

ACADEMIC ENTREPRENEURSHIP: CHALLENGES FACING SOUTH AFRICA

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Abstract

Academic entrepreneurship in general implies *ipso facto* the involvement of academic staff in commercial activities in a system that builds on university-industry relations. In this relationship it is expected from industry to acquire knowledge from institutions of higher education and to utilize this knowledge in the innovation process. On the other hand, academic entrepreneurship also occurs within the national boundaries of a specific country possessing a distinct history and culture. In the case of South Africa, the entrepreneurial culture was build over more than three centuries, 1652 to 1994, on an institutionalized political system of racial segregation. True democracy was only achieved in April 1994 when South Africans saw the first-ever democratic vote and election in South Africa. This paper intends to analyze and evaluate the challenges of academic entrepreneurship for institutions of higher education in South Africa following a historical and survey research design approach. The results revealed that higher education institutions in South Africa, despite remarkable achievements, are still struggling to comply with the demands of the knowledge economy and in the enhancement of academic entrepreneurship.

1. Introduction

In South Africa, as in the rest of Africa, the drive for education could be considered as a response to two aspects of European penetration. According to the anthropologist Herskovits (1965) Africa initially related the European power over them as dependent on writing skills ability enabling Africa to communicate with Europeans and the technological controls associated with this skill. Later, as European ways became better known, higher education institutions expanded their visions to aspire to master European skills and higher standards of living.

Despite the fact that South Africa is currently experiencing huge transformations in higher education, higher education institutions are still inclined to offer European-oriented education. European-oriented higher education therefore continues to exert a profound influence on South African higher education institution's attitudes, practices, policies and aspirations as it operates in a global world. England, as colonial power in South Africa for many years however, adopted a rather "elastic" educational approach based on the principle that the maximum of initiative and responsibility should rest with the colonial administration (Herskovits, 1965). This elasticity approach eventually led to the development of a segregated higher education system offering access to students based upon race and funded by government accordingly.

Presently, South Africa being a country undergoing a radical transformation process from being a segregated society towards becoming a fully integrated society, places special demands on higher education institutions to promote academic entrepreneurship. Academic entrepreneurship in general implies *ipso facto* the involvement of academic scientists in commercial activities, primarily by means of a country's national innovation system that builds on university-industry relations. In this relationship it is expected from industry to acquire knowledge from institutions of higher education and to utilize this knowledge in the innovation process (Jaffe, Lerner, Stern & Thursby, 2007; Kroll & Liefner, 2007).

2. Problem Statement

The principal research question under investigation is to evaluate to what extent academic entrepreneurship came into being in institutions of higher education in South Africa, and secondly, what challenges are created by this phenomenon for South Africa's higher education institutions?

Whilst South Africa is in a process of transforming higher education to address the imbalances of the past, the question arises whether higher education is able to make the transition to academic entrepreneurship as expected by the new global economy which regards knowledge as a commercialized commodity.

3. Purpose

The first purpose of this paper is to explain the transitional changes that occurred in higher education in South Africa over time, deduct the nature of the modern university, and conclude challenges for South Africa in its perusal to promote academic entrepreneurship. The second purpose is to investigate two principle learning orientations of South African students to make deductions with regard to their readiness to make a contribution to society in terms of academic entrepreneurship. The latter purpose will give an indication to which extend academic entrepreneurship was installed in the clientele of higher education institutions. The learning orientations investigated are labelled and defined as:

- **Grade orientation** – This orientation emphasises learning for the sake of learning. Students tend to construe their tertiary career in terms of the grades they obtain. Grades, rather than learning, become the primary objective of the students.
- **Learning orientation** – This orientation emphasises learning as a mechanism whereby students get the opportunity to gain access to significant ideas, innovative technologies, and new ways of thinking.

This part of the paper assesses the positive and negative values that students attach to learning and grade orientations. Three main components were assessed namely, current orientation towards studies, current study behaviour, and ideal study behaviour. Differences between current and ideal scores were considered to be indicative of the degree of dissatisfaction with their present orientations. The ideals expressed are considered to be necessary change catalysts that will guide adaptation of current learning behaviours.

