



## Massification: Preparing faculty for open learning systems

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### ABSTRACT

With the advent of the National Qualifications Framework and the general educational transformation, access to higher education has opened doors to many learners. Many critics applaud the recent higher education policy endeavours to massify South African higher education, as the exclusionary system of the past is gradually being replaced by attempts to expose learners to open learning systems and this in accordance with the initiatives to globalise education. Massification has the potential of playing an immense role in redressing past imbalances as it accommodates historically disadvantaged learners. Currently in South Africa, education has a role to play in the creation of a democratic society based on the ideals enshrined in the Constitution. There are, however, many others who maintain that massification brings with it tensions and demands that would need immediate attention. The expansion of enrolments will have a bearing on standards, conditions as well as resources.

This article we examines how universities can restructure their programmes by empowering faculty, thus enabling them to cope with the challenges made possible by the open learning systems. Furthermore, the discussion focuses on how faculty could prepare themselves to be able to enhance learning and teaching as they deal with the realities, opportunities and challenges brought about by massification in higher education. Keywords: Massification, democratisation of learning, professional skills, standards

## INTRODUCTION

A number of universities in South Africa are fast moving towards being mega-universities with large numbers of enrolled students. Daniel (1999, 29) defines a *mega-university* as an institution that combines three criteria: distance teaching, higher education and size. Furthermore, the majority of universities is pressured to develop technology-based teaching. Daniels (1999, 30) again states that if universities respond to such pressures they may have to change their approach to teaching so that they become not only closely resembling distance education, but also be more teacher-centred. With the mergers of various campuses having been finalised in South Africa, the merged institutions face a myriad of challenges. The planning in higher education requires managers to examine their environment as they develop strategies to respond or adapt to the sweeping changes in higher education. Institutional planning involves understanding of broader environmental changes and how to compete effectively with other post-secondary institutions (Peterson and Dill 1999, 3). The tertiary institutions in South Africa find themselves assuming the role of leading transformation among other stakeholders in education. The tertiary institutions are required to open up their institutions so that they could be accessible to all sections of society, especially to those who are historically disadvantaged. The South African Qualifications Authority (SAQA) was also formed in the mid-1990s so as to be responsive to the needs of the people of South Africa. Tertiary institutions occupy a privileged position of having the potential of developing models of transformation, which could benefit the wider society (Ramphele 1995, 316). Ramphele also states that the tertiary institutions' capacity to do research, and to teach and reflect on what they are doing should enable them to lead transformation as agents of change.

Among the challenges faced by South African higher education institutions are to reflect the cultural diversity of its multicultural society. Education needs to reflect the environment in which these institutions are situated. Topical subjects such as the Africanisation of the curriculum, embracing democratic ideals and use of technology have all posed a number of challenges to faculty who yearn to transform their practice. As faculty face these and other societal challenges they also need to focus on quality and the changing culture within institutions. Faculty are affected by the shifts in institutional culture. Furthermore, they face the introduction of new programmes as well as many other challenges necessitated by access and redress strategies. In some institutions where there is mixed mode delivery, faculty needs to be re-skilled to be generalists rather than specialists. The system required them to be able to develop material, facilitate learning in contact sessions and be able to use technology, (among other things). This discussion also focuses on these challenges and tries to address the following questions:

- What is massification and what is its impact on faculty?
- How does organisational culture affect faculty?
- What is the value of transformative pedagogy?
- Is the use of technology a boon in the twenty-first century African university?
- How does one sustain the new pedagogy?
- How does one create the 'new university' with empowered faculty?

## TRANSFORMATION AND FACULTY: UNDERSTANDING INSTITUTIONAL CULTURE

Many of the present challenges that face faculty were necessitated by massification. The previous system of education in South Africa denied many people access to opportunities to gain the information, skills and experience to develop the people and make economy grow (DoE 1997, 5). However, the National Qualifications Framework (NQF) provides opportunities for learners to learn regardless of their age, circumstances and the level of education and training they might have. Massification of higher education is one way of responding and attempting to realise the new government's vision for access, equity and redress. From the above it is clear that massification is a response to mass demands and it ensures that diversity is accommodated.

