Perceptions and practices of curriculum development at universities of technology (previously known as technikons): DUT case study

D. E. Mkhize
Department of Education
Durban University of Technology
Durban, South Africa
e-mail: mkhized@dut.ac.za

Abstract
This study was undertaken in an attempt to arrive at an appropriate perspective on how both academic staff and students at universities perceive curriculum development. It is of vital significance that students and academic staff have a common understanding of what should be contained in the curriculum since the two parties (academic staff and students) are co-partners in education. Amongst others, the study aimed to investigate ways of developing and aligning the existing curriculum to global needs.

Keywords: perceptions, practices, curriculum development, universities of technology

INTRODUCTION
Teaching and learning are an ever changing and dynamic process which always adapts to dynamic needs and opportunities in the classroom situation. Slater and Teddlie (1992) argue that effective schools and universities with effective teachers ought to change in order to preserve their efficiency as their contexts change; they must adapt their schooling to the changing context. Effective schooling should therefore be treated as a dynamic and ongoing process. The changes embrace, inter alia, curriculum so that whichever curriculum is presented to learners addresses the needs of the society at that particular point in time. The idea presented in this context is consistent with the contingency theory (Donaldson 2001; Mintzberg 1979) and with the main assumptions upon which the dynamic model of educational effectiveness is based (Creemers and Kyriakides 2008). One of the major assumptions of the model, which reveals its significant difference from other integrated models of educational effectiveness (eg, Creemers 1994), is that schools together with the education systems that are able to identify their weaknesses and develop policies on aspects associated with the school’s teaching, curriculum and learning environment are able to improve the functioning of the classroom level factors and their efficiency levels (Creemers and Kyriakides 2008). Factors that affect changes in such challenges with which schools are confronted are expected to be associated with school effectiveness. A change in curriculum is an undisputed need when the society changes. The curriculum and the way learners are taught will change depending on the nature of change taking
place in that society. The change in society will also influence the change in how the subject matter taught to learners is managed and monitored by school management. If a change in the above does not take place, the dynamic model may have an impact on learner achievement at the end of the day.

Curriculum reform has been identified as one of the significant areas to be addressed in the transformation of the so-called apartheid government. Nxesi (2000) contends that if curriculum reform is to be successful, it should include all the stakeholders, and then, be well planned and supported. In his argument, he suggests that the government provision has been inadequate, more especially because the curriculum was drafted and drawn up by government officials without the involvement of educators and other related structures such as educator unions and parents.

In support of Nxesi, Diamond (1997) suggests that too many students graduate from university without mastering the core and basic skills. He suggests the following reasons for this:

- Higher education does not spell out the goals of instruction explicitly.
- The programmes offered at higher education institutions (HEIs) do not provide students with an opportunity to attain an appropriate competency to address societal needs.
- Academic staff receive little or no reward/training in so far as improving the curriculum is concerned.
- As a result of the above, most academic staff can hardly design courses/appropriate assessment criterion related to such courses/programmes.

This study, therefore, was to all intents and purposes predicated on two hypotheses, namely:

1. Reconciling the subject curriculum and the democratic modes of social organisation as they relate to educational management necessitates a radical interrogation of the interests protected and promoted through each mode.

2. The new critical consciousness generated by the entire thrust towards liberation in South Africa necessitates an entire reconsideration of the status and needs of learners and the community; hence, the need for redefinition of the learning process.

As Nkomo (1990, 2) observes, the official sanctioning of the idea of creatively using schools in furtherance of the concept of people’s power and people’s education was issued by African National Congress (ANC) President Oliver Tambo as part of the 1987 annual statement when he declared:

The school, the college, the university is for us more than a place for formal education. It is also our assembly point, the location at which we marshal our forces, organize
them and take the opportunity to give the order of the day. We must fight the enemy for the right to be at our respective institution of learning, within which we should build and organize our democratic structures and within which we should introduce the system of people’s education which is a decisive element in the future of our country and people.

