

## TRANSFORMATION IN HIGHER EDUCATION AND FINANCIAL SUSTAINABILITY: THE IFIE-CONCEPT

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### Abstract

*The world today is in a period of transition. Traditional higher education institutions also seem to have lost whatever stability they may once have possessed. A failure to respond to exponential change in society affects the economic growth and the development of any enterprise. Higher educational institutions have had to make a paradigm shift; no longer can they merely systematize value (using, measuring, controlling and managing knowledge), they must now create value by formulating and producing market-driven niche products (economic value of knowledge) congruent with the existing or desired mission, vision, strategic imperatives and intrinsic nature of the institution. It is argued that the adaptive responsiveness towards the implementation of the forces arising from the synergistic effects embedded within the integration of financial and intellectual capital (entrepreneurial skills and creative ideas in the minds of people that do not form part and parcel of a service contract/job description) shaped by entrepreneurial activity (IFIE-concept) could revitalize processes and attitudes and prevent educational institutions from becoming poverty stricken academic communities – i.e., transform the institution into robust and independent academic bodies with identity, integrity and self esteem.*

### 1. THE CONTEXT

The Minister of Education has stated that “universities are too valuable to be constantly battered by the demands of disruptive policy, but transformation also demands engaged, responsive institutions. It would be peculiar, indeed, for our universities to be unaffected by the changing and changed priorities of our country” (Pandor cited by Fourie 2004: 15-16).

Clark’s “triangle of co-ordination” combines three groups of actors: government or state authority, the market, and the academic oligarchy, to construct a model of system co-ordination in which the location of each higher education system represents the degree of power of each of the three elements (cited by Fourie 2004: 9).

In accordance with the aforementioned notions and in order to survive, it is argued that educational institutions should incorporate into their model of system co-ordination structures, a definition for “academic oligarchy” which distinguishes between academic duties and intellectual capital.

## 2. IMPACT OF CHANGE ON THE INTERNAL ENVIRONMENT

In general, environmental conditions affect the institutions and people within their ambit. Changes to the environment often enforce change within it.

"It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change" (Charles Darwin as quoted in Smit 2002: 1).

Although applicable primarily to living phenomena, unresponsiveness towards exponential change seems also to impact on economic growth and the development of any existing/newly founded enterprise. "Change" often brings about competition between educational institutions which challenges the responsiveness of the internal environment towards restructuring systems to accommodate this change.

Identifying stressors does not necessarily alleviate any of the imposed constraints, but it may indicate the need for an opportunity-based departure. It is what the institution does not know but others do know that poses a threat - not knowing where, when, what and how the environment will strike at the internal environment of the institution. An awareness of possibility of something happening with cataclysmic effects influences many aspects of the work-world (Wheatley 2002: 273). Stressors changed into challenges can bring about desired solutions. If this reasoning seems to be realistic and logical, why then do many organizations become obsolete? A possible answer lies within the following considerations:

What is needed for survival (*sustainability*) within a changing environment (*stressor*) is adaptive responsiveness (*action*) towards the implementation of the forces resulting from the synergistic effects, embedded within the integration (*method*) of intellectual capital (*resource*) shaped by entrepreneurial activity (*skill*), to revitalize processes and attitudes (*means*) satisfying the desires of all people involved (*effect*) in order to obtain innovative products (*solutions*).

The ways in which institutions prioritize the above considerations indicated in brackets affect and determine the ability of the institution to survive and flourish.

Where should an educational institution under internal and external environmental strain begin? The external and internal environments demand that institutions think creatively to establish foci and niche areas within the scope of their activities. Creative thinking lies in the minds of the people and often results in innovative ideas that may compete successfully against the old, divergent views that end in killer applications making big organizations obsolete. Should the aforementioned views relate to rational perspectives it is necessary to describe *innovativeness* as well as *intellectual capital* prior to the proposed method that could alleviate possible stressors on financial capital imposed by environmental change.