However, massification in South Africa needed to be accomplished in the face of poor academic preparation of Africans (in particular) in primary schools and continuing maldistribution of resources (Green and Hayward 1997, 12). Some maintain that massification has an impact on internationalisation of higher education and that the latter is a necessity. Kraak (1999, 17) contends that massification in higher education is closely related to globalisation. As higher education institutions transform, the effects on teaching staff is immense. It is the faculty that is expected to reflect the transforming institutional culture. Austin (1999, 7) points out that academic staff who do the teaching, research and service work are also key players if change or transformation goals are to be achieved. Furthermore, Austin posits that success in institutional change requires a systems approach based on the view of the university as a complex system. She also lists several elements of the system pertinent in transforming the university and this list includes processes and policies that support the people of the university (including academic staff development, leadership development and training for non-academic staff, as well as reward and incentive policies). Therefore, as tertiary institutions embrace massification there is an inevitable necessity to develop the teaching staff.

Lately, there have been several writers who have highlighted the need for universities to establish learning communities (Boyer 1990; Angelo 1996; Heimlich and Norland 1994). The new system of education in South Africa, outcomes-based education (OBE), stresses that learners should acquire more skills. The higher education institutions also need to enhance this by building new institutional structures and redefining the curriculum to serve the larger South African society based on the ideals of democracy. This means that tertiary institutions have to take strides towards paradigm shift. One possible outcome of this important shift is the transformation of South African universities from 'teaching factories' into 'learning communities' (Angelo 1996, 1). According to Angelo, many definitions of *learning communities* centre on a vision of faculty and students (sometimes staff and the larger community) working collaboratively toward shared, significant goals in environments in which competition is de-emphasised. In learning communities all those involved have the opportunity and responsibility to learn from others. South African universities need to build this kind of community. The past education system was centred more on teacher-centred strategies where the faculty were purveyors of knowledge and the students were expected to imbibe; a very uni-directional approach to learning and teaching. Faculty today need to experience a transfor-

mational pedagogy that allows students to be active participants in the learning and teaching act. Faculty need to reinvent the learning communities as they foster collaborative learning approaches, co-operative academic culture and relevant courses designed to build connections. The decision by faculty to yearn to build a learning community in the classroom rather than replicating a conventional teaching formula is the first step toward a transformative pedagogy (Fishel and Segal 1998, 155). What is transformational pedagogy and what impacts can it make to the teaching and learning environment?

## THE NEED FOR TRANSFORMATIONAL PEDAGOGY

Daniel (1999, 30) points out that the achievement of mega-universities poses a challenge to conventional academic practice because they show that a different approach to teaching can be more successful than lecturing. As the changes in the education system one embraced, the faculty is expected to facilitate teaching and learning that would result in far-reaching changes in the learners than does learning in general. Austin (1998, 3) distinguishes between the two terms, *change* and *transformation*. She states that transformation is more intense than change and it requires new kinds of thinking about values, how they are expressed and about how work is organised. Therefore, transformational learning refers to learning that shapes people, making them different afterwards in ways that they and others could recognise (Clark 1993, 47). Faculty need to enhance what Paulo Freire refers to as the *critical consciousness*. Freire (1970) argues that education should conscientise learners and should move away from the traditional model of banking. He also believed that education should foster a dialogue between the learner and the educator, and this should lead to freedom and autonomy of the learners. Faculty need to understand the impact of transformational pedagogy on the practice. They also need to know the objectives of facilitating learning with the students. Mezirow, Freire and Dalow share common elements about transformational learning (Clark 1993, 52–53). These three all share a humanistic vision of the person by believing that people are capable of change and free to act in the world. They also maintain that knowledge is a construction that people make rather than objective truth that they discover. Finally, these three believe that a democratic vision of society is what individuals create for their collective futures.

Faculty should embrace the idea of transformational teaching as they move away from the conventional approach. The traditional approach to education includes some or all of the following elements; lecture presentation, teacher as authority and knowledge expert, a hierarchical power structure in the classroom, and learners as mostly passive recipients of knowledge who regurgitate back their understanding of content in examinations (Schwerin 1998, 104). Schwerin also lists criticisms addressed by the transformational approach to education. New faculty and veteran faculty members need to develop an approach to address these criticisms when they reflect on their facilitation of learning. They also need introspection that enables them to examine their teaching styles. There are various criticisms levelled against the conventional approach education:

- Conventional approach (discussed above) fosters inequitable social divisions and hinders attempts to build a peaceful and just social order. Students are encouraged to compete with one another to achieve the best grades. Some students lose for others to win. This breaks the sense of community among the students.
- Conventional approach promotes passivity towards teachers and other authority figures. In these classrooms the students are taught in an unquestioning way to digest information offered to them in a lecture format.
- Traditional classes are characterised by the use of ‘power-over’ instead of by the more empowering use of ‘power-with’. Students in these classes learn from the hidden curriculum to submit to authority not to become questioning and proactive.
- When teachers use their positions as authorities to control students, they reinforce the dominant social order. The conventional educational practices may socialize learners to value authority of the state preparing the learners to defend the status quo. (Schwerin 1999, 104–105).