Again, Tambo’s pronouncement that ‘the school, the college, the university is for us more than a place for “formal education”’ had (and still has) serious political and future implications for the educator, learner and community at large in the context of educational management in schools. It is against this background as depicted in the current study that I advocate the view that the political thrust that led to the attainment of liberation produced in the process unintended consequences which will continue to compromise educational management in the previously so-called black schools for a number of years to come. It is thus incumbent upon political organisations, education management and other relevant structures to engage learners, educators, parents and the community in a dialogue to begin addressing the contradictions inherent in using the new critical consciousness for political ends and its unintended consequences as exemplified in the lack of an appropriate curriculum to respond to the needs of the community. This being the case, I advocate the view that since the predicament facing learners, educators, and parents derives its origins, to a very large extent, from the political climate that prevailed during the years of the struggle for political emancipation, attempts towards resolving the problem at hand must by necessity be politically oriented.

HEIs in South Africa have experienced a series of remarkable changes over the last 20 years as governmental sectors have sought to make the sector more effective and efficient, and more accountable for investment of public funds. Rapid growth in student numbers and pressure to broaden participation amongst all students are more challenges facing HEIs. Learning outcomes can be used as an instrument to measure the quality and efficiency of HEIs. This will also enable universities to describe courses in an explicit way in order to demystify education to a wider audience. The article examined how learning outcomes are used in the HEIs to evaluate the implications of curriculum design and the students’ learning.

Watson (2002, 208) defines a learning outcome as ‘something that students can do now that they could not do previously ... a change in people as a result of a learning experience’. It has long been recognised that education and training are concerned with bringing about change in individuals, and the use of learning outcomes to describe these changes is a new practice. Gregory (2002, 26) suggests that as early as the 1930s in the United States (US), Ralph Tyler actioned an ‘objective-based’ approach to education in schools. It is thus possible that the most well-known contribution to the development of outcomes-based curricula was the publication of the Taxonomy of educational objectives by Bloom et al in 1956. Known as Bloom’s Taxonomy, it outlines a framework for classifying learning in cognitive terms that suggested different kinds of students’ ways of thinking. Bloom’s Taxonomy has been
Mkhize

severely challenged in South Africa following a number of changes in the curricula at universities and schools in general. In the United Kingdom (UK), recent educational reforms in HEIs as a result of the Dearing Report (National Committee of Inquiry into Higher Education 1997) have resulted in significant caution, awareness and an increase in the use of Bloom’s Taxonomy across the entire HEI bracket. In this regard, Dearing’s recommendations have had a significant influence on the way in which HEIs describe their programmes of study and have led to significant changes in quality assurance procedures in HEIs. The founding of the Quality Assurance Agency for Higher Education in the UK in 1997 was followed by a number of developments, including the founding of a Qualifications Framework for Higher Education Institutions, programme specification, institutional audit, as well as subject benchmarking. As such, South Africa followed suit in terms of borrowing the ideas which were utilised and employed by western universities.

It is true that there are dialogues around the use of learning outcomes, mainly centred around the proposed rewards and benefits to the student. A clear challenge faced by HEIs is an explicit indication of what students are expected to attain in relation to specific awards and their intended courses. It has been argued that, traditionally, universities tended to focus more on the content and process of learning rather than on its outcomes (UDACE 1989). As a result, universities have tended to describe their provision in terms of the courses and syllabuses they offer to students, hence they (universities) would expect students to adapt and adjust themselves to an established curriculum and mode of delivery. In the past decade, however, there has been a culture of change in most HEIs and there is recognition that much has to be benefited by moving away from the concept of a content-based focus of curriculum to a more student-based and centred approach (Robertson 2001). Barr and Tagg (1995) strongly advocated a necessity to move away from what has been known as Traditional ‘Instructional Paradigm’ which tended to focus its attention on teaching and instruction to a ‘learning paradigm’ which enables students to research, synthesize, analyse, discover and develop knowledge themselves. Barr and Tagg (1995) support this idea by means of providing an argument related to a shift towards an environment in which students are empowered to take responsibility for what they learn. Learning outcomes offer a means by which attention can be focused on the actual attainments of students. This also represents a more realistic and genuine measure of the value of education than measures of teaching input, thus adopting a ‘Learning Paradigm’ at HEIs puts the learner at the centre of the educational process. Many scholars generally argue that if students are afforded an opportunity in their own learning, they will learn better and be more motivated about what they are learning. This should also encourage them to be independent learners.

