graduates and have tended to view the UPSET project more as a collaboration between TVET colleges and UoTs rather than articulation. One principal stated:

> Ten per cent of TVET colleges are supposed to collaborate with other institutions, and we accept this. We believe in it as it is another way of improving the country's economy. To us, it is a very important cornerstone, but it is not core.

The principal also referred to three strategies that were important to TVET colleges: 'articulation, collaboration, and exit'. The TVET college leaders emphasised the crucial role of work, of connecting with industry and of establishing partnerships with companies to enable TVET graduates to find work; and the principal stressed the TVET colleges' role in ensuring that students have access to industry and work opportunities, highlighting TVET students' articulation in the workplace.

In contrast, UoT leaders emphasised the integration of educational pathways over immediate vocational outcomes and emphasised articulation rather than collaboration. Despite these differing priorities, both parties supported the development of HCs, which underscored a shared recognition of their value.

During the first meeting, UoT lecturers actively promoted the curriculum of HCs and presented an outline of the proposed programme. They focused on the rationale for HCs and on new admission criteria for HCs, emphasising 'the need for higher certificates to be multifaceted'. In contrast, the TVET lecturers' input into the curriculum was limited

and they did not engage with the substance of the proposed curriculum outline. Their limited engagement could be attributed to the fact that TVET college lecturers do not have any input into developing their qualifications, which are stipulated instead by the DHET. UoT lecturers, in contrast, do have experience in recurriculation and developing new qualifications.

The TVET curriculum has undergone significant changes over the past three decades. According to Needham (2018), the National Accredited Technical Education Diploma (NATED) (N1–N6) programmes, with their roots in the pre-1994 apartheid era, were initially designed to offer vocational training to white artisans. Post-1994, efforts were made to elevate the status of TVET colleges, as Van der Bijl and Lawrence (2019) have highlighted. However, Needham (2018:17) noted that the National Certificate Vocational (NC(V)) was primarily designed to be theoretical, aiming as it did to provide direct access to university undergraduate programmes and to facilitate articulation with universities.

Furthermore, Bhengu (2020:5), in an article on the CHE, highlights several challenges in TVET colleges that hinder this articulation. These include inadequate management, which fails to offer proper instructional guidance to lecturers and students, and underqualified lecturers, who are ill-prepared to teach. In addition, the current mix of programmes and qualifications in the sector is difficult to manage, is perceived negatively by the business sector, is confusing to students and parents, and is often poorly quality-assured. He also suggests a lack of cohesion between the various levels of management, administration, lecturing staff and students (Bhengu, 2020). Nzimande (2014:4) also revealed that only 33% of students who completed NC(V) programmes in 2013 graduated.

Notwithstanding these challenges with the TVET curriculum, the discussions between the TVET college and UoT lecturers open up the possibility of joint discussions on the curriculum and on teacher training. The jointly offered HCs and the UPSET processes would also enable TVET college lecturers to have more significant input into the curriculum and ensure equal participation.

The position of the UoTs in the post-school sector shows that they serve the higher education academy and interface directly with industry through work-integrated learning (WIL) by providing authentic learning and experiences at workplaces. The design of the curricula at UoTs integrates theoretical and practical knowledge, which is enriched by WIL components. Further, whereas UoTs and TVET colleges both maintain robust affiliations with the industrial and business sectors, given the UoTs' focus on integrating the theoretical and the practical, UoTs command a higher degree of relational autonomy.

In addition, the UoTs' curricular approach straddles the boundaries between academic study and practical engagement. Barnett (2006:153) captures this duality by stating that the UoT curriculum 'faces both ways' from theory to practice in an authentic work environment. Shay (2016) further identifies the various knowledge forms woven into the higher education

curriculum, encompassing as they do the theoretical, the practical, and a combination of theoretical and practical knowledge. This interaction between theory and practice in the UoTs strengthens their position in the post-school sector.

Epistemologically, UoTs are therefore better positioned to facilitate the development of the HCs because of their strong emphasis on the interaction between theory and practice. Themane et al. (2023) concur, asserting that universities are predominantly focused on creating knowledge. This puts UoTs in a stronger epistemological and strategic position to facilitate the jointly offered HCs to ensure articulation in higher education and the workplace. The success of articulation pathways is therefore significantly influenced by a strong relational autonomy.

## Diverse curriculum designs in the UoTs

This next section focuses on the UPSET project's efforts to advocate the development of HCs in the UoT sector and to create curriculum-design teams that foster specific articulations between TVET colleges and UoTs. A significant finding that emerged from the study is the diverse approaches to HCs among the UoT stakeholders. This points to the multifaceted role of the UoTs in the post-school sector. This section does not focus on the ways in which these HCs will be taught, how they will be delivered, and the way knowledge and pedagogy will be shared across PSET sectors; instead, the focus is on the actual and the initial conceptual approaches to jointly offered HCs.

