

Pathways through the education and training system: Do we need a new model?

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Analyses conducted by the Education, Science and Skills Development (ESSD) research programme at the Human Sciences Research Council (HSRC) reveal major areas of misalignment in the South African education pathway system. The majority of learners entering Further Education and Training (FET) colleges, nursing training institutions and learnerships have already achieved National Senior Certificates prior to enrolment. Higher Education is seen as the only viable option for further learning, contributing to the inverted triangle phenomenon in which a small FET college system is secondary to a much larger Higher Education system which struggles to retain inadequately prepared students. Against this background, this paper proposes a new model for student progression that broadens learning opportunities at the intermediate level.

Keywords: pathways; Further Education and Training; Higher Education; progression; articulation; misalignment

Introduction

The legislation that was introduced by the South African Qualifications Authority (SAQA) in the 1990s (RSA, 1995; RSA, 1998) created the framework for a new education and training pathway model for the country. This consisted of:

- Three bands: General Education and Training (GET), Further Education and Training (FET) and Higher Education and Training (HET)
- Eight levels: level 1 constituting the GET phase, levels 2-4 constituting the FET phase and levels 5-8 constituting the HET phase
- Qualifications within the three bands were designed to articulate with one another: a General Education and Training Certificate (GETC) at the exit point of the GET phase, a Further Education and Training Certificate (FETC) at the exit point of the FET phase (with the achievement of unit standards at National Qualifications Framework [NQF] levels 2 and 3), and certificates, diplomas and degrees (with notional learning hours of 120, 240 and 360 credits respectively attached to them) in the HET phase.

The post-apartheid dispensation has also seen various changes in the institutional landscape. Technical colleges have been replaced by (or, more accurately, subsumed within) FET colleges, teacher and nursing colleges have been shut down to allow universities to offer improved education and training for the teaching and nursing professions respectively, technikons have been merged with other technikons to form universities of technology, and universities with technikons to form comprehensive institutions. More recently FET colleges, Sector Education and Training Authorities (SETAs) and the National Skills Authority have been absorbed within the recently established Department of Higher Education and Training (DHET).

It is therefore clear that, in sixteen years, the education and training landscape has seen a great deal of change. The question raised is: have we seen concomitant improvements in the education and training system, in terms of better articulation, mobility and progression as envisaged in the principles underpinning the NQF, and of improved learning outcomes? This paper addresses the first part of this question: the extent to which the changes have promoted or hindered student mobility and progression through the education and training system.

Problems of articulation, progression and mobility

One of the key problems identified in the period following the establishment of the DHET is the limited range of opportunities for further learning at NQF levels 2 to 5 for youth who leave school prematurely (with a grade 9, or GET, certificate; or after grades 10 or 11) or with a National Senior Certificate (NSC) (Cloete, 2009; Lolwana, 2010). Teacher training and nursing colleges have been closed down and for a variety of reasons, including poor marketing, poor image and the lack of capacity in the sector to admit large numbers, FET colleges have not succeeded in attracting learners. This means that universities loom disproportionately large in the post-school learner imagination. This is compounded by the transition from the apartheid to the post-apartheid state in which learning opportunities for black African learners, in particular, have opened up to include study programmes other than, predominantly, teaching and nursing. Moreover, the phasing out of N4 to N6 certificates by FET colleges has contributed to the gap in education and training provision at NQF levels 4 and 5.

It might be argued that it is better to fix the problems of FET colleges than to consider introducing other institutional types. However, this is not a matter of “either-or”. Dealing with issues of poor marketing, poor image and the incapacity of the sector to admit large numbers of learners, is indeed a logical means of addressing the demand for further learning; but the nature and location of FET colleges in their present form are not conducive to stimulating demand. In addition, the continued absence of single-purpose institutions like teaching, nursing, technology and agricultural colleges will have dire consequences for skills development in these areas, particularly if universities are seen as the exclusive source of these skills, to their national neglect at the intermediate level.

The policy decision to phase out N4 to N6 qualifications and to confine FET college provision to NQF level 2 to 4 programmes was cemented by the introduction of the NC(V) as a parallel qualification to the NSC in the schooling sector. This has had negative consequences for the college sector and, more broadly, for skills development at the intermediate level. The most obvious consequence is the dearth of NQF level 5 programme provision which exacerbates the university-as-only-option scenario in which universities must perforce offer certificate and diploma programmes as well as the degree programmes that are arguably their *métier*. The provision of certificate and diploma programmes by universities of technology and by the technology components of comprehensive institutions goes some way towards accommodating this need. But these intermediate level qualifications are not the natural preserve of universities, and should be offered by other institutional types.

