Leading curriculum change in South African technical and vocational education and training colleges

Tercia Terblanche and Eli Bitzer University of Stellenbosch

ABSTRACT

This article proposes that the technical and vocational education and training (TVET) college curriculum in South Africa needs restructuring in order for it to support more innovative responses to industry requirements and TVET standards. The ultimate aim of this study was to develop a framework for leading curriculum change in the South African TVET college sector, a framework that will be able to support training and capacity-building among TVET college leaders to bring about long-overdue curriculum change. To achieve this aim, curriculum leadership is essential. The multi-phased, mixed-methods research design used in this study involved a questionnaire survey and follow-up group interviews with TVET college staff representative of five TVET colleges in the Western Cape province. Based on these data sources, the study reports on a range of current curriculum challenges in TVET college swhich formed the basis for suggesting a research-based framework to train leaders to take the initiative in TVET curiculum change. The study findings confirm the need for TVET college curriculum reform, which, in turn, requires competent curriculum leadership and leadership development. The research therefore contributes to theory and practice in the field of South African TVET curriculum leadership.

KEYWORDS

technical and vocational education; TVET; curriculum leadership; curriculum change; leadership development

Introduction

The technical and vocational education and training (TVET) college curriculum, which is at the heart of the South African vocational education and training (VET) system, is in serious need of change. First, an enhanced responsiveness to industry needs and requirements is needed and, secondly, an improvement in its related standards. This article discusses a study recently conducted to generate views on the current curriculum challenges being experienced by the TVET colleges. In particular, it focuses on a suggested framework for leading curriculum change in the TVET college sector, a framework that is able to support the training and capacity-building of college leaders.

History of TVET in South Africa

The origin of the institutions formerly known as technical colleges in South Africa dates as far back as the 1800s. The demand for technical education to be made available to young people was a response to the industrial development in the late 1800s (Pittendrigh, 1988:167; Abedian & Standish, 1992).

The policy framework for education and training (ANC, 1994) released by the African National Congress (ANC) led to the promulgation of *White Paper 4: A programme for the transformation of further education and training* in 1998. This policy document provided the core values and vision for establishing the new education and training system (DoE, 1998a:6); from it the immediate focus of the TVET policy development process emerged. The national curriculum framework for the TVET band (DoE, 1998b) suggested that some of the government's key reasons for introducing these new policies had been to resolve the weaknesses and deficiencies of the TVET college curriculum.

The TVET¹ college sector in South Africa was established in 2002 in terms of the Further Education and Training (FET) Act 98 of 1998. The merger process transformed 152 former technical colleges (both state and state-aided) into 50 multi-site TVET colleges across South Africa's nine provinces. The Department of Education (DoE) (1997:1) declared that:

[T]he curriculum is at the heart of the education and training system. ... It is imperative that the curriculum be restructured to reflect the values and principles of our new democratic society.

Recently, during a South African–European Union (SA–EU) social dialogue on mobilising stakeholders in support of the TVET dual system for training artisans in South Africa, the national minister of higher education and training stated:

¹ The TVET college sector has faced major policy and governance changes since the onset of democracy in South Africa in 1994. These changes have also resulted in name changes within and of the sector (such as moving from the label Further Education and Training (FET) to TVET). The term 'TVET' will be used consistently throughout this article for the sake of coherence, unless explicitly stated otherwise.

Although the [National Technical Education] programmes offered at our colleges are still formally set as a required component of an apprenticeship, in reality their content is seriously out of date, and employers who do train are forced to teach 'trade theory' again at their own expense (DHET, 2018).

This brief historic overview illustrates, among other things, the urgent need for TVET college curriculum reform and the need for strong leaders at the TVET college to lead the curriculum change.

International perspectives

For the purposes of this study we chose to explore elements of VET in the United Kingdom, Germany and Australia in order to gain some international perspectives on possible similarities and differences. As in South Africa, governments in the United Kingdom constantly intervene in the institutional arrangements, design, management and funding of VET, but they are reluctant to wrest power from or oblige employers to conform or become involved. Unlike the case in Germany, the South African government is heavily involved in TVET: it plays a central, almost all-embracing role in the vocational system, but it lacks sufficient involvement with business and commerce. German students are identified from a young age – that is, towards the end of their foundational school phase through the dual-education system – to make career choices. This is different from the practice in South Africa, where most students choose their career field of study towards the end of their high school phase. For those students who complete entry-level vocations, articulation between vocational education institutions and their higher education counterparts counterparts is also permitted in Australia and Germany. This is also not the case in South Africa, where the universities are reluctant to accept TVET college graduates (Clarke & Winch, 2007; German Government, 2011; Australian Government, 2011).

Theoretical perspectives

Curriculum in context

In TVET, the concept of 'curriculum' is viewed as a composition of structured theoretical, practical and workplace learning components (DoE, 1998b; Agrawal, 2012; RSA, 2016; Terblanche, 2017). Its purpose is to prepare students for a specific job or a broader occupation by equipping them with industry-relevant knowledge and skills that enhance their employability (Wedekind, 2008; McGrath et al., 2010; Terblanche, 2017). In addition, TVET curriculum content has to be kept relevant to the needs of the labour market through regular research, reviews and industry involvement in and support for curriculum development (Clark & Winch, 2007; Kraak, Paterson & Boka, 2016). An effective TVET curriculum therefore prepares students for low-, intermediate-, medium- and high-level skills that are linked to students' school-level preparedness to meet admission requirements. Furthermore, the TVET curriculum has to allow for seamless articulation between the different levels of an occupation and at the same time make possible access to further studies in a specific occupational field of study (Duncan, 2009; DHET, 2013).