4. Scope

This paper restricts itself to higher education institutions that are defined as “Universities” in the South African context and which include Comprehensive Universities as well as Universities of Technology.

5. Literature Review on Academic Entrepreneurship

To describe academic entrepreneurship in South Africa it is important to clearly define the concepts under investigation and to investigate the emergence of academic entrepreneurship in South Africa.

5.1 Clarifying “Academic Entrepreneurship”

Balázs (1996:3) viewed academic entrepreneurship essentially as behaviour, which modifies behaviour of research and education in the sense that it should be considered an “income-oriented” activity which could be seen as “risk-taking”, technology- and knowledge-based and causing greater stability for the university through their involvement in business activities. Whilst this debate centers primarily on the “commercialization” aspect of higher education and the utility value thereof to achieve a country’s economic goals (Imenda, 2006), Van Staden (2006) cautioned against equating entrepreneurialism in universities with commercialization and proposed that a more holistic perspective is required when analyzing an entrepreneurial university in which academic criteria dominate financial matters i.e. finance should follow academic matters and not vice versa.

5.2 The Evolution of the University Concept

To truly understand academic entrepreneurship in Higher Education Institutions, it is firstly necessary to understand the concept “University” in terms of its roots and essence to be able to reason meaningful about its existence, present role and drive towards academic entrepreneurship. It is therefore essential to reflect on the historical development of the modern university.

Initially universities were known as “Universitas Magistrorum et Scholarium” which directly translated means a community of teachers and learners. To refer to a particular university the Latin word “Studium” was used. Universities later adopted the terms “Studium Generale” where the term “generale” indicated that the university was open for any student coming from any part of the Christian world. The whole corporation of universities was in those days known as the “universitas magistrorum et scholarium studii Parisiensis” with the right to employ its own employees and developing its own statutes (Pauw, 1975).

The beginning of the 12th century for example represented a change in the fortune of intellectual history of Europe. During this time period a new spirit for investigation and innovation emerged caused by renewals in the church, the cultural domain, international trade, rapid growth of cities and economic prosperity. This led to the flourishing of theology, philosophy and Law in search for truth on the one hand and in search for truth based on what was already discovered (surrendered tradition). Education and training in general became more important and the guild system – a self managed regulatory system - was formed to ensure that only people properly qualified and considered masters in their respective disciplines were allowed to become members of a guild. In the field of education this trend resulted in the formation of a “brotherhood” of intellectuals able to protect their educational offerings and interests. The formation of the “brotherhood” of intellectuals in which learners were educated along similar lines followed by the guilds i.e. apprentice, journeyman to master craftsman, provided concrete content to the principle of “autonomy” in education by universities (Pauw, 1975).

Issuing a “licence” known as “licentia docendi” ensured that only people considered to be masters in their disciplines could present subjects. An incorporation ceremony known as “inceptio” was also established. This ceremony was created to give a chance to the novice teacher to conduct an inaugural lecture or to engage in a public disputation in the presence of his former master and other fellow masters. By so doing the teacher proved his ability to teach in the field he has chosen. Only after proven ability was the teacher admitted to the “fellowship of the elect masters”. The establishment of this practice introduced the concept of “corporation” into university life as the intelligentsia realized that their power and influence lied in taking shared responsibility to protect the interests of each other (Pauw, 1975) and to create knowledgeable societies following an endogenous approach (growing from inside) (Stern, 1970).

5.2.1 The Period 1873-1994 in South Africa

The first university in South Africa – “*Die Universiteit die Kaap die Goeie Hoop*” – was established in 1873 and remained till 1918 the only university in South Africa. University education in South Africa is thus only 135 years old. The university that was established in 1873 according to Act 16 of 1873 was in essence an examination practicing institution. The degrees issued were recognized in all universities belonging to the British Empire. Being a grade oriented institution the focus of education in those years have fallen on performance evaluation and grades obtained in evaluation. Little emphasis was placed on scientific research (Boucher, 1973). It can be concluded that in the beginning years of higher education in South Africa, the university could be considered as a certificate-producing factory.