Figure 1 illustrates the problems of articulation, progression and mobility presented by the current pathway model:

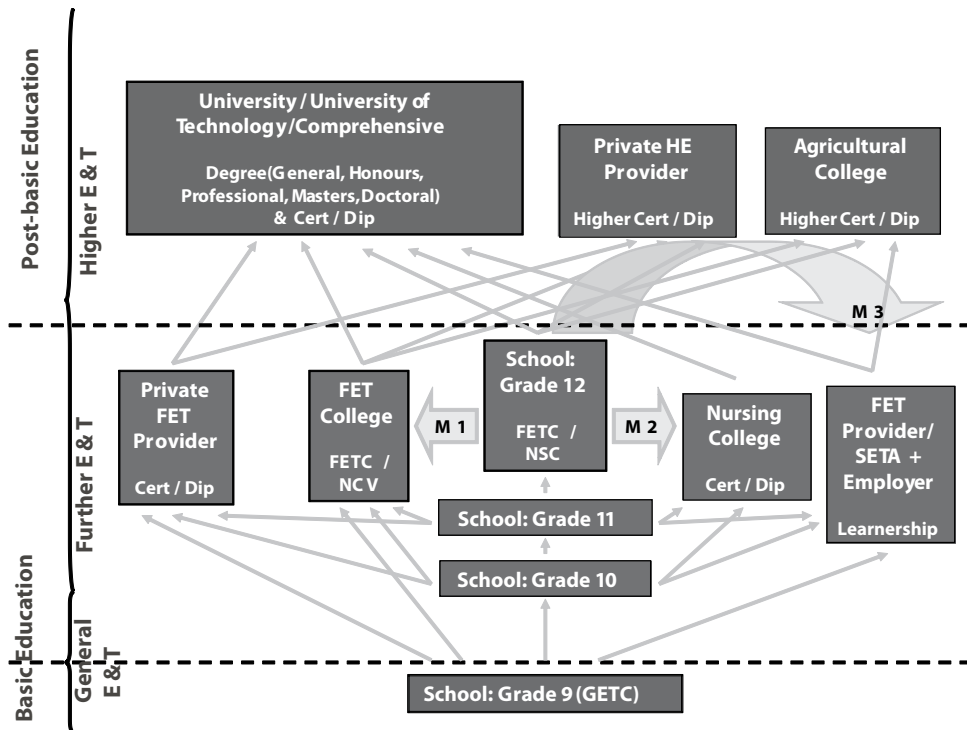


Figure 1: Existing pathways model: Misalignments (M) 1, 2 and 3

This figure shows three areas of misalignment. In 2002, an HSRC survey of the destinations of graduates from N2, N3 and NSC programmes (Cosser, 2003) revealed that 81% of respondents had already achieved a Senior Certificate before enrolling in a technical college programme (M1 in the diagram). Similarly, while the admission requirement for entry into an auxiliary nursing programme is a Grade 10 certificate, many entrants have achieved a Senior Certificate before enrolment (SANC, personal communication, 2009; M2 in the diagram). Moreover, between 1998 and 2007, there was a 66% attrition rate between graduation and registration as a nurse. Many nurses emigrate, or use the degree as a stepping stone to other qualifications (Breier, Wildschut & Mgqolozana, 2009). Finally, 72% of young unemployed learners surveyed in the course of a recent HSRC study (Visser & Kruss, 2009) already had a qualification at NQF level 4 when they enrolled for a learnership programme, the overwhelming majority (92%) having enrolled at a level lower than or equal to NQF level 4 (M3 in the diagram).

As well as these three instances of misalignment, there is one area of conflict and one further area of misalignment in the pathways system. The area of conflict, from a public provision perspective, involves private provision at the FET level. Notwithstanding the regulation of the sector, private provision of colleges is far larger than public provision (Akoojee, 2005). The private sector grew considerably in the 1990s, suggesting a significant demand associated with the twin processes of economic liberalisation and globalisation (Akoojee & McGrath, 2004). It would seem that public FET colleges are not perceived to provide relevant, credible programmes in sought-after technical and vocational learning areas that will lead to employment; at the higher level, private higher education appears to be filling a gap between schooling and public higher education provision.

While it might be argued that private provision complements public provision, the failure of FET colleges to offer programmes that articulate relevantly with the labour market is an indication of the inability of the public sector to compete credibly with private providers.