Curriculum development and reform

The literature indicates that TVET curriculum development seems best placed at the meso- and micro-college levels to promote flexibility and industry responsiveness (Van den Akker, 2003; Carl, 2012). At the same time, the national authorities play a central role at the macro-level towards providing educational policy development for TVET provision (Kessels, 1999; Marsh, 2004). The concept of curriculum development – in the context of this study – was explored because it focuses on the macro-level.

Closer to the turn of the present century, McGrath (2005) had already suggested that some VET curricula in South Africa were outdated; moreover, that the infrastructure had become inadequate and dysfunctional, VET provision had become costly, many graduates were failing to obtain formal employment and many programmes appeared to be irrelevant to labour market opportunities (McGrath, 2005). This contrasts with TVET systems worldwide: they are fundamentally shaped and judged by the effectiveness of their articulation with the world of work but also by the extent to which they grant meaningful access to further and higher education (Branson et al., 2015; Kraak et al., 2016). In contrast, the TVET sector in South Africa seems to have failed to link many young adult learners to employment prospects (Gewer, 2010; Kraak et al., 2016).

Also important is that curriculum development for vocational education is regarded as a national competency, which allows minimal room for institutional innovation. This includes curriculum customisation for National Technical Education (NATED) and National Certificate (Vocational) (NCV) programmes (Papier, 2017; RSA, 2013). Earlier, Littledyke (1997:259) had pointed out, for instance, that an over-prescriptive curriculum and an instrumental, directive management style can inhibit the process of curriculum development. In contrast, collaborative, democratic approaches to such development encourage the ownership of change, which makes the effective translation of policy into practice more likely. In line with this, some authors (such as Stumpf et al., 2009:7–9) contend that one of the key problems identified in the post-DHET establishment period is a lack of further learning opportunities at Levels 2 to 5 on the National Qualifications Framework (NQF) for youths who leave school with either a General Education and Training (GET) certificate or a National Senior Certificate (NSC).

Curriculum change

The South African Department of Education (DoE) (2007) views some of the negative features of the earlier technical college dispensation as follows: since 1994, these colleges have tried to overhaul curricula that were outdated and unresponsive to an emerging economy; they have also attempted to find solutions to low throughput rates and a negligible industry take-up of students. Change has, furthermore, become a constant feature of the TVET college sector since 1994 (DoE, 2007), as political and economic changes have had a profound impact on this sector. By passing multiple pieces of legislation, the government implemented some of the required changes, while other measures failed miserably (Gewer, 2001; Allais, 2012; DHET, 2012). Curriculum change

in the TVET college sector has been marked by an accelerated pace of change, but, unfortunately, at least the past two decades have been characterised by impermanence, uncertainty and unpredictability (Moll, Steinberg & Broekmann, 2005; Gewer, 2010).

Competing national and international demands, resulting from rapidly changing environments, suggest that major challenges to educational management and leadership are necessary. What seems important is that educational leaders and managers are needed who keep abreast of emerging trends that enable students to seize the best learning opportunities and future prospects. TVET leaders in South Africa therefore have to be sensitive to both global educational demands and the need for national and institutional transformation that will lead to the full potential of every student being unlocked and the needs of a changing economy and its industries being met (Bottery, 2007; Naidu et al., 2008).

Curriculum leadership

Applying a combination of leadership theories and traits that underpin the capacity of TVET college leaders to bring about curriculum change seems imperative (Middlehurst, Pope & Wray, 1992; Lussier, 2000). Given the South African context, power and influence theory, within a socio-constructivist learning framework, seems particularly relevant to leading curriculum change (Cross, 1999; Terblanche, 2017): from this perspective, the influence exerted by TVET college leaders therefore takes centre stage. Their influence should be based on their ability to understand emerging trends and to guide TVET staff towards a vision based on shared values and on developing and implementing effective curriculum change strategies (Schwella, 2008).

The literature also points out that college leaders do not always have to direct and lead from the front, but could also lead 'from behind', allowing middle managers the opportunity also to lead (Van Wart, 2011; Northouse, 2013). Such expectations also contribute to a belief that leadership is not necessarily confined to one person in an organisation, nor that there is one effective leadership style. Power and influence in leadership are clearly not the same theoretical constructs (Hollander, 1993). In curriculum leadership, association with the concept of influence, which involves persuading rather than exerting pressure, might be preferable (Terblanche, 2017). From a theoretical perspective, the power to change curricula needs to be situated at the institutional level and points to the need for increased authority over curricula to be vested in the TVET colleges themselves (Terblanche, 2017).

Contextual perspectives

Impact of legislation on TVET curriculum reform

From 1995 and until recently, a myriad TVET and related pieces of legislation have appeared. Some of the major changes have included legislation to effect a name change from FET to TVET and the constitutional changes that led to TVET colleges becoming a national competence under the auspices of the Department of Higher Education and Training (DHET). The new funding norms and standards for programme-based funding heralded a new and welcome era for TVET colleges.