## 2.1 Innovativeness

What is needed in an ever changing environment is innovativeness - the creative fantasy of people. Innovativeness is entrepreneurial activity best described as a way of thinking, reasoning; and a way of acting that welcomes opportunity, embraces change, and focuses on niche markets. It implies a leadership attitude (Smit 2002: 1). It incorporates the ability to sense and seize an opportunity where others see chaos, contradiction, and confusion (Timmons 1999: 28-29). Entrepreneurial activity results in the creation, enhancement, realization, and renewal of values, not just for the primary actors, but also for all the participants and stakeholders involved. It requires a willingness to take risks (financial and personal) in a calculated manner; and the resilience to accept failure (Morris and Kuratko 2002: 15-17). Entrepreneurial activity within an enterprise is not a temporary cosmetic, incidental adjustment (Smit 2002: 12) but rather the creation of a lasting entrepreneurial mindset (Morris and Kuratko 2002: 97) producing fundamental institutional change.

Although “entrepreneurial” activities at traditional higher education institutions have been *a-typical*, they have the potential of making a university financially independent and of enabling the university as an academic institution (creation, transfer, and application of scientific knowledge, methods and competencies, with the crux of the definition resting on the word scientific) to flourish. So while it remains that an academic institution cannot be divorced from its social and economic environment, it is also true that the institution cannot be completely identified with it either (Strauss 2002: 7). It would be wise to remember that there is an inherent conflict between the profit-seeking values of the market and the commitment of higher education to the disinterested pursuit of knowledge. What place does an institutional mission hold in choices concerning institutional revenue streams?

Analysis should indicate that the ultimate goal of any revenue-diversification effort should be the generation of *new nett returns*, not simply the generation of *new revenue* (Hearn 2003: iii). One way to generate *new nett return* is simply to generate *new revenue value* by utilizing *intellectual capital*.

## 2.2 Intellectual capital

Intellectual competence is the skilled scholarly know-how that can be defined as the mental ability of people that does not form part and parcel of their service contract or job description. When intellectual competence produces economic growth and development it becomes intellectual capital. Intellectual capital is the entrepreneurial investment needed to produce growth. Intellectual capital driven by entrepreneurial skills to generate opportunity is an external core competence that can be distinguished from financial capital or corporate managerial skills which are internal core competencies. Ideas are often the consequence of contact between individuals and their customers or their competitors, prompted by the technological and regulatory environments (external and internal) in which they

find themselves. Within these environments people invest time to seek new opportunities by asking relevant questions. In finding appropriate answers they create new knowledge or discover the value of previously unappreciated information, or apply information in a new order of structure.

The implementation of a new solution (product), often elicits two divergent attitudes:

First, the employer claims the new knowledge in order to exploit it as a corporate entrepreneurial activity, with the objective of creating a new revenue stream [(third income stream in addition to financial capital (lecture fees, research attributes, subsidy, grants and donations)]. Educational institutions could diversify their revenue streams by many ways (e.g., see Hearn 2003: 7-18) and means (e.g., see Hearn 2003: 19-26). The entrepreneurial incentive is often jeopardized by the fact that the model in hand assumes that educational institutions at present own intellectual property (IP) in the following cases:

- When knowledge that exists in the public domain is used to produce a product, they own this knowledge. This view is not true since they own a product. The institution does not have proprietary right but merely the right of possession and may embark on exploiting their product.
- When intellectual competence, including the creative thinking, forms part of the service contract or job description. This poses an additional obstacle - the unpredicted and unidentified competency that culminates in a function is non-existent when the service contract is signed or when the job description is defined. The only valid view appears to be that intellectual competence is present in the model in hand.

Second, the employee appropriates the new innovative knowledge, which is now intellectual capital, with the intention of commercializing it for self-enrichment. The employee feels that:

- The new innovative idea does not form part of the corpus of knowledge embarked on by the institution.
- The competence that he or she required to formulate the innovative and market-driven idea come from a genetic predisposition, an academic upbringing and stimulation by the environment acquired independently of the academic institution. The employee claims right of possession or even ownership of the intellectual property.

