

THE CHAMELEON-LIKE CHARACTERISTICS AND ASPECTS OF LEARNING IN HIGHER EDUCATION

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ABSTRACT

South African higher education institutions required a coherent teaching and learning model, but the effectiveness of such a model is jeopardised by the rapidly changing higher education world and culture. The hope for the future within this chameleon-like higher education context for educators is not to change the student, but to effectively and efficiently change the context experienced by the students. This article attempts to highlight not only that a paradigm shift is required from the new learning facilitator in this proposed holistic learning-based approach, but also adaptation in terms of various innovations and demands in the higher education practice.

1. INTRODUCTION

Anyone involved with higher education cannot deny that technology and demands for transformation are having a profound impact on the entire South African higher education context or that this impact will increase as time progresses. In whatever institution and at whatever rate this change is taking place, there are fundamental developments occurring in access to higher education; in the way institutions function; and in the teaching and learning process itself (Ryan, Scott, Freeman & Patel 2000; Jacobs, Gawe & Vakalisa 2002).

This article will assist teachers and educators in many different situations to make sense of the impacts, opportunities and challenges offered within this new Information and Communication Technologies (ICT), as well as the transformation-led context which higher education is confronted with. In addition, the shift towards a learning-based approach within teaching institutional models, which implies changes in the teaching-learning dynamics, will also be discussed. Other debates such as the typology of diverse higher education models, each with its own focus, as well as the fact that research institution staff have so-called more prestige/promotion opportunities than their teaching counterparts, will be integrated into the above-mentioned discussions. I propose in this article that these cultural changes in higher education necessitate a holistic model for higher education practitioners.

2. TEACHING-LEARNING DYNAMICS

In the past the traditional teaching institution was rigid in its operationalisation. With the current demands for transformation and changes within both the population of students and staff, this higher education environment has had no other choice but to be more flexible and adaptable. Policies such as *A Framework for Transformation (NCHE 1996)*, *the White Paper on Higher Education Transformation (RSA DoE 1997)* and *the National Plan for Higher Education (RSA MoE 2001)* have one mutual goal, namely *the opening of access to higher education to a wider array of social classes and age groups, with students from a diverse range of social life and work experiences. This has led to an equivalent shift in the "higher learning" function of institutions. These policies are paving the way of transformation for South African higher education.*

When culture changes of higher education are present, the nature of teaching and learning will subsequently be influenced and thus needs adaptation. Before this issue can be addressed, the meaning of a changing culture in higher education has to be clarified. According to social anthropologists, it refers to the shared beliefs, attitudes and ways of behaving which a social group its identity (Ryan *et al.* 2000). *This article discusses one of the core processes at the centre of all possible and available higher*

education institutional models, namely the changing teaching and learning practice.

The first part of this article focuses on the meaning of the concept “changing cultures in higher education”. The changing cultures in the higher education concept suggest the incorporation of innovations in future teaching and learning practice. During this discussion new forms of learning and new roles for the teacher/lecturer are identified. The last section of the article deals with the implications of innovations in teaching and learning practice, in addition to suggesting the way to address the altered higher education institution and the teaching and learning culture, namely by proposing a holistic approach to the learning-based approach.

3. REVIEWING THE CHAMELEON-LIKE CULTURES IN HIGHER EDUCATION

Traditionally, higher education institutions were in the past characterised by the following:

- A well-established culture.
- Reasonably clear defined roles.
- Strong community expectations about behaviour (i.e. students study, lecturers teach and do research, support staff support, administrators administrate and managers manage).