Legislation on TVET colleges, as espoused by the DoE (1998a), indicates that the NCV Level 2 to 4 qualifications were to be put in place to solve the problems of poor-quality programmes, the lack of relevance to the economy and the low technical and cognitive skills of TVET graduates. Unfortunately, such legislation did not meet all the needs of the vocational programmes; nor did it enjoy the universal support of industry, in particular its support for artisan training. In addition, the NCV Level 2 to 4 qualifications currently on offer at TVET colleges are not achieving the curriculum objectives as envisaged either by the Further Education and Training Colleges (FETC) Act 16 of 2006 (DoE, 2006) or by the National Plan for Further Education and Training (DoE, 2008b). The introduction of new programmes, such as the NCV in 2007 and the occupational programmes linked to learnerships and skills programmes, constituted some curriculum changes. The numerous amendments to the Continuous Education and Training (CET) Act 16 of 2016, which resulted from the FETC Amendment Act 3 of 2012 and the FETC Amendment Act 1 of 2013, had the potential to usher in a brandnew era, by the DHET, of unprecedented and drastic change in all areas of the TVET college sector, and, at the same time, to bring a measure of relief to some of the challenges experienced by the TVET colleges.

In 2007, the DoE declared that some of the negative features of the then technical colleges included programmes that were outdated and unresponsive to an emerging economy. It also included low throughput rates and negligible industry take-up of students as negative features, since those teaching in TVET colleges had mostly lost contact with industry and had little knowledge of new trends, new technology and the new shape of business in South Africa and beyond. The promulgation of Government Gazette No. 31711 (12 December 2008) followed suit: there the department (DoE, 2008a) also announced the phasing out of the national N certificates N4 to N6 and the National N Diploma qualifications offered at TVET colleges (see Report 191 [97/07] and Report 190 [92/04], respectively). Unfortunately, owing to the lack of replacement programmes and as a result of pressure from various stakeholders, the Minister of Higher Education and Training ultimately decided to reverse the decision that was taken between 2006 and 2008 to phase out the national N certificates (N1 to N3 Engineering Studies) and (N4 to N6 Engineering, Business and General Study) qualifications until further notice. Regrettably, almost eight years later, the TVET sector is still awaiting the replacements for the NATED programmes that should be implemented with dedicated, subsidised DHET programme funding.

Meanwhile, the establishment of the Quality Council for Trades and Occupations (QCTO) in 2010 brought new hope for curriculum reform, since its objectives included, among other things, ensuring the quality and industry relevance of occupational qualifications and developing replacement programmes for the outdated TVET curricula. But progress on this front has been slow and the colleges are eagerly awaiting the new suite of industry-relevant QCTO-accredited qualifications.

Furthermore, the TVET curriculum has to allow for articulation between the different levels of an occupation and at the same time allow for access to further studies (Duncan, 2009; DHET, 2013). In order to accommodate students from diverse backgrounds and differing levels of academic preparedness, the required curriculum change has two aspects to it: first, programmes must target the needs of industry, which would lead to improved student employability; secondly, programmes should lead to improved articulation with higher education institutions (Terblanche, 2017). The White Paper for post-school education and training (PSET) is the latest master plan of envisaged changes by the DHET that predicts a total overhaul of the entire post-school system of quality improvement in all areas of delivery. The upliftment of the TVET college sector is pivotal to it being given the capacity to play the role earmarked for it in achieving the goals and objectives and promoting the skills and economic drivers as set out in the White Paper (DHET, 2013).

The literature review of this study concluded by suggesting a preliminary conceptual framework (see Figure 1) as it emerged from considering a number of relevant theoretical and contextual factors pointed to in this article. Figure 1 depicts and underpins our initial theoretical understanding of the leadership needed for curriculum change in TVET colleges.



Figure 1: A preliminary conceptual framework for leading curriculum change

Source: Terblanche, 2017

Figure 1 emphasises the need for understanding how curriculum leadership might be influenced at the level of TVET colleges through a range of theoretical perspectives on key concepts such as education, curriculum change, leadership styles and trait theories that seem vital to any type of leadership framework in the 21st-century TVET environment.

With these theoretical and contextual perspectives intact, it seems a good juncture at which to report on the empirical investigation that drew on our conceptual understanding of the phenomenon of curriculum leadership – especially within the South African TVET college environment.

Methodology

This study was based on the Framework for an Integrated Methodology (or FraIM) as the most appropriate design for the purpose of the study. Through this design, numeric and non-numeric data could be integrated holistically by providing equal status of importance to all aspects of the research methodology (Plowright, 2011). Through applying purposive sampling, we were able to classify the respondents according to their job titles: they were academic managers such as deputy principals, curriculum planners, heads of department, programme managers, senior lecturers and lecturers.

Non-experimental research in the form of a survey design within a pragmatic knowledge paradigm was first used to analyse the trends, attitudes and beliefs of college employees and leaders. An online questionnaire survey was conducted in which 116 (n = 116) respondents provided quantitative responses about their perceived trends, attitudes, beliefs, views, knowledge and experiences regarding TVET college curriculum leadership and change. Numerical data from the online questionnaire were analysed using descriptive statistics and categorical variables with the support of the Statistical Service at Stellenbosch University. The differences in opinions, perceptions and experiences of the questionnaire, whereas a narrative format was used to describe the findings of the open-ended question section. Descriptive data were used to report on the findings from the closed-question section, and, thereafter, possible statistical relationships were drawn between the biographical characteristics of the respondents and three questions by using Pearson values.