The first articles confirming the important role of research at institutions of higher education in South Africa started to emerge in 1912. It was indicated that the research conducted should be of use to the whole commercial community of South Africa (Boucher, 1973).

Prior to 1994 the higher educational sector in South Africa was designed to reproduce, through teaching and research, white and male privilege as well as black and female subordination in all spheres of life. Although not all South African institutions of higher education shared these ideals, it can be reasoned that all the institutions, in different ways and to different extents are implicated in this (Cloete, Pillay, Badat & Moja, 2005). The higher education system in South Africa could thus also be described as fragmented and differentiated along the lines of race and ethnicity resulting in segregation and inequalities in educational standards, a lack of quality education to the majority of the people, duplication of functions, services and responsibilities, and vast disparities in the funding of 17 different education systems running in parallel with one another (Edrong, 2000). This educational system was also characterized by low Black education enrollments representing in 1993 only 46% males and 43% females respectively whilst, being, the largest demographic group in the country (∇70% of total population). It is therefore not surprising that the South African Department of Education, shortly after the 1994 election, realised that the inherited educational system was largely dysfunctional in meeting the development priorities of the nation as a whole (Department of Education, 2001).

Yet, despite the negative consequences of the apartheid legacy, the educational system in South Africa were considered to be the most developed in Africa, with access to substantial resources. Some institutions of higher education were even able to developed internationally recognized

competitive research and teaching capabilities (Edrong, 2000).

5.2.3 The Period 1994 – 2008 in South Africa

This period introduced radical transformation in the higher education system of South Africa. Whilst trying to retain the valuable features and achievements of the past, the Department of Education needed to address the system's inequalities, imbalances, and distortions as well as the educational challenges facing a non-racial democratic society (Edrong, 2000). Primarily, this entailed broad based social, political, economic and educational transformation in order to develop and construct an egalitarian and healthy South African education community.

To transform into an egalitarian and healthy South African education community, the government of South Africa embarked on a three-phase approach namely:

1. An initial focus on macro-policy formation, in which the policy and the regulatory framework for this systematic restructuring was elaborated;
2. Development of a planning framework, including the development of a new budgetary framework; and
3. The incremental implementation of the planning framework at national and institutional levels, which is currently taking place.

Further, globally as well as in South Africa, changed external expectations for economic development and internal pressures to generate new sources of income, universities have begun to drastically escalate their involvement in technology transfer, the process of transforming university research into marketable products (Powers & McDougall, 2005). As such it is expected that universities in South Africa will become more and more engage in risky forms of entrepreneurial activity. This implies that South African higher education institutions are seen as 'enterprises' and academics as 'entrepreneurs' contributing towards a "knowledge economy" demanding an exogenous education, research and innovation approach (growing from outside). The South African National Plan for Higher Education therefore gives greater emphasis to link government and business appropriations for universities to the quality of their performance in education and research (Adams, 2006). This in essence force higher education institutions to interact with industry to assist in meeting the needs of the national economy as these institutions are largely depended on money that could be gained from knowledge commercialization (Kroll & Liefner, 2007; Niewenhuizen & Kroon, 2002).

The White Paper on Education 1997; The Higher Education Act 1997; The National Plan for Higher Education 2001; and The New Funding Framework 2003 – offers a framework to higher education institutions to deal with national challenges in higher education and to formulate goals in terms of the (Roberts, Gouws & Van der Merwe, 2006):

- National planning and policy priorities;
- Quantum of funds made available in the national educational budget; and
- Approved plans of individual higher education institutions.