HISTORICAL BACKGROUND OF SOUTH AFRICAN UNIVERSITIES
CURRICULUM IN THE PRE-1994 AND POST-1994 ERA

The article proposes the advancement of the following four propositions:
The role of universities in social transformation

This tends to focus more on the pre- and post-1994/apartheid eras. The former focuses on practices of resistance to the apartheid regime and the latter on constituting and developing democratic policies by addressing racial legacies.

The role of the National Party in social transformation

The second one refers to the unintended results of policy of the National Party (NP). The NP founded black universities in order to breed passive elites who would administer ethnic political institutions. In return, this produced terrains that established a vibrant, strong and empowered oppositional student movement and other organisational resistance related to the higher education proximity.

The post-1994 era and social transformation

The post-1994 era and the role of universities in social transformation depict a situation where the state presents the role of universities in social transformation as open to reading in two paradoxical and contradictory ways. According to Reddy (2004, 1), the state demands that the universities contribute towards economic and socio-political transformation yet the nature of the transition from apartheid to a democratic regime, its macro-economic state policies, and the constraints of globalisation have led to two opposing tendencies. Reddy (2004, 1) contends that universities are expected to perform as viable corporate enterprises, producing graduates to help steer South Africa into a competitive global economy, serve the public good and produce critical citizens for a vibrant democratic society.

In order to make sure the above tendencies need not be coherently contradictory, yet they contain in a country with deep observation, race and gender divisions the possibility of pulling towards opposite directions. It is pivotal that when one sees universities as a vehicle through which the society is likely to transform and develop, then the focus between the state and civil society can be used to better eliminate problems and challenges associated with the role of universities in the post-apartheid era.

In a nutshell, the background of the study is divided into three sub-themes. Firstly, it embraces a descriptive analysis of the major characteristics of HEIs under the apartheid regime, and this particularly refers to historically so-called black universities which created the material conditions for a high role of black student resistance. Attention, in this instance is given to student protest campaigns that assisted in producing the crisis of apartheid rule after the mid-1970s. The second section relates to the post-apartheid era and its developments related to the transition and the macro-economic situation adopted in that era. The third section addresses the analysis of their empirical impact on political, economic, racial, social, cultural spheres of apartheid after 1994.
South African universities as a tool for social transformation

It has been clearly visible that the role of universities in social change prior to 1994 was to address and contribute to the collapse of apartheid regime and order, hence black university students embarked as agents of social change by engaging in protest activities, apartheid resistance activities, as well as challenging the legitimacy of the apartheid social establishment and order.

Challenges also manifested in confrontations between students and police, boycotts, mass meetings, riots, and other related activities demonstrating an element of dissatisfaction. These activities resulted in other areas of society marking those spaces as terrains of social protest and conflict. This was intended to bring about the collapse of social injustice and the apartheid era. According to Price (1990, 8), the broad spectrum of internal civil resistance, together with global, regional and national factors, ushered in the collapse of the apartheid regime.

It is evident that the democratic state in South Africa intended that South African universities would transform the society towards democracy. Similar to post-authoritarian societies in the 1990s, and the post-1990s and post-independence African states in the 1950s (Coleman 1994), the democratic South African state holds high developmentalist regard for universities. In essence, it is clear that the main purpose of the universities is to transform the society into a democratic sphere in accordance with the democratic principles.