Educational institutions have no alternative but to accept the fact that technology and legislation have done away with the illusion that traditional universities, newly founded technical universities or private educational units are the sole providers/proprietors of knowledge (Barnet in Jarvis 2001: 139). The importance

of knowledge lies in the fact that it affects the rise and fall of professions and can influence social classes, regions and even nations.

Furthermore, no educational institution can prevent its employees by means of a policy or a job description from exploiting creative fantasies and ideas beyond the borders of the institution. The following actions can develop:

Action 1: Prior to engaging in research activities, students and employees could decide how best to benefit from new ideas. In the traditional way, they could use the knowledge to acquire a degree or to publish articles. Since educational institutions show less competence and experience in facilitating new venture creation and survival (Gallagher 2000: 27), they could decide to use the knowledge more entrepreneurially by marketing it as a private venture, or selling it to an existing company, or even producing it in a newly founded company of their own. In every instance an idea is the scarce and driving force.

Action 2: Educational institutions might claim ownership of IP in those instances where chance generated new innovative knowledge via commissioned research. Even then the question remains as to who gave the instruction to do what and to achieve what. In addition, it is questionable whether an educational institution can possess IP in the form of a patent.

Irrespective of the views which state that knowledge development and transition in a changing environment has three conditions namely empirical, pragmatic and rational (Jarvis 2001: 41) and appears to be the result of paradigmatic developments in the knowledge society (Lategan 2003: 195-198), it seems appropriate to state that what is also needed in a changing environment is to acquire new and innovative knowledge which can be implemented and satisfy a relevant market-driven demand. What seems to be inevitable is that the environment demands change which implies that the level of useful knowledge must be upgraded. This calls on intellectual capital, with the implication that an educational institution could become a client of its own employees. Employees could become drivers of the economy, and through their innovative efforts they could render existing products, structures and/or industries obsolete. "Obviously, and not at all surprisingly, success in revenue seeking depends in good part on opportunistic, talented individuals with good ideas. Still, leaders can improve the *odds* with organizational savvy" (Hearn 2003: 21).

It is important that all parties concerned realize that a lack of financial capital could become a constraint in the implementation process, and also that intellectual capital is the driving scarce resource which could become a strategic asset. Whether a corporate institution should embark on unexploited intellectual capital or not is often determined by how the *stressors* that originate in the internal and external environments impact on the intellectual and economical status of the internal environment.

### 3. STRESSORS

Exponential change is universal and has direct bearing on any large organization. In this growing but turbulent market for higher education external and internal forces apply pressure at all levels, and to such an extent that many of these institutions seem to have lost the characteristic stability they may once have possessed.

#### 3.1 External forces

When the following external forces coincide with the new lifelong learning movement and with the globalization of higher education, they may destabilize cultures and niches at established educational institutions, and act as stressors:

- The increasing rate of technological advances and the half-life of useful knowledge (Wheatley 2002: 273).
- The persistence of incremental reactive social change (Kotter 1996: 3).
- Legislation (curriculum reform) and globalization trends in education (Hay and Hay 2003: 1-10).
- New corporate entrants in the educational industry (Hearn 2003: 1).
- The complexities of being a traditional, classical university striving to become an entrepreneurial university (inequality of funding, capacity, access, success rates, standards, resources and shrinking state subsidies) (Fourie and Fourie 2000: 17; Smit 2002: 6).
- The duplication of educational institutions functioning in the absence of well defined niche areas.
- Ability to establish quality assurance in the South African context (Strydom 2004: 101-111).
- The government's higher education policies since the apartheid period (Fataar 2003: 31-38; Luescher and Symes 2003: 1-33).
- The reduction in governmental funding which could imperil the preservation of academic imperatives (Bowden 1980; Fourie 2004: 12).