Few progressive academics would want the universities to perpetuate the above. The students are not to be taught to perpetuate the power of the elite by enhancing cultural and political reproduction. Faculty also needs to facilitate a pedagogy that promotes democratic concepts of peace and social justice. Nguru (1995, 61–62) maintains that integration, adequate preparations of both pre-service and in-service teachers, alternative instrumental strategies, dialogue, flexible classroom climate to foster participatory skills, utilising adequate instructional resources and assessment of learner knowledge are aspects that need to be addressed by a curriculum that addresses democratic citizenship. The teacher education programmes have to explore the transformational approaches to enhance the self-esteem of both themselves and their learners. As Schwerin (1999, 108) puts it:

Transformational approaches should be designed to enhance self esteem and self-efficacy, to develop the knowledge, skills and political awareness essential for democratic citizenship, to teach students and encourage them to take responsibility for their communities and their world. A guiding question or compass for transformational teachers might be; what can I do to make my approach to teaching more empowering?

The above illustrates that South Africa needs to change its orientation from one of higher education to that of learning that is more refined and advanced. Heydinger (1997, 108) states that advanced learning is important because it

- cares only that learning takes place; it does not care how or where learning takes place
- views learning as assessed by outcomes, not whether people jump through the hoops of a predefined process
- sees faculty as coaches working collaboratively with students toward the same objectives, not as cloistered works whom students seek out to have wisdom imparted.

## FOCUSING ON CHARACTERISTICS OF LEARNING COMMUNITIES

There are many aspects that the faculty needs to consider as tertiary institutions open their doors through massification. Students from disadvantaged backgrounds face many challenges when they enter institutions of higher learning. Many African students, especially those who come from historically African schools in the townships experience several problems at universities because of a number of problems endemic in their schools. Human resources and physical resources continue to be a problem in historically African schools long after the attainment of a democratic system of education. Recent research shows that learners from historically disadvantaged schools experience various problems when they get to university. Universities spend more time and energy teaching ill-prepared students and campuses need to address the inequalities of the past (*Sunday Times* 2004, 16). Many institutions are forced to introduce bridging programmes to uplift the standard of the students. Furthermore, many historically African schools do not have resources such as laboratory equipment and computers. The country's secondary education continues to produce generations of students who fail to meet the needs of the country's economy (*Mail and Guardian* 2004, 9).

The problem with secondary education is that inequality still persists to disadvantage the poor. The chief executive of a company was quoted as saying that when that company employs people straight from school, it discovers that it does not have the depth to get by and his company ends up investing more resources to train them (*Mail and Guardian* 2004, 3). The dilemma is enhanced by a number of factors during the secondary school years. Many candidates are encouraged by their teachers to take courses on standard grade so as to be able to pass easily at the end of the year. The majority of these students ends up lacking the necessary depth to meet the challenges of university education. Some critics also question the quality of matriculants who get top honours during their final year (*Mail and Guardian* 2004, 9). Faculty faces the challenges of meeting these students in the first year. It is then necessary for faculty to prepare themselves with skills to deal with the problems related to language and communication content in various programmes.

Despite these and other similar problems, all students are entitled to enter any university of their choice. The above realities about matric results though show that there is still quite a lack from the past imbalances. However, the National Qualifications Framework provides opportunities for learners to learn regardless of their age, circumstances, and the level of education and training they might have. This is referred to as *lifelong learning*. From the beginning, the post-apartheid government has tried to utilise education in the attainment of quality, equity and access to opportunities, as well as redressing past imbalances. Massification at higher education institutions is one way of responding and attempting to realise the new government's vision for access, equity and redress. The traditional approach of higher education was to equip young people to be part of the elite, to be able to future leaders. It relied on the matric examinations as gatekeepers and was characterised by a high degree of failure and low throughput. Currently though, policy makers and other stakeholders (in education) see education as a response to mass demands, and that it was necessary for it to accommodate diversity.