Semi-structured focus-group interviews involved a total of 90 respondents (n = 90). We purposely selected the interviewees from the five participating TVET colleges and the regional DHET office located in the Western Cape. Based on the trends that emerged from the questionnaire survey, focus-group interviews were conducted with 14 TVET interest groups. The focus-group interviews were conducted to strengthen the findings of the survey and to identify any similar or different views from those of the respondents. The semi-structured focus-group interviews were recorded, transcribed and analysed using qualitative levels and categories. Finally, the study findings from the previous two phases were insightfully integrated into a proposed framework for leading curriculum change intended to lead training and capacity-building in the TVET college sector.

Findings

Since the questionnaire survey and focus-group interview questions were based on the initial theoretical conceptual framework (see Figure 1), the analysis of general findings supports the framework in many ways.

The findings of the study indicate that TVET college curriculum reform is necessary. Such reform has the potential to contribute in various ways to improve the employability, productivity and success rates of TVET college graduates. The findings emphasise the crucial need for change in management strategies to prepare for current and future TVET curriculum challenges. What also emerged is the need for more substantial industry involvement in the TVET curriculum review process to enhance responsiveness to industry needs and requirements. Furthermore, the findings on leadership capacity in the TVET institutions represented in this study indicate that the TVET college sector needs leadership programmes to help leaders to bring about curriculum change. In addition, the findings indicate the various cognitive and social competencies that curriculum leaders require if they are to be effective in leading curriculum change and meeting its accompanying challenges.

Different views emerged during the empirical part of the study regarding the concepts of vocational, occupational and academic types of education. The respondents indicated a need for specific knowledge and skills required to develop a responsive vocational and occupational curriculum: research on and knowledge of the academic abilities and preparedness of students; the social background of students; industry knowledge and experience; curriculum writing skills; and advanced cognitive and analytical skills. In particular, the students' social background and prior academic knowledge could be a priority when considering the development of new curricula if an impact is to be made on the success rates of TVET college students.

Another important finding points to the ongoing professional development of college staff, which seems crucial if TVET staff are to gain the relevant knowledge and skills required to plan and deliver a responsive vocational and occupational curriculum. Broadening student participation and access was also considered to be crucial during the inception stages of curriculum development.

Furthermore, industry knowledge and experience were pointed out as being critical for curriculum developers, who believe that, once the curriculum becomes industry-aligned, the employability of students may improve and forging industry partnerships with TVET colleges might become more likely. Finally, the revision of the type and amount of funding the DHET awards to colleges seems critical to fulfilling the mandate of expanding student numbers, meeting the need for adequate resources, and delivering the quality of teaching needed to develop South Africa's skills workforce. Based on the results of the study, and drawing on the success of TVET in Germany, a parallel-stream or two-stream curriculum is suggested to better address current and future TVET training needs.

The following section highlights some of the respondents' verbatim quotations from the closedquestion section of the questionnaire survey and the group interviews. These are complemented by statistical data analysis derived from the closed-question section of the survey regarding curriculum relevance, student employability and curriculum leadership issues.

Curriculum relevance

The survey results (n = 116) indicated that a large majority of the respondents (88%) agree or strongly agree that the current curriculum of Report 191 (N4–N6) Business and General Study Programmes needs revision (see Table 1).

TABLE 1: Survey responses to the question: Does the curriculum of Report 191 Business and General Studies (N4–N6) need revision? (n = 116)

	Number	Percentage
Disagree	14	12
Agree	58	48
Strongly agree	46	40

Similarly, when the respondents were probed for their views on the curriculum challenges faced by TVET colleges, in particular on the NCV programmes (L2–L4), Report 191 Engineering Studies (N1–N3) and Occupational (L1–L5) programmes, the following results emerged from interviews and open-ended questionnaire items:

• The perceived curriculum challenges linked to the NCV programmes seem to be multiple. As one respondent put it:

... specific subject content levels which are pitched too high for the education entry level of the students as well as the pass requirement of subjects which are also too high.

Another respondent emphasised:

... curriculum is not responsive to industry and market needs and [is] tainted with a poor public image.

• Several challenges with regard to the Report 191 (N1–N3) Engineering programmes were also reported. These challenges rendered responses such as these:

... [the] short duration of twelve weeks, the lack of practical components and technology, outdated curriculum content, design, equipment and textbooks.

Another respondent stated that the curriculum is:

not aligned to changes in technology, new equipment and industry.

The boxes below reflect interview responses related to issues concerning the Engineering Studies (N1–N3) curriculum:

'...Credibility of qualifications – industry [doesn't] acknowledge. Training for the unemployed. Machinery and equipment (some from Noah's Ark) are outdated and we are lagging behind industry. [We] only provide basic training and not what industry demands due to limited machines and equipment. The 1969 textbook for trade testing is still the same....' (FG2M1*)

*Key: Focus Group 2, Male respondent 1

The responses generated regarding challenges with the Report 191 (N4–N6) Business and General Study programmes were analogous with most of the preceding findings. These challenges varied from *outdated curriculum and design and textbooks* to *[l]ack of practical applications to current work scenarios.* Students don't find jobs, as yet another respondent remarked: *No demand – students don't get work with their qualifications.*

As for the occupational programmes, one respondent stated that *some of the unit standards are outdated*. Additional challenges cited by another respondent were: '*T*]*heory-based learnerships; too much paperwork and inadequate actual learning time*, while [*I*]*ack of infrastructure for practicals and partnerships with industry for work placement*', was added by another.