The above framework acts as one of the steering mechanisms by which higher education institutions in South Africa are governed. The funding Framework of 2003 offers excellent opportunities for entrepreneurial universities to (Roberts, Gouws & Van der Merwe, 2006):

- Increase student participation by increasing enrollments as 56% of block grants from the government are allocated to input subsidies;
- Increase output funding by increasing graduate outputs or graduate output rates;
- Enlarge institutional factor grants by proportionally increasing the number of African and Coloured students who are considered to be disadvantaged students based on the previous Apartheid political system of South Africa;
- Ensuring that higher education institutions adhere to the desired 40:30:30 Full Time Equivalents (FTEs) in Humanities, Business and Commerce, and Science, Engineering and Technology; and
- Optimising desired proportions by taking into account the funding groups according to the Classification of Education Subject Matter (CESM) indicated by Table 1.

Table 1: Funding groups by Classification of Educational Subject Matter (CESM)

Funding Group	Ratio	CESM Categories
Group 1	1.0	Education, law, librarianship, psychology, social services, public administration.
Group 2	1.5	Business/commerce, communication, computer science, languages, philosophy/ religion, social sciences.
Group 3	2.5	Architecture/planning, engineering, home economics, industrial art, mathematical sciences, physical education.
Group 4	3.5	Agriculture, fine and performing arts, health sciences, life and physical sciences.

Over and above the funding formula, the South African government has embarked on a steady improvement of higher education via public accountability by means of the National Qualifications Framework (NQF) and the South African Qualifications Authority (SAQA). This system – a system of “reward and punishment” – was created to establish rules for the assessment of the quality of program offerings at institutions and to ensure economic, social and political rationality thereof as a principal of legitimacy (Adams, 2006). These underlying principals clearly allows one to deduct that higher education programs are considered to be commodities in which students, society and businesses become rational choosers as consumers of these commodities.

6. Research Methodology

The research design adopted is based upon firstly; a historical research design approach discussed above and secondly, a survey research design in which a sample of six institutions of higher education in South Africa was selected to participate. Gay (1987) and Leedy (1993) defined the historical research method as the systematic collection, objective evaluation and interpretation of data related to past occurrences as it occurred in a particular space of time to help explain present events and anticipate future events. As this method of research is unable to control phenomena and the research is limited to what data is available as the historical researcher cannot “create” data, the data compiled from existing data was used to clarify and expand existing knowledge to identify challenges facing South Africa in pursuing academic

entrepreneurship. As the educational system of South Africa is highly intertwined with that of Europe, the historical space of this research included both Europe and South Africa.

As South African Higher Education Institutions were historically known as focusing on “certification” and thus promoting the grading of students (endogenous learning) it was decided to conduct a survey to determine the installment of a learning orientation in students (exogenous learning) driven by the knowledge economy and resulting in an academic entrepreneurship approach. The results obtained from the survey will provide an indication of Higher Education Institutions’ responsiveness to the demands of the new knowledge economy.

6.1 Data Collection and Measuring Instrument

The data collection process consisted of an in-depth literature review and detective work in the form of primary and secondary sources. The primary sources constitute the original policy documents and reports used in drafting the paper, whilst reference books and journals used represent the secondary data.

A 5-point scale questionnaire was designed for the collection of primary data in order to measure different aspects of students’ orientations towards their studies as well as with regard to their study behaviours. A response of 1 with regard to any question was indicative of a student having a complete learning orientation with regard to that question, whilst a response of 5 was indicative of a complete grade orientation with regard to that question. The questionnaire comprised 20 questions. Student orientations were determined by calculating the sum of all students’ responses to all questions.

Total student grade orientation would be achieved if all students’ responses to all questions were equal to 5 whilst a total student learning orientation would be achieved if all students’ responses to all questions were equal to 1. The middle value between a total grade and a total learning orientation represents the “turning point” between learning and grade orientations. Scores below middle values represent a learning orientation, whilst scores above the middle value represents a grade orientation.