Currently the characteristics of higher education institutions are being transformed educational systems and processes are not only changing, but are also re-engineered or reconfigured. The reason for this is also a result of the diverse student population, the impact of new technologies (e.g. the growth of the Internet and ICT), as well as other changes in higher education roles and expectations. This is highlighted by Blair (1998:1): “Technology has revolutionised the way work is done and is now set to transform education. Children cannot be effective in tomorrow's world if they are trained in yesterday's skills. Nor should teachers/lecturers be denied the tools that other professionals take for granted”. The impact of the above-mentioned is confirmed by Ryan *et al.* (2000) who conclude that:

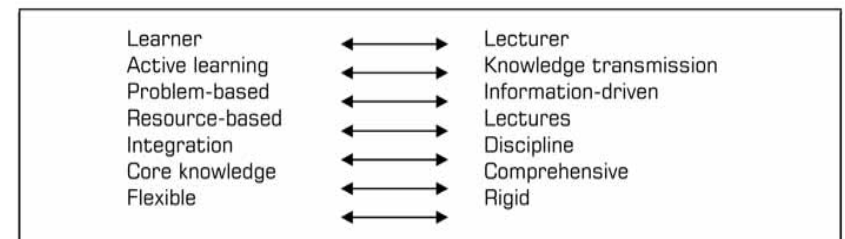
- new learning technologies can transform the way knowledge is packaged, delivered, accessed, acquired and measured, altering the core and delivery processes of higher education;
- students demand flexible, targeted, accessible learning methods, potentially altering the traditional role of higher education;
- a huge population of new learners estimated at millions more students in the next decade will expand the total market for education and entice new competitors; and
- by relying on technology rather than on bricks and mortar, non-traditional competitors will give higher education institutions a run for their money.

Thus, accompanying the changing culture of higher education, is the changing practice of being a teacher/lecturer. The question that now arises is: “What will the new forms of practice look like?”

4. INNOVATIONS IN TEACHING AND LEARNING PRACTICE

Innovations in teaching and learning methods in higher education are being introduced at a time of rapid institutional change. An effective way to visually demonstrate the significant changes from the traditional curriculum pattern, is the adapted Harden's SPICES model (Harden, Sowden & Dunn 1984) as depicted in Figure 1:

Figure 1: Adapted version of Harden's SPICES model for curriculum change



It should be stated that in Figure 1, the arrows represent two sides of a continuum. Furthermore it is evident from this figure that there is a shift towards a learning-based approach. Its characteristics are displayed on the left-hand side of the figure and the learner is in the centre of the learning process. It would be inappropriate for the new practice to be either of the extremes of the continuum as presented in the above-mentioned table. It would be better to be selective regarding what is effective and efficient in the move towards a more innovative stance as demonstrated on the left-hand side, where the delivery of learning programmes should encourage problem-solving and lifelong learning. In order to achieve this goal, a shift from an “instruction paradigm” towards a “learning paradigm” is required (Barr & Tagg 1995; Meade 1997). In this new learning paradigm it is essential to be aware of the following implications for educators, namely:

- Knowledge is jointly constructed by students and facilitators.
- Linking with **constructivism views - students are active constructors, discoverers and transformers of knowledge (Semple 2000)**.
- The purpose of staff is to develop students' competencies and talents.
- The relationships are personal transactions among students as well as between facilitators and students.
- The learning context consists of co-operative learning in the classroom and co-operative teams among staff.
- The assumption exists that facilitating is a complex task and thus requires a considerable amount of training.

In addition, this paradigm shift and the way learning and teaching is experienced, are also demonstrated in the following questions:

- Is teaching fundamentally about transferring information from the teacher to the learner, or is it - as we would contend - about creating contexts which make learning possible?
- Is it about the latter? What does that mean and what does it say about the way in which teachers should think about and approach learning and teaching?

- Do university teachers and learners experience learning and teaching situations in different ways and, if so, what are the different ways?

Thus the conclusion is reached that teaching and learning are fundamentally related; that good teaching needs should be defined in terms of helping students to learn; and that it is the learning of students that needs to be the focus of good teaching, not the teaching activities of teachers. Thus good teaching is about bringing the teachers' perceptions and understanding of learning and teaching (their awareness of teaching and learning) into a closer relationship with the students'. Good learning also involves a focus on the meaning and understanding of the material students are studying.

Evidently the core task of higher education is explicitly fostering the students' abilities to take evidence-based, values-grounded stands on important issues and commit themselves to act in ways that make a difference. In order to fulfil this task, new forms of learning are required.