Indeed, the society in South Africa has undergone enormous changes, however, the resilience of the old order and ideas remain, thereby causing confusion, frustration, despair, and even anger in some instances. The intention of the state to effect social change through the use of universities is to a certain extent complicated by the nature of transition, resulting from socio-political policies, and socio-economic policies associated with perceptions of internationalisation, and cultures that want to resist deracialisation changes within universities in the areas posed within transformation discourses. Meanwhile, the state is failing to attain its fully-fledged change and societal transformation through the universities in South Africa, the longer term transformation is effected at its own course under what may be referred to as normal functioning of South African universities.

It is evident that the rigid and racially discriminative South African universities of the past are now non-existent. The previously white dominated universities have ceased to be. The increasing numbers of first generation so-called black students, mostly from middle class backgrounds, but also from poor economic backgrounds, and rural, semi-rural, and urban working class backgrounds, are being enrolled at HEIs. Previously, such students would only have been able to access the former so-called black universities characterised by a lack of both physical and human resources, then in fairly large numbers, to some former white universities (Cooper and Subotzky 2001).

However, although universities in South Africa are now open for all students, regardless of race, colour or creed, the question at hand, is whether or not the universities are able to address global societal demands in terms of social needs.
PURPOSE OF THE STUDY

In South Africa, the restructuring of the higher education system curriculum and the transformation of HEIs in general are located within the country’s broad political and socio-economic transition to democracy. The article focuses particularly on institutional curriculum transformation, thereby paying attention to the perceptions and practices of curriculum development and the processes of transformation for academic staff.

Although the general and overall effect of curriculum development in most South African universities is experienced negatively by most academic staff, the study concludes that academics have to be empowered by means of engaging in more research programmes and staff development programmes in order to remain active partners in the process of curriculum development at South African universities.

The purpose of this research was premised on the following questions:

• Does the curriculum meet student/academic current and future needs?
• What can be done to facelift the curriculum?

In this investigation, the researcher hoped to find answers to these questions by focusing on the following areas/themes:

• General expectations: Do programmes meet student needs? Are they what students expected to do/study?
• Curriculum development: This includes the method of teaching/lecturing, design, media, technology, curriculum experts, and assessment criteria.
• Relevance: Does the programme respond to global needs? How does it compare to other programmes offered at other universities, more especially in the neighbourhood? Is there any duplication of contents?
• Support material/Resources: What is the nature of support structure? Are the available media adequate? Are support programmes available? Does the technology suffice?

METHODOLOGY

The research method used in the study focused on a group interview which was done in conjunction with action research. The researcher was trying to make the work more humanistic and also respond to the people’s lives, hence he used a qualitative study. In qualitative research, as Patton (1980, 20) argues, validity is dependent on careful instrument construction so as to be able to make sure that the instrument has measured what it is supposed to measure. There should be no suspicion that the data collected has been affected by the researcher’s values and the data are not fully reliable. In other words, if the data is influenced by the researcher’s values, that data
may not be fully reliable. In other words, it should be possible to claim that whoever collected the data would arrive at a similar conclusion.

Interviews create a sense of ownership which in turn develops a certain responsibility for seeing to it that some decision and action follows (Gardner 1974). A group interview incorporating students and lecturers was conducted in order to ensure representativity. These methods were utilised in order to provide in-depth and reliable information on students’ and lecturer’s perception of curriculum development at the Durban University of Technology (DUT). It is safe to note that qualitative research enables the researcher to understand and capture the point of view of other people without predetermining those points of views (Patton 1980, 28). In qualitative research, the researcher has a duty to provide the framework within the respondent’s responses based on the topic dealt with. The group interview as developed by Merton (1946) can be described as a purposive discussion on a specific topic taking place between a group of individuals with a similar background and common interests. The approach enables the researcher to develop concepts and generalisations that are grounded on the knowledge of the participants in the research group interview.

Qualitative research tends to analyse data inductively (Bogdan and Biklen 1992, 31). They do not search data to prove the hypothesis they hold before engaging in a study, but rather the abstractions are developed as the particulars that have been gathered are put together (Bogdan and Biklen 1992, 29). It is significant, however, that while the researcher may have a hypothesis, he/she will at the same time guard against being influenced by it. The researcher, in the current study tried by all means to be careful of such possible influences.