The fourth area of misalignment is at the intersection of the FET and HET bands, and concerns the lack of study options for school-leavers. Figure 1 shows that there are a number of pathways into higher education. This exemplifies one part of the problem. The DHET aims to have one million students enrolled in the system by 2014. However, there are simply too few institutional options in the FET band to cater for the current and projected demand for further learning and to provide a pathway into the labour market. This inevitably pushes learners into higher education.

Figure 2 illustrates the area of conflict and the fourth area of misalignment:

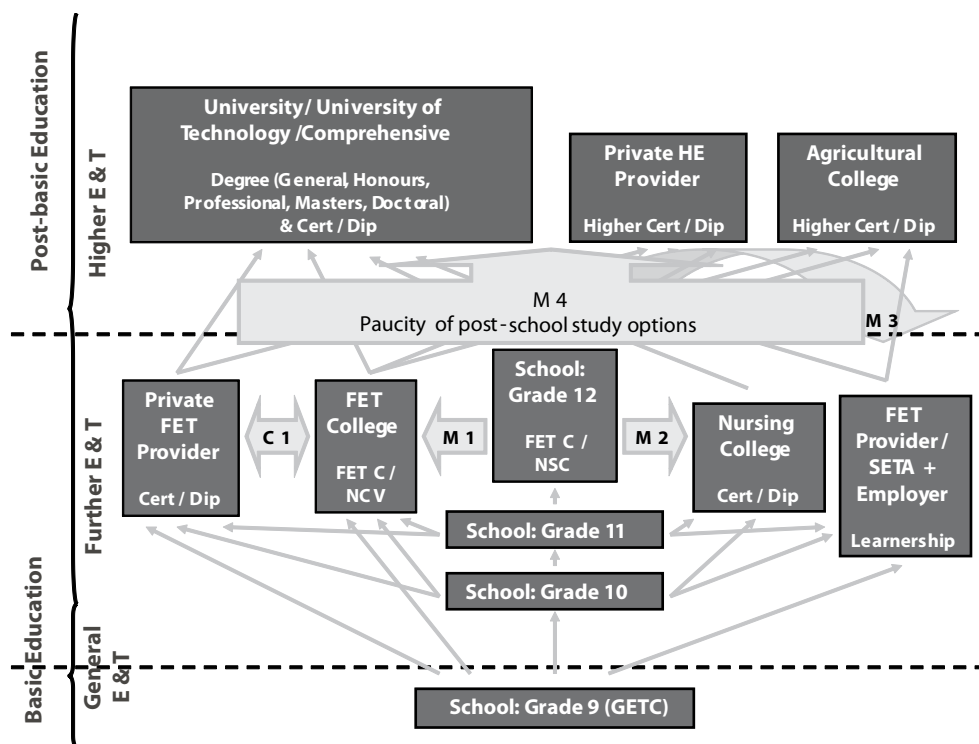


Figure 2: Existing pathways model: Conflict (C) 1 and Misalignment (M) 4

Expanding post-school provision

Pushing learners into higher education comes at a cost. The attrition rate in the university system is notoriously high and was the reason for a study of student retention and graduate destination conducted by the HSRC (Letseka, Cosser, Breier & Visser, 2010). Many of the learners enrolling in universities should arguably be enrolling in other institution types for qualifications other than degrees. It may be argued that, through bridging programmes, extended curricula, intensive and sustained academic development and other initiatives, universities provide comprehensive support for students ill-prepared for university study. But at what cost? By way of comparison, the Foundation degree introduced in the UK has not been popular with students, possibly because it is offered by universities alongside traditional degrees and therefore appears as a “second best” option (Young, 2007). Should universities continue to bear this human and financial resource burden of failures in the schooling system?

A solution proposed by Lolwana (2010) and which is clearly articulated in the *National Plan for Further Education and Training Colleges in South Africa* (DoE, 2008), is to use FET colleges as “second chance institutions for preparing students in alternative access programmes as well as bridging courses” (Lolwana, 2010: 18). Is this a solution to the NEET problem? This refers to the looming social crisis

in which an estimated 2.8 million young people are “not in employment, education or training”, hence the acronym NEET (Cloete, 2009). FET colleges, however, are not the most appropriate vehicle for a social engineering project to get young people off the streets and into meaningful activity. Such a project distorts the central mission of the FET system, which is to produce employable graduates of technical and vocational education and training programmes.