4.1 *New forms of learning*

Traditional forms of teaching are replaced by the greater use of resource-based learning (RBL) and new technologies (Ryan *et al.* 2000; Jacobs *et al.* 2002). *Some examples of how the teaching and learning practice is changing are the following:*

- Lecturing to groups carried out at a distance (e.g. video-conferencing) or satellite.
- Record lectures to be used in students' own time.
- Enhanced lecturer via multimedia presentations.
- E-learning, Internet- and computer-assisted learning.
- Smaller group seminars or tutorials take place in a variety of computer and mediated forms.

These well-developed systems have various advantages for the educator, namely:

- After initial investment, preparation time is reduced.
- There is increased opportunity to engage with learners in one-to-one or small group dialogical encounters (i.e.

- to really teach).
- Strategies to minimise the chores of marking and administration.
- Staff meetings and administration-related queries from students are minimised by the judicious use of e-mail and electronic bulletin boards.
- Creating and adapting RBL materials may produce materials for multiple use and, potentially, for national and international distribution.
- Teaching staff may acquire new teaching- and research-related skills (e.g. information and instructional design, Web publishing, general Internet and digital archive searching skills, etc.).
- Developing and evaluating RBL may lead to publishable research.

There are, however, some potential pitfalls which may affect the successful introduction of these innovations in higher education. Educators may be:

- reluctant to give up their autonomy *vis-à-vis* teaching content and forms of delivery;
- reluctant to accept, without strong evidence and/or personal experience, that new methods and materials are effective;
- anxious about adopting teaching methods and materials which are much more open to peer examination and appraisal;
- anxious about having to work in teams;
- anxious about engaging in less formal, dialogical encounters with students;
- reluctant to acquire new RBL- and IT-related skills.

Owing to the above-mentioned reasons, a drop in morale and even active resistance to change could be present if higher education innovations are not introduced in a sensitive, participative way.

Furthermore, adequate resources and support are vital. Thus, necessary investments such as the following are imperative:

- Staff development (i.e. general awareness raising

- specific training in RBL- and ICT-related skills).
- Adequate support from technical staff for the communications and information technologies aspects of the delivery mode.
- Support from educational technologists, other media and design specialists.
- Conscious effort to facilitate team working.
- Opportunities for staff to reflect on and develop dialogical teaching skills.
- Periodic reviews of changes, with forums in which concerns can be raised.

Despite the above-mentioned, staff have to have confidence in their leaders' locked-up in preceding responsibility and caring skills as well as introducing change sensitively and supportively. Thus a lack of participation leads to alienation, while a lack of effective leadership leads to stress and anxiety.

4.2 New roles for the teacher/lecturer

When adapting the higher education practice, the functioning of educators is simultaneously affected. At the core, it implies that the educator is no longer the centre of knowledge, but the manager of knowledge. This paradigm shift thus depicts the shift from knowledge transmitter towards the learning facilitator role. It also depicts a much more active and two-way communication process and relationship. Due to the fact that the facilitator is now in partnership with learners and no longer the knowledge expert, changing roles on both sides are visible, namely the following (Kraak 2000; Ryan *et al.* 2000; Jacobs *et al.* 2002):

Table 1: The changing roles of academics and learners

Changing lecturer roles	Changing student roles
From a lecturer who provides the answers to an expert questioner who is a facilitator, guide and resource provider .	From passive receptacles for hand-me-down knowledge who memorise facts to complex problem-solvers who construct their own knowledge.
Teachers become designers of student learning experiences , providing the initial structure to student work, encouraging increasing self-direction and presenting multiple perspectives on topics, emphasising the salient points rather than just being providers of content.	Students refine their own questions in search of their own answers and see topics from multiple perspectives as they work, in groups, on more collaborative/co-operative assignments. Group interaction is significantly increased.
The teacher-learner power structure changes from a solitary teacher in total control of the teaching environment to a member of a learning team , sharing a learning environment with the students as fellow-learners.	More emphasis on students as autonomous, independent, self-motivated managers of their own time and learning process. Access to resources is significantly expanded.
More sensitivity to student learning styles and study methods being used.	Emphasis on acquiring learning strategies (both individually and collaboratively).
	Emphasis on the use of knowledge rather than the observation of the teacher's expert performance or just learning to "pass the test". Discussion of students' own work in the classroom.