The researcher cannot rule out that the study has some limitations in the sense that the respondents were only lecturers and students. Another limitation can be based on the nature of qualitative research. The researcher has, however, tried by all means to ensure that his questions embraced the feeling of the other stakeholders when interviewing both students and lecturers.

**RESEARCH FINDINGS**

The research findings from the group interview are summarised in Table 1. The respondents’ comments are quoted verbatim.
Table 1: Research findings from the group interview

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<th>Key themes</th>
<th>Group associated perceptions</th>
<th>Respondents' comments</th>
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<td>General observations on the curriculum: Contemporary, future and recommended ideas.</td>
<td>The curriculum is relevant, appeals to students, however, does not adequately respond to the needs of both students and society. There is a need for practical comparisons between local countries, e.g. DUT and European countries so that ideas are being shared in so far as what needs to be done in order to upgrade the curriculum. Owing to varied interests, more options requested in terms of courses offered: for instance, introduction of research at a preliminary stage in order to prepare students for the work related environment.</td>
<td>'We are certain that the curriculum provided at university level provides answers to the needs of both industry and society we live in. This is more so because, even when we meet with other students from other universities, they (students from other university institutions) confirm that they do not have even some equipment that we have at our university, for instance, E-learning equipment, and advanced overhead projectors (OHPS).’</td>
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<td>Curriculum development: to what extent has the curriculum developed?</td>
<td>The research skill is significant in the sense that it provides students with a special skill to address whatever challenge they come across in a work-related environment.</td>
<td>'The idea of an inter-disciplinary post-graduate courses is of vital significance as these will tend to address a number career needs, more especially that most governmental sectors, NGOs, and private sector demand the knowledge grounded on both theory and practice.’</td>
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<td>Theory and practice are taken care of, but special attention has to be given to research theory, and practice more especially that the duty of the university is to discover the new knowledge. This is considered significant because the work place and environment is dynamic; hence every student needs to be prepared for any change that might take place at the work environment. Research can be introduced at a junior degree/ diploma level and get more advanced at senior degree level, for instance with the introduction of a BEd (Hons) degree, master’s and up to a doctoral degree.</td>
<td>Senior degrees can be done on a part-time basis and the duration is dependent on the number of modules each degree requires. This may also require the adjustment and assessment of lectures, media and assessment criteria of academic staff by specialised persons.</td>
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<td>Relevance: Current, comparisons to other HEIs, universally as well as marketability in terms of work-related needs.</td>
<td>Curriculum seems to be theoretically and practically relevant, but not adequately relevant because seems to be confined to the immediate needs of student vicinity instead of addressing the global needs as well. The focus is mainly confined to local vicinity.</td>
<td>‘Our curriculum so far is relevant and indeed, it responds to the current needs of the country, but one may not be really sure about whether, one may use the knowledge we acquire at our University when we go abroad because we do not know what is happening there. In fact we are only prepared to respond to the needs of our immediate communities.’</td>
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<td>Support material/Programmes: Media, library resources (Physical and Human resources).</td>
<td>Most library material is either unavailable or out-dated. Physical resources are very minimal. Limited number of journals. Very limited new knowledge, more especially newly researched knowledge. Need extended library hours, even over the week-ends. Also, there is a dire need for staff-student forums and associations. A need for identification of students with special needs at a preliminary stage at ‘first year level entry’ and provision of support structures and services. Students need support on communication and general academic support. Students need support to be able to discover the new knowledge on their own (Research skills). Students need more resources access, e.g. libraries and computer laboratories. There is a need for student engagement in the writing of articles and presenting these at conferences, more especially at international conferences.</td>
<td>‘Meanwhile it is true that we have positive, and good academic staff, but it must be considered that some students come from previously disadvantaged background with poor communication background, thus need some programmes to improve such. Some students also find difficulty in coping with the advanced technology, thus needing to be afforded more time with the library hours and material.’</td>
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**DISCUSSION**