The need for a viable technical and vocational education and training system

As Lolwana (2010: 7) indicates, “The public FET college sector did not only experience institutional mergers but also a curriculum engineering, resulting in institutions that look more like schools with young students pursuing a set curriculum [the NC(V)] pegged at basic school levels (grades 10-12) and on a full-time basis.” In the context of the need in South Africa to develop intermediate level technical skills for technicians and associate professionals, a system that runs parallel to the NSC in the schooling sector would not seem to be most appropriate. What is needed is a fully-fledged technical education and training system that articulates with the labour market and with higher education, and particularly with universities of technology. Such a system should, moreover, be pegged not at levels 2 to 4 on the NQF but at levels 4 and 5, thus building a bridge between school and higher education for those on the technical/vocational track.

The need for single- and multi-purpose colleges

FET colleges should not be the only institutional type for expanding study options at the intermediate level. As Lolwana (2010) advocates, single-purpose institutions, such as nursing colleges, agricultural colleges and education colleges, are needed to allow learners greater opportunities for further learning at this level.

Besides single-purpose institutions, however, a multi-purpose institutional type is needed to accommodate, in particular, learners who are unsure of their abilities and of their study direction. The community college provides the best means for meeting this need, expanding intermediate provision at NQF level 5 in a way that may be an end in itself (culminating in student achievement of certificates and diplomas) and that also enables entry into university education (providing the first two years of tuition towards the achievement of a four-year degree).

The community college derives its name from its ability to attract and accept students primarily from the local community (Baker, 1994). This enables it to work with local businesses to develop customised training geared towards local needs. Writing about the system in the United States of America, Miller (2004) notes that institutions offering mainly four-year programmes generally focus on state-wide or national needs. Another advantage of the community college is its open access admissions policy, which broadens access for students who achieved poorly in high school (McPhail, 2005).

There is an interesting instance in the Korean system, where, at tertiary level, TVET is provided in mostly private junior colleges (two- and three-year programmes) and in polytechnic colleges, which are state-funded. Education at junior colleges and in two-year programmes in polytechnic colleges leads to an Industrial Associate degree, which is roughly the equivalent of the Associate degree achieved in the American community college.

Whether one looks to the American community college model (which the Australian Technical and Further Education [TAFE] system has been considering as a means of facilitating progression to universities; see, for example, Young, 2007) or the Korean, this institutional type offers clear benefits in the South African context. Community colleges would provide a first chance for youth wanting to access higher education to achieve university endorsement, a second chance for NEET youth to complete their NSC or NC(V), and an opportunity for youth wanting to re-enter formal education to access education and training opportunities in other, single-purpose, college types.

Towards a new pathways model

Drawing together the points made above, Figure 3 provides a graphic representation of a proposed pathways model for South African education and training.

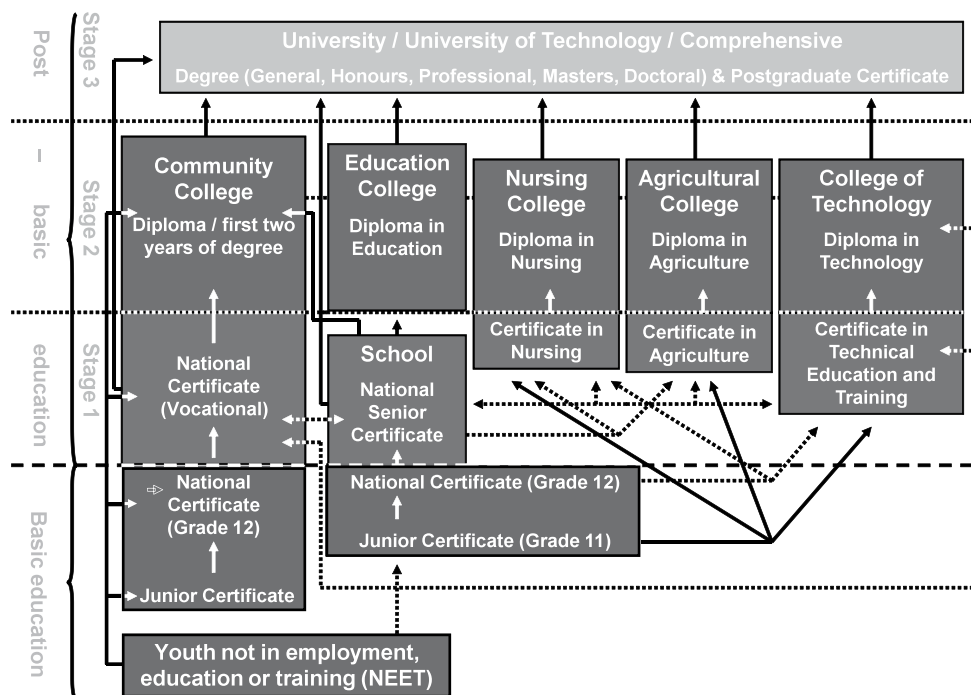


Figure 3: Revised pathways model of education and training in South Africa

The education and training system here proposed comprises two phases: basic education, and post-basic education. The major innovations in this model are:

- The extension of basic education from the end of grade 9 to the end not of grade 12, as implied by splitting of the Department of Education into the DoBE and the DHET, but to the end of grade 11
- The use of the Junior Certificate, at the end of grade 11, as an exit-level qualification for progression into further learning in selected occupations and in technical education and training
- An expansion of the number and type of institutions providing post-basic education at the intermediate level
- The introduction of community colleges that span the basic and post-basic education phases
- The relocation of the NC(V) to the community college and the use of the colleges of technology to provide technology-specific programmes.

The rationale for this proposal is as follows:

1. The large, and annually growing, number of young people not employed or in education or training (NEET) indicates the need for an expanded system of post-basic education and training in South

Africa. The proposed system accommodates the demand for extended learning opportunities by providing for three post-basic education and training stages: Stage 1 (red), which includes education and training in schools (post-grade 12/sixth form) and in colleges (nursing, agricultural, technical, and vocational) towards the achievement of certificates; Stage 2 (blue), which includes education and training in the same institutions, and in education colleges, towards the achievement of diplomas; and Stage 3 (green), which comprises education and training in universities towards the achievement of degrees and postgraduate certificates.

2. Compulsory basic education is extended, in this model, from the end of grade 9 to the end of grade 11, which is the first branching point in the education pathway and a multiple entry point into post-basic education and training. This extension is necessary to ensure adequate achievement of the cognitive and affective skills, particular in the literacy, numeracy and social domains, needed for progression to post-basic education and training.
3. Separate academic and technical/vocational tracks are set up at the grade 11 branching point. This is not to suggest that technical education options should not form part of the Grade 10 and 11 curricula. There is, in fact, a strong argument for introducing more TVET options into the schooling system from Grade 10 as many learners, because of inadequate early childhood development, inferior schooling, personality type or a combination of the three, are not predisposed to succeed in the academic track. However, there is a need for a clear branching point at the end of grade 11 towards which learners will have moved purposively. Those learners who have followed the academic track will proceed to Grade 12 and then to post-grade 12, while those who have followed the technical or vocational track will proceed on the technical track to a college of technology, or on the vocational track to an agricultural or nursing college. Particularly within the first two stages of the post-basic phase, it should be made possible for learners to switch between the academic, technical and vocational tracks; but however such options for flexibility are constructed, the aim should be to establish clearly demarcated pathways.

The model opens up a number of progression possibilities:

- a) Learners on the academic track can proceed from a grade 12 to a post-grade 12 programme in school and thence to an education college or to a two-year diploma programme in a community college, or, depending on their academic performance at post-Grade 12 level, to a four-year university degree programme. Importantly, the achievement of the National Senior Certificate at a level higher than the current NSC is a prerequisite for entry into further academic learning, including learning in an education college. Providing a post-grade 12 academic year has the added advantage of bridging the gap between school and university education, in a context where attrition rates are currently around 40% in the first year of study.
- b) Learners on the technical/vocational track can proceed:
 - i. from a certificate programme in a nursing college (the preferred qualification for auxiliary nurses) to a two-year diploma programme in a nursing college (the preferred qualification for staff nurses) or, depending on their academic performance, to a four-year programme in a university (the preferred qualification for nursing sisters)
 - ii. from a certificate programme in an agricultural college (the preferred qualification for agricultural extension workers) to a two-year diploma programme in an agricultural college (the preferred qualification for small-scale farmers and farming assistants) or, depending on their academic performance, to a four-year programme in a university (the preferred qualification for large-scale commercial farmers and high-tech agricultural careers)
 - iii. from a certificate programme in a college of technology (the preferred qualification for artisanal and technical assistants) to a two-year diploma programme in the college (the preferred qualification for artisans and technicians) or, depending on their academic performance, to a four-year programme in a university (the preferred qualification for technologists).
1. The (re)introduction of the education college allows for the achievement of a two-year diploma, which is the preferred qualification for teachers in the Foundation and Intermediate phases, while the

four-year degree in a university, or three-year degree plus a postgraduate certificate in a university, is the preferred qualification for teachers at the high school level.