6.2 Sample Description

A total number of 229 respondents were randomly selected from a stratified sample selecting respondents from the following subject fields:

- Cost and management accounting (15,8%).
- Credit management (4,8%).
- Economic management analysis (21,9%).
- Logistics (20,2%).
- Marketing (26,8%).
- Public management (9,2%).
- Purchasing management (1,3%).

The sample consisted of 60,4% female and 39,6% male respondents and the average age of the respondents was 21,9 years (with the highest representation (69,6%) in the age category 19-22

years). The 11 official languages of South Africa were represented by the sample as were the nine provinces in terms of geographical distribution of schools attended by respondents. Most (65,9%) of the respondents had to repeat subjects (most repeated 1-2 subjects with an average of 1,6 subjects).

6.2 Data Analysis

The Chi-square test was utilised to test goodness of fit between response distributions of different categorical variables. No difference could be illustrated between the response distributions of:

- Gender;
- Fields of study;
- Study years;
- “Repeaters” vs. “non-repeaters”; and
- Church members vs. non-church members.

With regard to the following categorical variables chi-square test values were not valid due to the fact that the variable presented too many categories, and that too few responses per category were obtained:

- Language groups;
- Provinces where school years were spent; and
- All age categories.

6.3 Data Synthesis

To synthesis findings the researchers adopted the notion that the more similar a new situation is with a former situation, the more applicable will generalizations be that builds on the past situation.

7. Findings

For the purpose of this paper the findings from the historical research design and the survey are interpreted in the following sections.

7.1 Findings from Historical Research

The historical research revealed that the concept of academic entrepreneurship is not an entirely new concept amongst researchers and academic staff in higher education institutions. Both current conditions i.e. research funding, educational funding by governments - nationally and internationally - and the wider socio-economic environments have challenged academics throughout history to modify their patterns of behaviour as well as higher education institutions to adapt to ensure their relevance. Despite the inherent aspiration of higher education institutions, irrespective of time, to create knowledgeable societies, the “knowledge society” of today differs from the knowledge society of the past. Whereas in the past universities were interested in the systematic production and application of knowledge (Stern, 1970) following primarily an endogenous (growing from within) approach to where today higher education institutions are seen as ‘enterprises’ and academics as ‘entrepreneurs’ contributing towards “knowledge

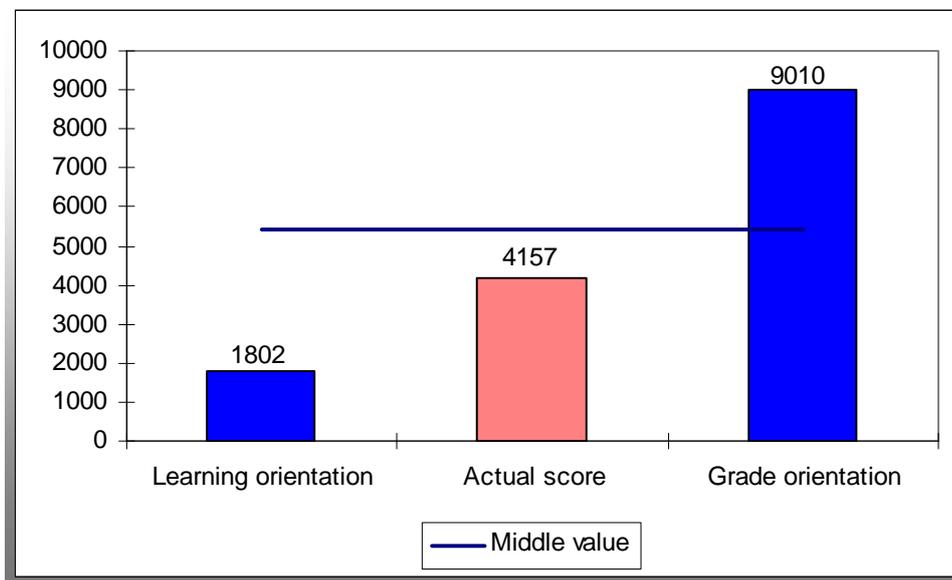
economies” because of an exogenous (growing from outside) approach. The concept “knowledge economy” does not mean the restructuring of the economy according to scientific knowledge, but rather to economize knowledge production to add value to the real needs and demands of society (Lorenz, 2006). This represents a shift from being *homo academicus* (the creature, who dwells with the entirety of his or her being in the educational sphere) towards being *homo economicus* (Economic man as a rational and self-interested actor who desires and contributes towards wealth, avoidance of unnecessary labor, and who has the ability to make judgments towards those ends) (Parker & Jary, 1995:331). The latter implies that the knowledge economy is no longer represented as the domain in which science demonstrates its applied success, but the knowledge economy is rather represented as the domain that determines whether intellectual production is value adding or not.