As highlighted above, faculty need to brace themselves for the challenges and changes brought about by massification for the present open systems are unlike the previous elite systems. Coupled with open systems of higher education is the growth of partnerships between societal institutions (Kraak 1999, 65). Faculty need to be aware of these basic shifts from elite to mass open systems.

Table 1: Transformation in higher education from elite to mass, open systems

	<b>Elite systems</b>	<b>Mass, open systems</b>
Key features	Discipline-based Maintenance of the canonical traditions of critical science Knowledge important for its own sake, not because of its instrumental value	Programme-based Responsiveness to society and economy  Plural, heterogeneous
Size and shape	Mostly binary, trinary systems	Tendency towards unified or single systems with a high degree of programme and institutional diversity
Boundaries	Hard, rigid boundaries	Soft, permeable boundaries
Relations to society	Insular Academic peers the key external Reference	Open, accountable Partnerships with industry society, and other HE and FE institutions
Knowledge structures	Formal, academic Discipline-based	Hybrid formations: mixes academic and professional/tacit knowledge
Organisational forms	Donnish collegiality, canonical Single-discipline departments; Faculties	Managerial, programmatic Transdisciplinary schools; Transinstitutional projects
Mode of delivery	Contact-residential teaching in discipline-based degrees	Diverse delivery modes: contact-residential; distance and resource-based learning; recurrent and adult education programmes; lifelong learning; certificated short course training.
Access	Restricted access Mainly young members of the elite middle classes	Extended access More diverse learner constituencies – young students and working adults; members of previously marginalised groups such as workers, women and blacks

Among other things, Table 1 shows, that with massification, faculty knowledge becomes transdisciplinary. Furthermore, the diverse delivery modes necessitate ongoing profes-

sional development, thus enabling faculty to utilise contact residential tuition as well as distance and resource-based learning. Workshops among faculty form part of ongoing professional development to meet the demands of open learning systems, which include refinement of skills in the utilisation of mixed-mode delivery systems.

## **BENEFITS OF THE PARADIGM SHIFT: ISSUES OF ACCESS, EQUITY AND PROFESSIONAL DEVELOPMENT**

The massification has impacted on a number of elements concerning teaching and learning in higher education institutions. Among these is the use of mixed-mode delivery, which has become part of the open system. Traditionally, many distance education institutions have offered a correspondence first generation model of distance education. The first generation model includes correspondence and mainly uses mailing systems. Table 2 illustrates differences in the various generations.

Table 2: Distance education and open learning systems 'generations' (Adapted from Mays' conference presentation, 2004)

First generation	Correspondence- mailing systems.
Second generation	Specially prepared self study material- material development, storage, despatch.
Third generation	Print + multi-media and two-way communication-teams/learner support.
Fourth generation	ICTs and two-way interaction- social learning/multi-skilling.
Five generation	Communities of learning – multi-skilling/decentralised decision-making.

Table 2 also highlights the fact that the upper generations display what quality distance education should be. Snell, Hodgson and Mann (1987, 169) point out that one should move beyond the first generation definition. This definition shows an educational approach with roots in the transmission and regularisation of knowledge. They maintain that an open learning system with roots in the individual's creation of his or her own meaning and understanding is needed. The problem with the traditional definition of distance education is that it reflected a hierarchical image of society and those who have power are the regulators of knowledge. However, the massification currently envisages a more open image where learners can create meaning.

Open learning systems put the students squarely at the centre of the equation in developing their learning plan (Heydinger 1997, 109). In contrast, distance education (in the 1st and 2nd generation above), may or may not permit students to be partners in developing their learning plans. Open learning stands in contrast to the traditional faculty-driven curriculum model, which presents the students with a set of programme options giving them little freedom to determine their own learning activities (Heydinger 1997, 109).

## **OPPORTUNITIES OF THE MIXED-MODE DELIVERY: IMPLICATIONS FOR THE FACULTY**

Research done has proven that teachers' preparation and support within the school system are critical elements of higher learner achievement and retention (Craig, Kraft and du Plessis 1998, 12). The mixed-mode delivery accommodates diverse learning needs and environments. Proponents of massification have called upon universities to be responsive to the needs of an economy and those of a historically marginalised majority (Soudien and Corneilse 2000, 302). The mixed-mode delivery also ensures that the needs of learners from different backgrounds and ability are accommodated in the programme.