Adapted from Berge and Collins (1996); Ryan et al. (2000); Scase & Scott (2001);

The above-mentioned roles have raised questions about the security of academic jobs versus the cost-savings that may be possible with the introduction of technology. However, this has not yet been proven. In addition, the greater interaction - although a time-consuming task - is enhancing the learning experience, which makes this paradigm shift a "killer application" for education as well as modifying the human role of the teacher/lecturer. Furthermore, if new technologies are applied and RBL are performed well, the result will be effective and efficient teaching, assessment and administration (Kraak 2000; Ryan *et al.* 2000; Jacobs *et al.* 2002). This leads to the question: "How is this possible?" Good quality RBL and new technologies enhance and improve learning by the effective use of different media and by individualising instruction in a variety of ways. Effective assessment procedures have to address both the "how" and the "why" aspects of understanding, although in the context of a specific course, given its aims and desired learning outcomes, there may be more or less emphasis on one aspect or the other (i.e. sometimes performance skills, while other times theoretical, conceptual knowledge).

Thus our understanding of learning has changed and thus it is important for each educator to know when effective learning and teaching occur. Taking into account the shift in various higher education institutional models, it is evident that the context in which learning and teaching take place may change, but not the underlying principles that inform good practice. The above-mentioned quality element will not be arrived at by accident, but needs the following:

- Competent application of relevant learning theories.
- Competent application of learning and teaching principles of course designs.
- Necessary competencies such as programming and media design as well as facilitation skills and sound pedagogics.

These competencies as well as the importance of quality assurance emphasise that input on pedagogy and course design is no longer primarily the responsibility of subject specialists, but need inputs from programmers, media designers and educational technologists. This links with the changing role of

teachers/lecturers, namely their involvement in the production of RBL materials as well as becoming effective instructional designers in their own right.

5. IMPLICATIONS OF INNOVATIONS IN TEACHING AND LEARNING PRACTICE

With the shift to a learning-based approach, it necessitates a conscious critical, analytical pedagogical approach with regard to its practice. Now the learning facilitator would be expected to deliberately interweave the new learning methods (which promote a specific kind of knowledge) and the assessment strategies being used.

- First you have to determine what kind of knowledge you are dealing with (e.g. *instrumental knowledge* is the concrete, objective, cause-and-effect knowledge derived from empirical scientific methodologies; *communicative knowledge* is the interpretative, interpersonal knowledge of society, culture and human relations generated through language and consensus-building; or *emancipatory knowledge* which is personal, subjective knowledge of one's self, acquired through critical self-reflection).
- Second, you have to match the kind of knowledge required to a certain learning method. *Instrumental knowledge* is typically taught via lecturers and demonstrations, laboratory work, problem-based learning and experiential learning. Thus learners practise or work with transmitted knowledge to solve concrete problems. Discussions, collaborative groupwork, role-plays, case studies and learning networks characterise the pedagogies used to impart *communicative knowledge*. *Emancipatory knowledge* deals with journal writing, critical debates and critical questioning activities which encourage the articulation and examination of underlying assumptions.
- Last, you have to use appropriate assessment strategies which match the above-mentioned. With regard to *instrumental knowledge*, it could be assessed via scored tests, multiple-choice questions and problem