It appears from the historical research that academic entrepreneurship in essence takes advantage from the “university technology transfer phenomenon” that emerged over centuries caused by constant demands that higher education institutions should be more relevant to societies.

7.2 Findings from Survey

By relating the research on learning orientation to the design of learning environments and learning content it was possible to investigate how learners approach their learning, how they perceive themselves as learners and what they value in the learning experience.

Figure 1: Orientation towards studies



- **Study orientation**

Figure 1 indicates the orientation of students towards studies. A potential total score of 1802 was achievable for a complete student learning orientation (i.e. if all students had allocated a value score of 1 to each question). On the other hand, a potential total of score of 9010 was achievable for a complete student grade orientation (i.e. if all students had allocated a value score of 5 to each

question). The middle value – represented by the horizontal line – represents the “turning point” between learning and grade orientations. In figure 1 the actual scores of the students fall below the middle value indicating that students know that they have to be learning orientated.

- ***Current study behaviour***

Current study behaviour of students as indicated by Figure 2 shows an inclination towards a grading orientation. This is in contrast with the current study orientation of students where a learning orientation was preferred. This result may be indicative of the strong held belief in society that grading is the most important indicator of studying success.

Figure 2: Current study orientation

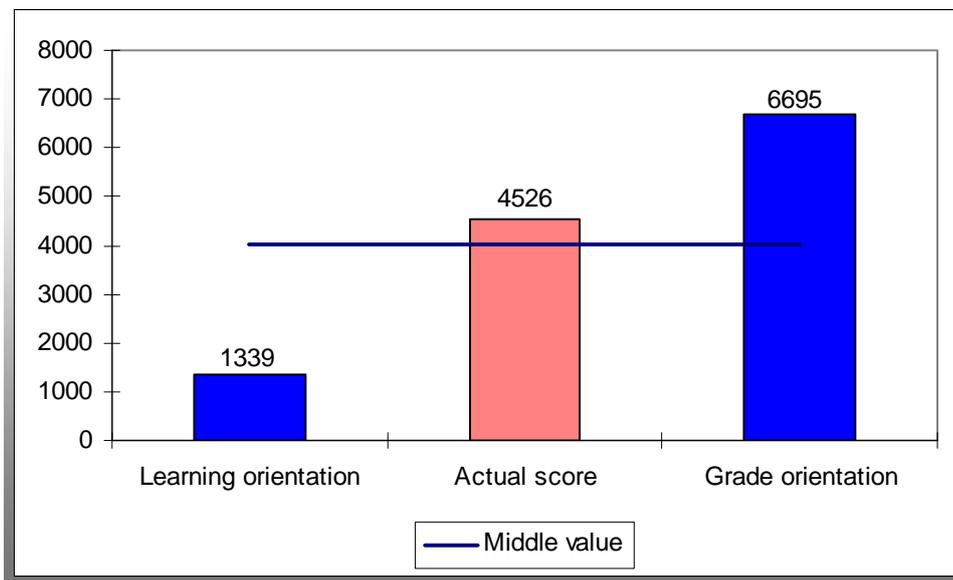
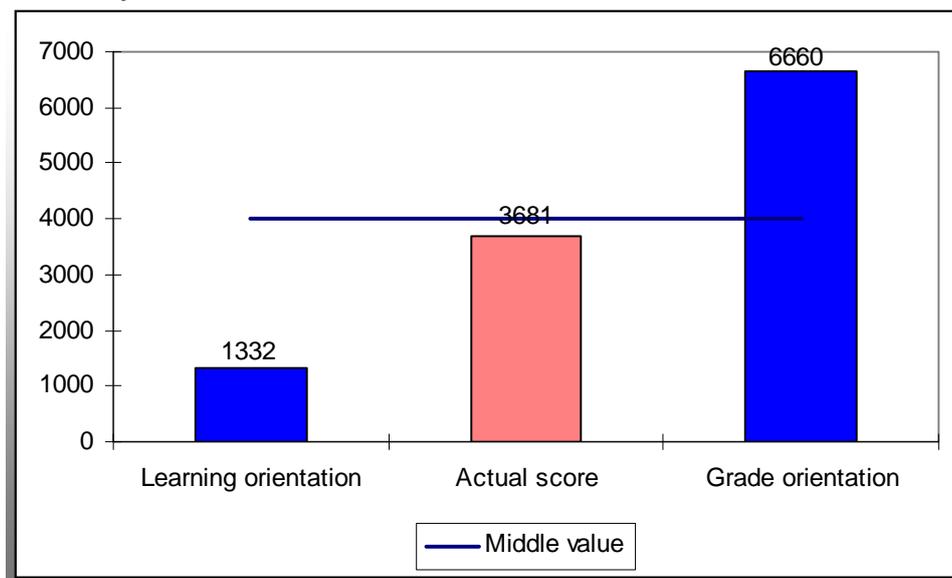