The box below reflects particular curriculum issues such as trust, content, motives and entry levels:

'People do not trust the curriculum, which contains too little content knowledge. [L] ack of knowledge content of occupational programmes. (FG4M1*)

*Key: Focus Group 4, Male respondent 1

Student employability and curriculum leadership

Industry support and involvement in the TVET college sector seem critical to curriculum renewal, enhancing student employability and curbing the lack of industry knowledge and experience of college leaders. To illustrate:

A majority (92%) of survey respondents (n = 116) indicated that student employability could be enhanced through curriculum change (see Table 2).

	Number	Percentage	
Disagree	10	9	
Agree	60	52	
Strongly agree	46	40	

TABLE 2: Survey responses to the statement: Student employment opportunities will be increased by curriculum change (n = 116)

When asked about the need for leadership to bring about and sustain curriculum change, a majority (76%) of respondents (n = 116) disagreed (see Table 3) with the statement that effective leadership training programmes currently exist that could enable and give TVET college leaders the capacity to lead curriculum change.

TABLE 3:	Survey responses to the statement: Effective programmes are available to capacitate TVET
	college leaders to lead curriculum change. ($n = 116$)

	Number	Percentage
Strongly disagree	17	15
Disagree	71	61
Agree	25	22
Strongly agree	3	3

The survey results were therefore clear on the need for curriculum leadership and giving TVET college leaders the leadership skills to confront current and future curriculum challenges, including curriculum design and development.

Current and future curriculum leadership capacity-training needs

To provide a basis for curriculum leadership development, the empirical part of the study also compared possible current and future curriculum leadership capacity-training needs. However, as indicated by Table 4, the needs indicated by respondents to an open-survey question differed quite substantially regarding current and future training.

Table 4 indicates a range of skills development initiatives to build leadership capacity in TVET colleges. Current needs include effective communication and conflict-handling skills, the use of various communication channels and systems through the use of technology, strategic planning and curriculum management skills, and knowledge about quality management and quality assurance systems that could enhance the quality of teaching and learning. Research skills also seem important for making sound strategic decisions based on adequate information.

Current leadership capacity-training needs	Future leadership capacity-training needs
The need for vision	The need for insight into global and internation- al future curricula
The need for effective communication	The need for futuristic leaders
The need for listening skills	The need for improved leadership qualifications
The need for assertiveness	The need for a workable organisational structure with capable leaders
The need for conflict management	The need for visionary leaders with foresight to develop programmes that will meet future needs
The need for strategic management	The need for research and development skills
The need for curriculum management	The need to understand the vocational curriculum
The need for people skills	The need for an ability to set up collaborative structures between college and industry to develop relevant curriculum
The need for emotional intelligence	The need to be able to use latest technology
The need for research into industry training needs	The need for networks and partnerships
The need for mutually beneficial partnerships with local industry and international organisations	The need for economic literacy
The need for skilled, dynamic, strong, consistent and decisive leadership	The need for quality management
The need for strong, ethical leaders	The need to be able to think out of the box
The need for understanding curriculum and labour needs	The need to make provision for needs that do not exist yet

TABLE 4: Comparison between current and future leadership capacity-training needs as indicated by respondents

Source: Terblanche, 2017

As for projected future development of curriculum leadership, needs include the provision of programmes that will meet future employment needs, economic literacy, research and development skills, as well as training in the use of the latest technology. Developing future skills and becoming economically literate are seen as important to helping college leaders to plan for the future and be ready for future challenges.

Curriculum challenges and leadership capacity-training needs

When the study participants were asked about how they perceive current TVET curriculum challenges as they relate to curriculum leadership capacity-building, more interesting perspectives emerged. Table 5 shows these recorded relations and options.

Proposed current leadership capacity-training needs
Need for a broad curriculum knowledge and understanding
Need for industry knowledge and experience
Need for planning, organising, monitoring and follow-up
Need for quality assurance
Need for business acumen
Need for creating a sense of urgency
Need for change management
Need for charismatic type of leadership
Need for proactivity
Need for pragmatism
Need for visionary skills
Need for adaptability
Need for people skills
Need for a consultative leadership approach
Need for a servant-leadership approach
Need for a situational leadership approach

TABLE 5: Current curriculum challenges as related to proposed leadership capacity-training needs

Source: Terblanche, 2017

Table 5 highlights numerous current challenges such as a lack of resources, vision, curriculum knowledge, strategic thinking, and industry knowledge and experience. The DHET (2012) stated earlier that college principals require a suite of comprehensive leadership competencies such as strategic capability and leadership, financial management, people management and empowerment, client orientation and customer focus, change management, and honesty and integrity to lead a college effectively. Most of these requirements are reflected by the capacity development needs proposed in Table 4.