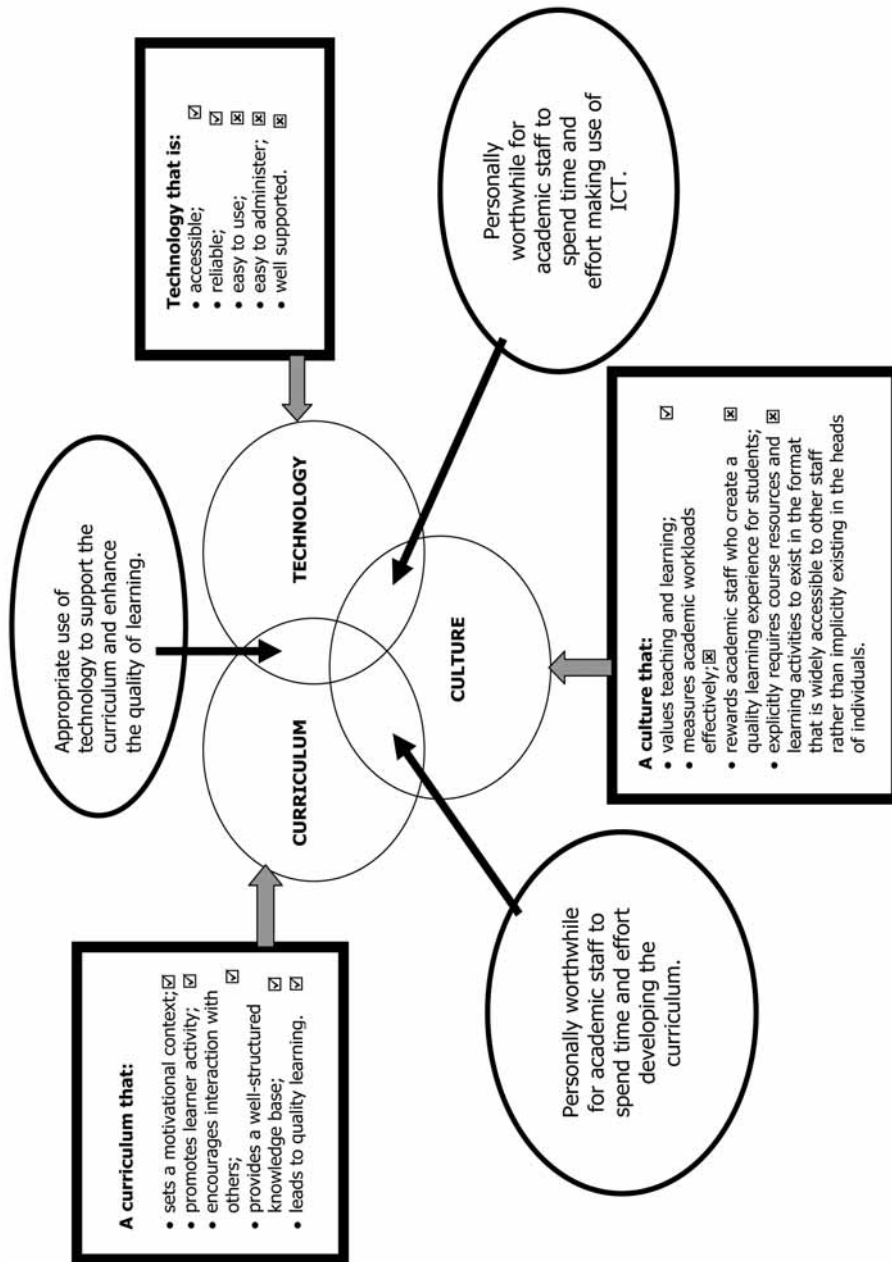
sets which evaluate the progress or lack of learning. When *communicative knowledge* is present, pedagogies use interpretive techniques such as essays, term papers or oral presentations. Assessment techniques used when *emancipatory knowledge* is at hand are essays, but with the instructor's guidance and validation (Cranton & Cohen 2000).

In brief, it appears that the task of the learning facilitator in the new learning-based approach is very complex because he/she now has to be a proactive critical educator who does not only have to consider the learning environment and the learner profile, but also to determine the type of knowledge that complements the type of delivery mode and assessment strategy. Furthermore, despite the benefits of ICT implementation, namely access and flexibility (i.e. valued access to resources and the opportunity to learn where and when one wants), the learning facilitator is now confronted with the global/open classroom, which puts more pressure on the learning facilitator to have global knowledge to meet learners' needs (Staley & MacKenzie 2001). In addition, diversity also remains a crucial issue in the new learning-based approach. Thus the learning facilitator needs training to sensitise him/her towards cultural diversity within the learning environment, as well as to make him/her aware of the pitfalls which could destroy the learning facilitator's active learning-based method.