Figure 3: Ideal study behaviour



- ***Ideal study behaviour***

Figure 3 indicates that the students' ideal study orientation is a learning orientation. This implies incongruence between their current study behaviour and their ideal study behaviour. Students are thus aware that they should be learning orientated (Figure 1) but that their behaviour does not reflect that they apply this approach in practice.

- ***Orientation determining factors***

Analysing the individual variables it is revealed that in their current orientation towards studies, learning orientated students feel more strongly about:

- Understanding the field may lead to a good job;
- The study objective being to understand the field and apply the knowledge obtained;
- The need for exposure to a broad spectrum of information; and
- The purpose of studies is to obtain knowledge.

The grade orientated students on the other hand feel most strongly that high marks are an indication of academic success.

Analysing their current study behaviour the learning orientated students feel more strongly about:

- Focus should be on obtaining information about their field;
- Relating course content and practice; and
- Seeking the application of knowledge.

The grade orientated students on the other hand feel most strongly about:

- Knowing prescribed course material; and
- Being driven by prescribed course guidelines.

With regard to ideal study behaviour the learning and grade orientated students respond respectively as follows:

Learning orientated students feel more strongly about:

- Relating course content and practice;
- Being driven by personal development needs; and
- Using various sources of information.

Grade orientated students feel more strongly about:

- Knowing prescribed course material;
- Using prescribed course material; and
- Focussing on the prescribed course.

The researchers discovered significant differences between response distributions of current orientation towards studies and current study behaviour (degrees of freedom = 9, $p = 0,005658$). This implies that students' study behaviour is incongruent with what they believe their study

behaviour should be. One can therefore expect that students may feel uncomfortable in the way they understand and manage their own personalised learning approach.

No significant differences occurred between response distributions of current study orientation and ideal study orientation (degrees of freedom = 9, $p = 0,517$), implying that students understand what study orientation is preferred. This raises the question of whether the educational framework may possibly institutionalise study behaviour that is contradictory to the learning belief orientation of students and the expectancies of the knowledge society.