The above are some of the consequences of the massification of higher education institutions. The universities have found themselves in a changing environment; key changes happening in the social and economic spheres. Most universities around the world are seen as meeting a much broader range of national needs (Scott 1998, 125). With mixed-mode delivery being part of open learning systems, education will move towards fulfilling the needs and demands of the markets. The markets are dynamic as knowledge is continuously being sought. Markets set new problems more or less continuously, and the sites of knowledge production and their associated networks of communication move on (Gibbons 1998, 74). As faculty utilise mixed modes of delivery, they should ensure that the following happens:

- learning styles for quality and flexible delivery within various learning contexts drawn from the students' experiences.
- the utilisation of students' experiences ensures that lifelong learning is developed and sustained.
- the flexible teaching strategies should accommodate learner-centred approaches. Many model how students should apply this knowledge in everyday life.
- the diverse delivery systems ensure that the majority of the students will be able to deal with course material.

There are a number of institutions in South Africa that are implementing the open learning systems in an effort to adopt as many qualities of these as possible.

## **FROM TEACHING TO LEARNING: TRANSFORMING THE ROLE OF THE LECTURERS**

Earlier in this article transformational pedagogy is discussed as being an important aspect among progressive faculty in South Africa today. In the past the model of fundamental pedagogics emphasised teaching instead of learning. Universities under this system provided instruction. Teaching was centred on the faculty members. However, as universities are exposed to changes with debates on several issues around transformation people are beginning to see universities as institutions that should be producing learning. Barr and Tagg (1995, 13) contend that to say that the purpose of higher education institutions is to provide instruction is like saying that General Motors

is operating assembly lines. Universities need to see their mission as the production of learning rather than teaching.

The role of lecturers will have to change as South Africa move towards the transformation of its education system. There are several debates in the country today, including mergers of institutions', debates around Africanising higher education institutions. Democratic practices also need to be explored. The democratic practice should not only emphasise the role of the students in education, but it should also magnify the role of faculty members in the production of learning. Barr and Tagg (1995, 17) draw up the nature of roles under the instruction paradigm and the learning paradigm. This nature of roles endorses Gibbons' and Scott's arguments above.

Table 3: Nature of faculty roles

<b>Nature of roles</b>	
<b>The instruction paradigm</b>	<b>The learning paradigm</b>
Faculty are primarily lecturers.	Faculty are primarily designers of learning methods and environments.
Faculty and students act independently and in isolation.	Faculty and students work in teams with each other and other staff.
Teachers classify and sort students.	Teachers develop every student's competencies and talents.
Staff serve/support faculty and the process of instruction.	All staff are educators who produce student learning and success.
Any expert can teach.	Empowering learning is challenging and complex.
Line governance: independent actors.	Shared governance: team work.

Among others, faculty needs to assume multidisciplinary approaches as they facilitate knowledge. The students need to find solutions for a number of societal problems. Plater (1995, 25) points out that people have come to realise that most problems do not fit neatly into the historically useful compartments of disciplines or individual expertise. Furthermore, Plater states that no single perspective, methodology, practice or belief can accommodate the implications of contentious issues such as population control, environmental protection and crime. There are many overlaps in courses.

Finnegan (1997, 490) cites Rost who contends that many university departments are composed of active scholars engaged in similar subjects encourage more faculty productivity but they also limit explorations of cross-disciplinary perspectives. Finnegan adds that in the past few years a considerable amount of knowledge has been advanced by scholars crossing discipline boundaries. The University of South Africa has a good example of an interdisciplinary research centre. The centre provides interdisciplinary, Afro-centred knowledge. Training and research done within the African context focuses on various disciplines. When faculty are not segregated into disciplinary departments, the curriculum is likely to assume this interdisciplinary character as well as to focus on student needs rather than the context of singular fields (Finnegan 1997, 491). Inter-

disciplinary approaches prepare students to assume scholastic thinking that could make them efficient in future. South African universities are gradually moving towards address this need. Boyer (1990) refers to this integration of disciplines as *scholarship of integration*. For Boyer, scholarship integration is closely related to discovery and it also involves doing research at the boundaries where fields converge. Furthermore, he avers that scholarship of integration also means interpretation, fitting one's own research into larger intellectual patterns. The call for scholarship integration also comes at a time when information technology is gaining ground, posing additional challenges to faculty.