2. The community college, the multi-purpose mainstay of the new model, provides opportunities for NEET youth, and learners from school and from technical and vocational colleges, to access further learning which may be an end in itself (the achievement of a certificate or diploma) or a pathway to further opportunity within the community college or to a university. Multiple points of entry into and exit from community colleges (not all are illustrated in the diagram) should be possible.
3. From a certification perspective, the model preserves, in broad terms, the NQF logic of certificates, diplomas and degrees involving respectively 120, 240 and 360 credits and the accompanying notional hours of learning. However, the model inserts a Junior Certificate at the end of grade 11 as the exit-level qualification for progression to a grade 12 programme in a school or to a learning programme in a college and commutes the Senior Certificate to a qualification pegged at a higher level (level 5 on the NQF) than the current NSC.
4. The revised model is consistent with the principles contained in the SAQA Act (Act No. 58 of 1995) (RSA, 1995) and the Regulations promulgated under this Act (RSA, 1998), which provide for enhanced articulation, progression and mobility as well as for alternative routes into post-basic education and training.

The cost of the model

One of the concerns about the proposed model is likely to be cost, and in particular the expense involved in constructing community colleges. However, the idea is not to incur vast infrastructural costs but as far as possible to make use of existing infrastructure to achieve the structural changes proposed.

One of the 2010 FET Summit task teams (DHET, 2010) proposed that FET colleges be differentiated on the basis of programme provision, with “Programme and Qualification Mix” (PQM) shaping the process. Building on this proposal, it would be logical to divide colleges into those offering predominantly N-programmes and those offering predominantly NC(V) programmes. The recent FET audit conducted by the HSRC (Cosser, Netshitangani, Twalo, Rogers, Mokgatle & Juan, 2010) indicates which colleges fall into each category. Colleges focusing on N-programmes should become colleges of technology, while those focusing on the NC(V) should form the backbone of the community college system.

The following steps would need to be taken to achieve this differentiation between community- and technology colleges:

1. The process of designating certain colleges as colleges of technology should be based on an analysis of the labour markets surrounding the present FET college campuses. College-industry links, in the form of memoranda of understanding (MOUs) between colleges and firms for skills training purposes, supplement information about local labour markets. Both of these sets of information are available from the HSRC’s FET audit (Cosser et al., 2010).
2. One of the purposes of the community colleges, as outlined above, is to give learners who have dropped out of school without qualifications or who have achieved an NSC without endorsement a second chance to re-enter formal education and training and acquire basic skills. In this regard, analysis of the Community Survey data used for calculating the number of NEET youth (Cloete, 2009) might be extended to include the qualification-geographical location nexus profile of these young people. In addition, further research should be undertaken to ascertain the number and location of community and church halls throughout the country that could serve as sites of learning. A cross-tabulation of the two sets of data emerging from these analyses would inform decision-making about the number and location of community colleges that could be established. The principle determining college establishment should be that no student should have to travel for more than 45 minutes to access an institution of learning. Community colleges should thus be located as far as possible in the communities in which their learners live.
3. A feasibility study to determine the affordability of this process and the human costs involved should proceed alongside and inform the research and analyses proposed above. This study would include

an investigation of the costs involved in staffing such colleges, in terms of initial and in-service training of lecturers. Universities of technology would be the obvious training places for lecturers at community colleges and indeed colleges of technology. How the DHET would provide for such training would need to be considered early in the feasibility study.

Conclusion

This paper describes the problems of the existing educational pathways model devised in the wake of the SAQA legislation of the 1990s. It has shown that the principles of articulation, mobility and progression on which the NQF stands have been breached over a ten- to fifteen-year period. It has proposed and argued the merits of the adoption of a new model to address the articulation deficiencies in the present model and remove obstacles to learner progression within the current education and training system.

An important rider to the advocacy of a new model, however, concerns the quality of teaching and learning in the schooling system. Without questioning the value of structural change of the kind proposed here, it is unarguable that unless there is a dramatic improvement in quality in the schooling sector, South Africa will not achieve a PSET (post-school education and training) system of a quality that it urgently needs. South African learners' achievements in literacy and numeracy are far below those of their international peers (Howie, Venter, Van Staden, Zimmerman, Long, Scherman & Archer, 2007; Reddy, 2006). If this continues, it will make structural change of the kind proposed in this paper expensive and possibly fruitless.

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