Several implications for practice emerge from the findings of this research. First, awareness of differing study preferences will help promote understanding of difficulties experienced by students possessing different learning orientations. Second, a question that needs to be addressed is whether the study orientations of students are similar or dissimilar to the preferences held by academic staff, and thirdly, what the effect of academic staff preferences are on the study orientations of students. Discovering the impact of the latter on the study orientations of students may enable higher education institutions to adapt instructional methods to suit the needs of the society better. Lastly, understanding study orientations of students as described by the empirical results may create an opportunity for educators to ensure that an optimal learning environment is provided in accordance to the principals of academic entrepreneurship.

8. Conclusion and Recommendations

It can be concluded that since the medieval period, till today various challenges in the environment in which higher education operates necessitates consideration of establishing co-operative features between institutions of higher education to firstly, capacitate the institutions in terms of resources and secondly, to protect the core function of these institutions to create new knowledge.

Recognition should be given to the fact that since the inception of the university system it was open to students from different parts of the world, giving universities by nature firstly, an international character secondly, allowing students to study under the masters of their choice and lastly, establish a comparative status and reputation for a higher education institution against other higher education institutions.

Further, the offering by institutions of higher education in South Africa today, are to be considered as commodities that could add value, nationally and internationally. However, the current academic entrepreneurship departure point is still relatively weak and the relative performance level is indeed modest as can be expected from South Africa's educational historical past as well as from the transitional challenges imposed on it. However, some positive signs were detected which indicated that higher education institutions in South Africa would be able to position them appropriately to respond to the marketplace demands. In this regard promoting an international character for higher institutions in South Africa may enhance accumulation of entrepreneurial capability and skills as well as purely scientific knowledge which will enhance the potential to transfer expertise from academia to industry and even from abroad to the local market. However, the transfer of expertise can only be achieved if proper mechanisms are created to manage the interface between higher education institutions. In this

regard Balázs (1996) considered mechanisms such as science parks, technology centres and small spin-offs as possibilities.

The integration of academic and business goals forms the basis for growing the entrepreneurial university. Institutions of higher education in South Africa are increasingly recognized to have a broader role in the economic development of the country. The idea is that scientific knowledge has to prove its economic value. In this regard two critical challenges are imposed: first, how to develop a professional interest in academia to work with industry, especially in those working in the applied sciences? and second, what funding formula should be applied to condition academia to engage with industry?

Higher education institutions in South Africa are furthermore challenged to transform themselves into a learning academia. Ensuring successful transformation into a learning academia, higher education institutions must be able to constantly adapt to new challenges in and position itself as a global player in the knowledge economy. Through the latter, universities will fulfill a role as an instrument for bringing high quality human capital into the society. The survey results emphasized the challenge by indicating that the majority of respondents still clearly have a grade orientation instead of having a learning orientation towards their studies. This illustrates the challenge of higher education institutions to install a learning orientation in students as a critical prerequisite to promote academic entrepreneurship in South Africa.

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Problem Definition

Whilst South Africa is in a process of transforming higher education to address the imbalances of the past, the question arises whether higher education is able to make the transition to academic entrepreneurship as expected by the new global economy which regards knowledge as a commercialized commodity.

Research Questions

The principal research question under investigation is to evaluate to what extent academic entrepreneurship came into being in institutions of higher education in South Africa, and secondly, what challenges are created by this phenomenon for South Africa's higher education institutions?

Theoretical Framework

A historical theoretical framework, in which a timeframe perspective was adopted, combined with a learning theory framework - based upon the commonalities in the learning theories of Carl Rogers, the social development theory, situated learning, the behaviouristic theory and the constructivist theory – was adopted to explain the transitional changes that occurred in higher education in South Africa, to deduce the nature of the modern university, and to conclude challenges for South Africa in its perusal to promote academic entrepreneurship.

Empirical Context

The empirical context in which the study was conducted was in the South African higher education environment.

Research Phase

This research forms part of a more comprehensive research programme focusing on the repositioning of higher education in South Africa to address the educational imbalances of the past and to ensure the relevance of higher education institutions in an increasingly competitive global environment.

Contribution

The paper provides an indication of the transition in higher education in South Africa and the challenges currently faced.