The findings on leadership capacity were largely supported by the non-numerical data generated from the group interviews with TVET college staff. To illustrate:

'Leadership should operate in a business sense. [There should be] a sense of urgency to address issues, service delivery, respect, integrity, [and] trust [in] staff if [they] propose solutions. Change management programmes are required, emotional intelligence, etc. to lead occupational programmes.' (FG3F1*)

*Key: Focus Group 3, Female respondent 1

The curriculum leadership challenges and needs as pointed out by the findings from this study clearly support previous research by Gewer (2010), who has indicated that insufficient levels of knowledge about leadership among college leaders and management are detrimental to curriculum renewal.

Conclusions and implications

Conclusions

From our investigation it became clear that building the capacity of curriculum leadership in the TVET college sector appears to be an urgent matter. In addition, various cognitive and social competencies are needed to lead curriculum change and deal with its accompanying challenges. These competencies include acquiring industry knowledge and obtaining exposure to industry, which seems crucial for TVET college leaders if curriculum responsiveness to industry needs is to be enhanced.

Our findings have also shown that no coherent framework for developing curriculum leadership in TVET colleges currently exists. For a curriculum leadership development framework to materialise, various policy reviews or new policies regarding curriculum leadership are likely to be required. In addition, TVET leadership might be required to phase out outdated curricula and enhance curriculum responsiveness to industry.

Based on these conclusions, a number of implications can be pointed to which relate to curriculum leadership theory and the practice of curriculum leadership.

Possible implications related to curriculum leadership theory

Power and influence theory (Hollander, 1993) has been shown in our study as an applicable theory that could potentially help TVET college leaders to influence changes in seemingly outdated curricula. Curriculum leadership is ultimately underpinned by a constructivist theory of learning by which knowledge is actively constructed from within and by leaders as lifelong learners. Curriculum leadership in educational contexts is therefore mainly associated with influencing the direction of learning and studies (Middlehurst, 1993). In practice, this means that the leadership development framework we suggest may comprise four pertinent modules which are derived from the elements as they have emerged from the empirical part of our study.

For TVET curriculum change to happen, at least at a theoretical level, it seems that a combination of leadership theories and styles – as has emerged from the literature and findings in this study – has to be taken into consideration. Most prominent is transformational leadership, which is seen as a power and influence theory according to which the leader acts in mutual ways with the followers, appeals to their higher needs, and inspires and motivates followers to move towards a particular purpose (Van Wart, 2011).

As has been pointed out by our study, shared or distributed leadership, in addition to transformational and innovative leadership, is central to supporting the magnitude of change envisaged to bring about TVET curriculum change. This is because shared or distributed leadership allows different people to lead at different times (Yukl, 2010; Edwards, 2011).

Practical implications: A suggested framework for curriculum leadership

The main purpose of the present study was to develop a framework for leading curriculum change and promoting leadership capacity-building for TVET college leaders. To develop a framework for leading curriculum change it seemed important to gain a better understanding of the core concepts that informed the elements of a proposed framework (see Figure 2).

The suggested leadership framework is based on four modules, which are derived from the elements that have emerged from the empirical investigation (see Tables 4 and 5). These elements were grouped under four suggested headings, namely, (1) Leadership and curriculum change, (2) Human, cognitive and technical competencies, (3) Industry knowledge and skills, and (4) Curriculum design and development. The two-way arrows indicate articulation, integration and flexibility between the four sections of the framework, which might become learning modules (see Figure 2).



Figure 2: A simplified framework for facilitating curriculum leadership training

Source: Terblanche, 2017

The framework supports a socio-constructivist approach to learning and acknowledges that students' needs are central to the learning component. The modules and elements are based on the social context of the respondents which emerged from the empirical data. Accordingly, the further development of this framework will remain contextually shaped by the experiences and knowledge of those related to the TVET college sector. The emphasis is on the key elements that contribute to the composition of the curriculum leadership framework that could contribute to equipping college leaders to bring about curriculum change in the South African TVET college sector (Terblanche, 2017:240–244).

The framework differs from our initial conceptual understanding (see Figure 1) in that it represents a more coherent view of how curriculum change could be led. In the first framework, the two main strains involved theoretical and contextual perspectives; in the present framework, the focus is primarily on incorporating the conceptual understanding into a more practical orientation. This adaptation helps us to focus on what could be potentially helpful in developing leaders in need of capacity-building and training to equip them for leading curriculum change (Terblanche, 2017).

Details of the key elements of the four suggested 'modules' are given in Table 6.

Modules	Elements	
Module 1: Leadership and curriculum change	 Curriculum or academic leadership Transformational leadership style Innovative leadership Shared or distribution leadership style Participative leadership style Policy development and implementation TVET college knowledge and experience Curriculum change Change management strategies Strategic planning 	
Module 2: Human, cognitive and technical competencies	Human skills: • Integrity, trustworthiness, passion, energy, honesty • Committed, empathetic, ethical, accessible, flexible • Sincere • Interpersonal/people skills • Motivational Cognitive skills: • Critical, analytical and strategic thinking • Creativity and innovative thinking • Futuristic leadership • Influential and persuasive • Negotiation and risk-taking • Being a change agent • Decision-making and conflict management • Curriculum management • Quality management • Quality management	
Module 3: Industry knowledge and skills	 Industry knowledge, exposure and experience Labour market needs for current and future jobs Industry collaboration, linkages and partnership establishment and maintenance Global industry knowledge and trends in the labour market Macroeconomics and microeconomicss 	
Module 4: Curriculum design and development	 Curriculum writing and language skills Curriculum design and development skills General knowledge of TVET college programmes Sensitivity towards the distinction between vocational and occupational education Specific subject knowledge and expertise Flexible modes of delivery and technology Knowledge of international trends specific to the learning area Research skills 	

TABLE 6: Possible 'modules' and elements of a framework for curriculum leadership training

Source: Terblanche, 2017

Module 1 (Leadership and Curriculum Change) is suggested to equip college leaders with the necessary knowledge and skills through applying a combination of leadership styles best suited to influencing curriculum change in the TVET college sector.