These same forces present opportunities and challenges for all educational institutions in South Africa. As part of the problem solving process, however, educational institutions have had to become dependent on intellectual competence culminating in intellectual capital.

#### 3.2 Internal forces

The internal environment also plays a major part in the success or failure of an educational institution. Managerial skills that succeed in a stable environment are not necessarily successful in an unstable environment. What guarantees do employees have that the present mindsets and managerial skills will continue to show responsiveness towards the challenges of an ever-changing external

environment and how will these views in the long-term affect the remuneration status of all involved?

Innovative corporate initiatives acknowledge and respond to reactive social change and require that routines and habits relating to the existing dominant logic be re-visited. The ability to learn and the need to unlearn become appropriate. The longer a dominant logic has been in place within the organization, the harder it is to unlearn (*systemic inertia*). It often takes a crisis before existing assumptions, routines, and systems are questioned (Morris and Kuratko 2002: 31). An incremental approach to change is superficial, especially in a rapidly changing environment (Bartlett 2002: 46). The paradigm-shift in mindset and the time required for implementing new innovative dimensions, pose a rate-limiting constraint on change should a time limit be demanded. In addition to the general turmoil of restructuring and re-engineering an existing institution (Bartlett 2002: 45), many stressors (for a comprehensive review refer to Smit 2002: 6-14) could act on the educational environment. The following additional difficulties in bringing about a change in a corporate culture must also be considered:

### 3.2.1 *Financial capital*

The traditional structure of organizations has its foundation in the assumption that financial viability is determined by the effective use of capital, return on investment (ROI), and earnings per share. The ultimate goal of any revenue-diversification effort should be the generation of *new nett returns*, not simply the generation of *new revenue* (Hearn 2003: iii). One way to generate new nett return is simply to generate *new revenue value* by utilizing intellectual capital.

A revenue theory of cost in which increased revenue is being sought in order to pursue excellence, prestige, and influence, tends to develop in sophisticated systems into the control and management of financial capital through vertical control directives. Intelligence is diverted to the top of the management structure in order to evaluate and prioritize information and to allocate funding accordingly. This approach emerges in top-down cascading internal directives which are supposed not only to determine the objectives but also in that process set the terms and the direction of the aims (Bartlett 2002: 45). Since intellectual capital should reside deep down in the organization, the diversion of managerial skills and 'intelligence' to the top of the management structure culminating in the traditional top-down derivatives produces a less viable institution than the case where a bottom-up approach is followed. The focus of accountability should be on the individual rather than on the institution.

But, leaders do not always come to terms with the idea that staff members can act as managers for entrepreneurial activities. Notice, too, how all kinds of convoluted theories have developed around workload models (managerialism). It is only when faculty activities can be reduced to figures that the suits may be mollified (Nel and De Beer 2004:161) / modified craftily initiated by invoking uncontested truths such as "the drive to broaden access" (Marsicano and Marues 1999:131)

and the ideals of “democratization”, “massafication” of higher education in South African universities whereas the need for a *critical mass of intellectuals* and productive employment are deteriorating (Nel & De Beer 2004: 161).

Better economic growth rates do not always imply focus on the under-performing business/academic units (Zook and Allen 2001: 3, 18), implementation of transformation legislation or the selling of assets to limit expenditures.

Financial capital and managerial skills *per se* are important but not always the constraining and/or strategic resource.

### 3.2.2 Demand-driven outputs vs. supply driven inputs

A university is much more than merely its function within the logical-analytical and socio-political aspect of reality. The university is not only a community of teachers and scholars. The nature of the credo of an academic institution (formulation of its vision and mission statements) cannot be divorced from society. The solemn academic appeal for academic freedom is challenged to face the claims of accountability - ‘relevance for society’ - involving community service. As a consequence it seems appropriate to state that typical aims could become atypical aims and vice versa - what was once considered the less important could become the more important. If the university is an educational institution, this basic character should play a guiding role in all its activities.