A discussion around the perceptions on curriculum development at universities of technology, previously called technikons shall now take place. This will be done by interrogating and focusing on the following themes: general observations, curriculum development, relevance, and support material in a form of both physical and human resources.
General observations

The general feeling of both lecturers and students interviewed was that the curriculum does respond to community and student needs. However, it is of vital importance to note that there is some joy in so far as curriculum is concerned; there is also a concern by respondents that there is a need to embrace the global or universal needs in curriculum development. There has been a wide call for the incorporation of research modules which shall also address worldwide/universal needs in order to enable students to address the universal needs rather than confining their curriculum to the local needs. A need for the introduction of more senior degree levels such as BEd, master’s as well as doctoral degrees has been alluded to in order to promote research which addresses universal needs.

Curriculum development

Both the students and academic staff found that the curriculum did meet the needs of the society and those of students, however, it was clearly spelt out by both parties that additional to what is provided currently by the university, there is a need to modify the curriculum by means of introducing senior degrees in order to promote research at the university. The feeling has also been around under emphasis of other modules such as incorporation of the modules that tend to address economic issues.

Relevance

As suggested above, the courses provided at the university have been considered relevant and contemporary. It can, however, not be overemphasised that the request was made that the curriculum would make more sense if it could embrace research in order to address universal issues as well. This would provide a variety of topics to be addressed. Such would also encourage the marketability of the students to overseas countries when looking for job opportunities.

Resources and support services

The respondents responded to the issue of physical resources, human resources, as well as support services strongly. Writing skills were also emphasised in the interview processes and there was a strong motivation for student writing skills to be improved. The motivation that students be afforded an opportunity to present papers at international conferences was made. It is believed that this would tend to expose students to problems and challenges facing foreign countries, and this would teach students the means and ways on how they would address this once they are qualified in their areas of study.

Regarding the library as a source of information, there was a strong feeling that the material and books stored in the library are either inadequate or too old to address the current issues or challenges. There was also a request that the library hours be extended over weekends in order to allow students to be able to access books and journals when looking for information.
While students commented that the academic staff are supportive and doing their work, it was recommended that communication skills be promoted amongst students in order to improve these skills. It was also recommended that if communication skills were promoted amongst students, this would tend to assist students in so far as their ability to express themselves, publicly and otherwise, is concerned.

CONCLUSION

In the researcher’s view, therefore, academic staff and university management cannot afford to ignore the new reality that has dawned in post-apartheid South Africa that is characterised by democratic structures within which the system of people’s education has become a decisive element in a society in which the people govern.

Furthermore, the study has attempted to develop an in-depth understanding of the perceptions of curriculum development at universities with particular reference to the DUT. The findings of the study suggest that there is some evidence of curriculum development, and reform, more especially the development which is in line with the global needs in so far as economy and other related matters are concerned. There is also proof of learner-centred methods equipping students with marketable skills which are measured at an international standard. Such findings are supported by Nxesi (2000), and regarded as significant steps towards developing South Africa’s curriculum. Diamond’s (1997) opinion cannot be overemphasised when he suggests that in order to encourage skills acquisition, the courses offered must be competency-based. This suggests that the academic staff who design the courses need to be afforded time to do so; however, they require remuneration, support and knowledge which amount to institutional commitment.

In conclusion, it is safe to note that the study has some limitations resulting from the nature of qualitative research and the fact that only students and academic staff’s perceptions of the course were interrogated. This restricts the researcher’s ability to generalise the findings to the total group of master’s students and academic staff as well as to carry out a comprehensive curriculum development due to the confinement of stakeholder participation, as contended by Nxesi (2000). It is thus significant to suggest that for future studies and investigations around the matter, researchers may have to consider looking at the results against the background of other studies on curriculum development, both locally and globally. In order for the study to be as inclusive as possible, it would be vital to include and embrace the perceptions of other stakeholders who play a role in the education fraternity.

REFERENCES

Perceptions and practices of curriculum development at universities of technology