Module 2 (Human, Cognitive and Technical Competencies) has the potential to empower leaders with human, cognitive and technical management skills. A combination of these traits should be applied, since one trait alone cannot ensure effective leadership to bring about curriculum change.

Module 3 (Industry Knowledge and Skills) is able to provide leaders with a wide range of industryrelated information about local, provincial, national and international labour market needs and trends. It is therefore important that a compulsory industry or workplace component form a critical part of the curriculum design and implementation plan.

Module 4 (Curriculum Design and Development) should equip leaders with the knowledge and skills linked to basic elements of curriculum design and writing processes. This element could provide extensive capacity-building to develop the parallel curriculum that will either lead directly to the workplace or articulate to higher education programmes. Finally, basic research skills will form an integral part of the training, because important curriculum-related decisions will be based on sound research.

Implications for future research

Further studies at TVET colleges in the other eight provinces of South Africa should be considered. This could add value to the verification, credibility and expansion of modules and key elements, as well as to the need for a generally accepted framework for facilitating curriculum change.

Conclusion

The aim of this study was to propose and develop a curriculum leadership framework for curriculum change in the TVET college sector. The study has contributed towards increasing a conceptual understanding of the key factors and leadership features needed for TVET college leaders who take the lead in curriculum change. In addition, the study reported on the current and future challenges facing curriculum development in a TVET context and also dealt partly with possible strategies needed to build capacity among TVET college leaders to enable them to deal with both current and future curriculum challenges.

The study also highlighted certain prominent leadership features considered necessary for TVET college leaders to effectively lead curriculum change sustainably in TVET colleges. We hope that this study will contribute in some modest way to the body of research into higher and further education in South Africa, whose aim is to improve the teaching–learning environment at institutions of higher education.

REFERENCES

- Abedian, I & Standish, B. 1992. *Economic growth in South Africa: Selected policy issues.* Cape Town: Oxford.
- African National Congress (ANC). 1994. A policy framework for education and training. Discussion document. Education Department, ANC, January.
- Agrawal, T. 2012. Vocational education and training in India: Challenges, status and labor market outcomes. *Journal of Vocational Education and Training*, 64(4):453–474.
- Allais, SM. 2012. Will skills save us: Rethinking the relationship between vocational education, skills development policies, and social policy in South Africa. *International Journal of Education Development*, 32(5):632–642.
- Australian Government. 2011. Department of Education Employment and Workplace Relations (2011). Australian jobs. Canberra: DEEWR.
- Bottery, M. 2007. Reports from the front line: English headteachers work in an era of practice centralization. *Educational Management Administration & Leadership*, 35(1):89–110.
- Branson, N, Hofmeyr, C, Papier, J & Needman, S. 2015. Post-school education: Broadening alternative pathways from school to work. *South African Child Gauge*, 1:1–8.
- Carl, AE. 2012. *Teacher empowerment through curriculum development: Theory into practice.* (4th ed). Cape Town: Juta.
- Clarke, L & Winch, C. 2007. Vocational education (international approaches, developments and systems). London: Routledge.
- Cross, K. P. 1999. *Learning is about making connections: The Cross Papers Number 3*. Mission Viejo, CA: League for Innovation in the Community College & Educational Testing Services.
- Department of Education (DoE). 1997. *Outcomes-Based Education in South Africa*. Pretoria: Department of Education.
- Department of Education (DoE). 1998a. *Education White Paper 4: A programme for the transformation of further education and training: Preparing for the twenty-first century through education, training and work.* Pretoria: DoE.
- Department of Education (DoE). 1998b. National Curriculum Framework for the Further Education and Training Band. Discussion document of education. Pretoria: DoE.
- Department of Education (DoE). 2006. *Further Education and Training Colleges Act No. 16 of 2006.* Government Gazette No. 29469. Pretoria: Government Printers.
- Department of Education (DoE). 2007. FET colleges: Institutions of first choice. Pretoria: DoE.
- Department of Education (DoE). 2008a. Approval for the phasing out of the programmes of the National N Certificates: N4 - N6 and National N Diploma Qualifications offered at Further Education and Training Colleges. Government Gazette No. 31711. Vol 522. Pretoria: Government Printers.
- Department of Education (DoE). 2008b. National Plan for Further Education and Training. Government Gazette number 31712 (Vol. 522). Pretoria: Government Printers.
- Department of Higher Education and Training (DHET). 2012. *Green Paper for post-school education and training*. Pretoria: DHET.