This holistic approach towards a learning-based approach within the higher education practice could be summarised by means of Figure 2:

It is evident from Figure 2 that the higher education practitioner has three core elements to consider within this new learning-based approach, namely curriculum, technology and culture. The first element - curriculum - is not a new element, but was also paramount in the traditional teaching institutional models. The difference in this context is that now the dynamics of the participative approach to teaching and learning have to create a motivational learning environment which leads to quality learning. In order to make participative learning a reality, the following conditions are paramount:

Figure 2: Holistic learning-based approach



- Flexibility.
- Relevance of content to real-life situations.
- Democratic learning climate.
- A spirit of co-operation and individual responsibility.
- Empowerment.

In addition, this makes provision for the lecturer to act as participative leader, mentor and role model (Jacobs et al. 2002). These additional roles imply the following:

- *Lecturer as participative leader:* The core qualities which distinguish a lecturer from a leader are knowledge of the content, knowledge of the learners, interpersonal skills and classroom management skills. According to Jacobs *et al.* (2002), the additional characteristics which are crucial to demonstrate leadership potential are the following:
 - Willingness to make sacrifices.
 - Courage to stand up for one's principles without compromising them.
 - Adventurousness and eagerness to explore new situations.
 - Honesty and a deep sense of commitment to the responsibility entrusted to one.
 - Empathy and genuine concern for others.
 - An innate faith in oneself and others.
 - Humility and a willingness to consider the points of others.
- *Lecturer as mentor and role model:* Main features of participative lecturers are being effective mentors and role models. With regard to mentorship, the concept "mentor" implies someone who is:
 - always there for the protégé (in this case the learner) to turn to if and when the need arises (Zimper & Rieger 1988; Jacobs *et al.* 2002);
 - able to place him-/herself in the protégé's shoes so as to be in a position to offer empathetic support (Zimper & Rieger 1988; Jacobs *et al.* 2002);

- developing a genuine interest in the welfare of the protégé (Parkay 1988; Jacobs *et al.* 2002);
- a n expert in the realm of human endeavour in which the protégé aspires also to become an expert (Gehrke 1988; Jacobs *et al.* 2002).

The above-mentioned features confirm the importance of commitment and willingness of both following (the learner) and providing (the lecturer) guidance.

“The idea of role model is strongly underpinned by the principle of participative teaching/learning such as modeling or teaching by example. Thus observation and emulation are at the core of the learning process where lecturers should model positive features of humanness and a desire for learning” (Jacobs *et al.* 2002).

These significant roles highlight the lecturer not only as being responsible as interpreter and conveyor of the curriculum, but also as participative leader, mentor and role model. Thus it is evident that lecturing/facilitation is becoming a demanding occupation, where building a culture of participation is even more challenging. This requires also transforming the teaching-learning dynamics and relationships from passivity towards vibrant co-existence and participation.

The second element, namely technology, can be used to provide more concrete experiences which could lead to improved perception (Jacobs *et al.* 2002). Perception is the active interpretation of sensory impressions and it makes learning more meaningful. For this reason it is essential for lecturers/facilitators to make use of it.

The third element of culture implies not only the higher education cultural changes towards a learning-based approach, but also the diverse learners in the classroom who have to be accommodated, as well as the diversity within higher education models where higher education practitioners no longer have one job, but have to be flexible and act as lecturer-researcher-community service specialists. This is also physically demonstrated by means of the arrows connecting all three elements within a holistic picture.

6. CONCLUSION

Higher education institutions are supposed to have a coherent teaching and learning model, but they do not always function so well due to the rapidly changing higher education world and culture. The hope for the future within this chameleon-like higher education context for educators is not to change the student, but to change the context experienced by the students. In order to do this, flexibility and creativity as well as a mind-shift are required from the new learning facilitator in this proposed holistic learning-based approach. Based on this notion, the reason and method of accomplishment of new forms of learning and new roles for teachers/lecturers were discussed. This was followed by an exposition of some of the implications of these above-mentioned innovations in the higher education practice. The claim in this article is that real success lies not in what you know what matters, not even what you do with what you know, but rather what you do when you do not know and how efficiently and effectively you do it.

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