Approaching the faculties at the UoT involved representations at senior committees of faculties and institutional committees. The analysis revealed both scepticism and support among lecturers at the UoTs regarding their institutions' involvement in the UPSET project, particularly their responsibility for establishing HCs at the UoTs. Three distinct articulation approaches emerged from the author's engagement with stakeholders at the UoTs. These approaches signalled the diverse perspectives among stakeholders on adopting HCs: the 'innovators', who are characterised by their prior experience in developing HCs and their desire to pioneer new articulations; the 'developers', who concentrate on enhancing the capacity and appeal of the post-school sector, particularly in the fields of science, technology, engineering and mathematics (STEM); and the 'resistors', who have a more cautious approach to the adoption of HCs. Each group represents a unique stance on integrating and expanding HCs in the post-school sector, which serves to underline the challenges and opportunities inherent in advancing post-secondary education.

The innovators, with their long history of developing HCs, including the development of the HC in Information and Communication Technology (ICT), were a testament to the UPSET project's capacity. They thought about novel ways of developing HCs and suggested interdisciplinary approaches to the curriculum design and new, future-oriented innovative curricula, further highlighting the project's transformative power.

For their part, the developers focused on enhancing the capacity and appeal of the post-school sector, particularly in the STEM fields. They recognised the strategic importance of HCs in bridging the gap between secondary education and higher-level STEM careers. By advocating the development of HCs that articulate into STEM disciplines, the developers intended to create more accessible and seamless pathways for youths aspiring to enter these critical sectors. The developers also focused on inter-faculty collaboration as a means of obtaining an HC in the STEM field. The innovators and developers expressed their desire to develop HCs based on the model and structure of the current HC in ICT offered at the UoTs.

The resistors raised some valid concerns by adopting a more cautious approach to HCs. Their reservations stem from perceived obstacles in the current UoT infrastructure, notably curriculum misalignments, a lack of systemic articulation between TVET colleges and UoTs, and insufficient staff capacity to support new HCs effectively. These lecturers raised critical questions about the position of the UoTs and their role in the UPSET project as the initiators and leaders of the formation of HCs. They argued for prioritising reforms in the TVET college sector, particularly curriculum reforms, before embarking on any substantive attempts at articulation between these institutions and UoTs.

Internal discussions within UoTs also reflected a significant interest in evaluating alternative access programmes such as Extended Curriculum Programmes (ECPs). The participants discussed the distinctions between ECPs and HCs and probed their respective roles and disparities.

These approaches to articulation in the UoTs indicate the epistemological level of articulation and the ways in which the knowledge will be structured (Slack, 1996). They represent the ongoing dialogue in expanding the post-school sector and illustrate the complex nature of the attempts to develop HCs to enhance the accessibility and quality of post-secondary education. Although still in their nascent stages, these discussions facilitated by the UPSET project facilitate collaborative opportunities between TVET colleges and UoTs. This initiative is pivotal to developing strategies, practices and processes for the joint provision of HCs and for bridging the gap between these two educational sectors.

## Conclusion

The present study and the ensuing article focused on expanding access to higher education by dealing with the articulation pathways between TVET colleges and UoTs as a strategic means of broadening access to higher education in South Africa. The article highlights the potential of strategic and substantial collaboration between TVET colleges and UoTs as a way of contributing to the public good. It does so by describing the UPSET project and its objectives aimed at formalising articulation pathways. This collaboration can pave the way for social mobility and economic growth. The article also underscores the transformative power of creating pathways for students from diverse educational backgrounds, particularly those who have been historically marginalised.

The UPSET project described here represents a significant initiative to enhance higher education access in South Africa by formalising the articulation pathways between TVET colleges and UoTs. The article highlights the initial conceptual approaches to HCs in UoTs, the varied perspectives and the challenges of adopting HCs, underscoring these institutions' multifaceted role in the post-school sector.

The collaborative efforts between TVET colleges and UoTs have revealed a fundamental difference in their priorities. Whereas TVET colleges prioritise immediate employment outcomes and industry partnerships, UoTs emphasise the integration of educational pathways and maintaining a balance between theoretical and practical knowledge. This difference necessitates a nuanced approach to curriculum development and articulation strategies if the goals of both sectors are to be accommodated.

The findings indicate the ability to develop communities of practice through discussions and the development of action plans between TVET colleges and UoTs aimed at cultivating articulation pathways. The reliance of the UPSET project on the commitment and engagement of senior university and TVET college leaders is critical to its success. Moreover, more stringent measures are needed to ensure accountability and effective monitoring. The UPSET project exemplifies the capacity for strategic collaboration between NQF stakeholders. By fostering an educational system that values both vocational and academic pathways, South Africa can more effectively equip its citizens for the demands of the contemporary world by ensuring that higher education contributes to the public good and the nation's development.

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