- Department of Higher Education and Training (DHET). 2013. White Paper for post-school education and training. Building an expanded, effective and integrated post-school system. Pretoria: DHET.
- Department of Higher Education and Training (DHET). 2018. South African–Europeon Union (SA–EU) social dialogue on mobilising stakeholders in support of the TVET dual system for training artisans in South Africa. Pretoria: DHET.
- Duncan, K. 2009. The current state of the FET college sector in South Africa. Paper presented at the Colloquium on the State and Role of FET Colleges in South Africa, held at Johannesburg Central, 5 December 2009, Johannesburg.
- Edwards, A. 2011. Building common knowledge at the boundaries between professional practices: Relational agency and relational expertise in systems of distributed expertise. *International Journal of Educational Research*, 50(1):33–39.
- German Government. 2011. *Report of VET in Germany 2011.* Federal Ministry for Education and Research. Available: http://www.bmbf.de/pub/bbb_2011_en.pdf> [Accessed 16 May 2017].
- Gewer, A. 2001. Macro-strategies and micro-realities: Envolving policies in further education and training (FET).In A Kraak & M Young (Eds), *Education in retrospect: Policy and implementation since 1990.* Cape Town: HSRC Press.
- Gewer, A. 2010. Choices and chances: FET colleges and the transition from school to work. National business initiative. Report on FET research study commissioned by HRD Support Unit. Johannesburg: DHET.
- Hollander, EP. 1993. Legitimacy, power and influence: A perspective on relational features of leadership. San Diego: Academic Press.
- Kessels, JW. 1999. A relational approach to curriculum design. In J van den Akker, R Branch, K Gustafson, N Nieveen & T Plomp (Eds), *Design and development methodology in education*. Dordrecht: Kluwer Academic.
- Kraak, A, Paterson, A & Boka, K. 2016. *Change management in TVET colleges: Lessons learnt from the field of practice*. Cape Town: African Minds.
- Littledyke, M. 1997. Managerial style, the national curriculum and teachers' culture: Responses to educational change in a primary school. *Educational Research*, 39(3):31–42.
- Lussier, RW. 2000. *Management fundamentals: Concepts, applications and skills development.* Springfield: South-Western College Publishing.
- Marsh, C. 2004. Key concepts for understanding curriculum (3rd ed). London: Routledge.
- McGrath, S. 2005. Skills development in very small and micro enterprises. Cape Town: HSRC Press.
- McGrath, S, Needham, S, Papier, J, Wedekind, V, Attwal, H & Calitz, M. 2010. *Employability in the college sector: A comparative study of England and South Africa.* London: British Council.
- Middlehurst, R. 1993. *Leading academics*. Buckingham: Society for Research into Higher Education & Open University Press.
- Middlehurst, R, Pope, M & Wray, M. 1992. *The changing roles of university managers and leaders: Implications for preparation and development.* Sheffield: Universities of the United Kingdom, Universities Staff Development and Training Unit.
- Moll, I, Steinberg, C & Broekmann, I. 2005. *Being a vocational educator: A guide for lecturers in FET colleges.* Braamfontein: South African Institute for Distance Education.

Naidu, A, Joubert, R, Mestry, R & Mosoge, J. 2008. *Education management and leadership: A South African perspective.* Cape Town: Oxford University Press.

Northouse, PG. 2013. Leadership: Theory and practice. Thousand Oaks, CA: Sage.

- Papier, J. 2017. Improving college-to-work transitions through enhanced training for employment. *Research in Post-Compulsory Education* (Published online: 16 May 2017), 22(1): 38–48, DOI: 10.1080/13596748.2016.1272084. Available: http://dx.doi.org/10.1080/13596748.2016.1272084> [Accessed 8 June 2017].
- Pittendrigh, A. 1988. Technikons in South Africa: An evaluative analysis of the factors influencing the development of the Technikons (1967–1985) and an assessment of their role in educational change at tertiary level in the RSA. Halfway House, South Africa: The Building Industries Federation of South Africa.
- Plowright, D. 2011. Using mixed methods: Frameworks for an integrated methodology. London: Sage.
- Republic of South Africa (RSA). 2013. *Policy and professional qualifications for lecturers in technical and vocational education and training (TVET). Government Gazette* No. 36554 of June 2013. Pretoria: Government Printer.
- Republic of South Africa (RSA). 2016. South African Qualifications Authority (SAQA). SAQA Bulletin, 15(1), March 2016. Pretoria: SAQA.
- Schwella, E. 2008. Administrative reform as adaptive challenge: Selected public leadership implications. *Politeia*, 27(2):25–50.
- Stumpf, R., Papier, J., Needham, S., Nel, H. & Unit, S.P., 2009. Increasing educational opportunities for post NQF level 4 learners in South Africa through the further education and training college sector. Cape Town: Centre for Higher Education Transformation & Further Education and Training Institute.
- Terblanche, TE. 2017. Technical and vocational education and training (TVET) colleges in South Africa: A framework for leading curriculum change. Unpublished PhD thesis, Stellenbosch University.
- Van den Akker, J. 2003. Curriculum perspectives: An introduction. In J van den Akker, W Kuiper & U Hameyer (Eds), *Curriculum landscape and trends.* Dordrecht: Kluwer Academic.
- Van Wart, M. 2011. *Dynamics of leadership in public service: Theory and practice.* (2nd ed). New York: ME Sharpe.
- Wedekind, V. 2008. *Report on the research on further education and training (FET) colleges in South Africa.* Pietermaritzburg, South Africa: University of KwaZulu-Natal.
- Yukl, GA. 2010. An evaluative essay on current conceptions of effective leadership. *European Journal of Work and Organisational Psychology.*