## **INFORMATION TECHNOLOGY: THE CHALLENGE OF THE TWENTY-FIRST CENTURY CAMPUS**

It is a critical commonplace that the renewal of universities cannot be complete without the introduction of technology. Many believe that the flaws in academic institutions would dwindle if proper technologies could be introduced. Daniel (1999, 10) lists five accusations that have been levelled against universities worldwide:

- 1 national university systems are not accommodating the volume and variety of student demand;
- 2 higher education is too costly and does not deliver graduates with the skills employers value;
- 3 teaching methods are too inflexible to answer the needs of a diversifying student body;
- 4 the quality of higher education is not assured;
- 5 the sense of the university as an academic community is being eroded.

The new technologies being introduced are believed to have the potential to address some or all of the above challenges. Distance education institutions have increased their accessibility to learners by utilising new technologies. Distance education has evolved by the incorporation of more media into the earlier versions of correspondence tuition and remote-classroom teaching (Daniel 1999, 50). Furthermore, Daniels states that there are four broad groupings of technologies that have influenced the development of mega-universities:

- (a) the combination of printing and the post in correspondence tuition;
- (b) the mass media of broadcasting;
- (c) personal media;
- (d) telecommunication [sic] systems.

Graves, Henshaw, Oberlin and Parker (1997, 448) cite Gilbert and Green who point out that information technology (IT) is rarely integrated successfully without substantial structured changes in the campus culture and operating environment. Faculty that resist the introduction of changes associated with IT will not gain from the advantages of IT. Faculty will continue to feel the pressure to transform their practice as they accommodate lifelong learning for themselves as well as their learners. In South Africa life-

long learning is an integral part of the new education system. The Focus Group (2004) see lifelong learning as a must for real-life context of knowledge society. They also add that lifelong learning environment has specific characteristics and is strongly supported by information and communication technology (ICT). The huge demand for lifelong learning is forcing many educational institutions to transform.

The ICT revolution is putting many faculty members especially those from the previously disadvantaged backgrounds under lot of strain. Apple (1997, 330) raises concerns about the new technology in education including the deskilling and depowering of educators and the creation of inequalities through expense and limitations on access. Apple also adds that the more the new technology transforms the classroom into its own semblance the more technical logic will replace critical political and ethical understanding. However, all countries want to follow global trends and the new technologies are among these. Developing countries though, face a number of risks when it comes to ICT and South Africa is among these. The Focus Group (2004) cites the World Bank which pointed out that developing countries and transition economies risk being further marginalised in a competitive global knowledge economy because their education and training systems are not equipping learners with the skills they need. The World Bank further posits that policy makers in these areas need to make changes as they replace the information-based, teacher-directed, directive-based rote learning provided within formal education. The challenge for faculty when it comes to ICT is to assume an ability to be lifelong learners themselves. They need to know how to create educational innovation as they try being competent ICT users.

The above discussion shows that education in higher education is changing, the curriculum, the faculty roles, and the student population and so is the global environment. ICT is fast becoming recognised as an integral part of Lifelong Learning. However, as Hezemans and Ritzen (2004) see it, ICT in higher education should not be an end but a means. Furthermore, Hezemans and Ritzen add that ICT at a higher education institution should be linked to vision and educational concept. Yet, whatever the vision and whatever the notions of the faculty and management in an institution, the student should always come first as innovations are being implemented in campuses.

## **CONCLUSION**

In conclusion, as South African universities transform, one needs to look at ways of empowering faculty. Usually administrators and leadership do not talk about professional development when they talk about institutional culture. There is a tendency to only concentrate and address administrative challenges of institutions and overlook challenges faced by faculty in facilitating knowledge. Furthermore, with the debates on the Africanisation of knowledge in some quarters, what this concept means needs not only to be spelt out, but also to address the challenges faced by faculty members. This article has shown that massification is one important step towards the democratisation of education in South Africa. However, the discussion indicates that its ideals will not be achieved if faculty in higher education institutions are not empowered. Universities cannot escape the effects of changing paradigm shifts for all their employees. Faculty

that can deal with institutional changes and paradigm shifts enable their institutions to deal with change effectively. Faculty should strive to adapt their teaching strategies to accommodate the Learning Paradigm. As Barr and Tagg (1995, 15) put it: 'The aim of the Learning Paradigm is not so much to improve the quality of instruction-although that is not irrelevant – as it is to improve continuously the quality of learning for students individually and in the aggregate.'

The latter will be necessary as higher education institutions continue to massify. Institutions of higher learning need to redesign with the learners in mind. Increasing the learning productivity implies having students take more responsibility for their own learning; ensuring that curricula and time tables are more focused and purposeful; and training faculty to be mediators of learning rather than better teachers (Daniel 1999, 24).

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