#### 3.2.2.1. Institutional autonomy and public accountability

According to Fourie (2004: 17) the first objective of the state National Plan (2001) is to transform higher education in South Africa to be achieved by the mechanism of linking the allocation of funds to activity and output, in particular to the delivery of teaching-related and research-related services that contribute to the social and economic development of the country. The distribution of funds, that is, will be goal-orientated and performance-related. The rationale for this policy shift is the conviction that accountability is owed to society - in particular to the taxpayer - because society is both the major funder and the major beneficiary of higher education (Tight 1988: 130). Accordingly, institutional autonomy must be coupled to public accountability (Fourie 2004: 14). With gears and leavers the Department of Education (or government or state) will steer higher education in a pre-ordained and presumably approved direction by functionaries who pander to the mandarins of education or government approved social engineers (Nel and De Beer 2004: 160-161).

A problem seems to be that educational institutions find it difficult to answer the following question: If educational enterprises are so clever and competent, why then, do they continue to rely on subsidy? In a competitive world outsiders should not be the key role players in the main decision making processes. Until managers wean themselves of reliance on subsidy, the independence of the institution will always be compromised. Evidence shows expansion of the higher education sector has outstripped government subsidies. This deficit has created



the entrepreneurial opportunity to become self-sufficient and self-reliant within the non-political domains of society. The institutions have become accountable for service-delivery. The specific directional choices of an institution presuppose an internal sphere of freedom and ability of the institution to pursue its own typical goals while maintaining its *sphere-sovereignty*. Failure to do so may lead to a process of *de-differentiation*, i.e., to an undifferentiated totalitarian societal condition.

Within these perspectives, two standards emerged in higher education, namely quality assurance and quality improvement. Both share a common denominator in that the human element, once again, can never be neglected in the quest for quality (Roode 1995: 1).

There is an alarming growth in non-traditional higher education providers competing directly with the classic government-based universities (Sheehan 2000: 3). Why do private institutions see an opportunity and develop niches in the overall national system? Markets could be more specialized, segmented, 'niched' (Smit 2002: 2), and harder to classify because of changing societal environment (Morris and Kuratko, 2002: 14-15). Traditional universities are not the sole disseminators of knowledge anymore and government is continually raising regulatory and legal standards. These entities presumably create more hazards and opportunities for everyone (Kotter 1996: 18), forcing organisations to make dramatic improvements, not only to compete and prosper, but even to survive. In a rapidly changing environment the aforementioned forces could turn 'self-centredness' and 'autonomy' into meaningless prospects. To counter-act these external forces, many universities should alter existing structures and systems to accommodate an additional route for demand-driven entrepreneurial activities independent of the routes followed for supply-driven teaching and research activities - and do so more rapidly than ever. This requirement does not mean that universities have to take on new functions - they should rather revise their functions in the context of a changing society.

### 3.2.2.2. Teaching approach

In accordance with the teaching approach, educational institutions are influenced by developments in the knowledge society which impact on these institutions and the way in which they execute their core assignment of knowledge production (research) and knowledge transmission (teaching and learning) (Lategan 2003: 192).

Outcome based education and training (OBET), furthermore, challenges the heart and soul of many of the supply-driven academic inputs that have been propagated for decades in many of the traditional academic institutions - "churning out illiterates by the thousands, graduates who are unable to write coherently, if at all" (Nel & De Beer 2004: 158). A supply-driven generalized formative approach culminating in generic degrees could render an inferior outcome when compared to a more focused, up to date, relevant and specialized

approach which satisfies specific market driven demands i.e. “building a competency-based training curriculum for each job” (Jarvis 2001: 117). The crucial impulse should be directed towards training for specific occupation - what the learner can do has become more important than what the learner knows but cannot apply in practice. Logic foretells that the status quo will automatically ensure that some traditional fields of study are bypassed (brought about by social change), whilst others (generic degrees) will fall into disuse (not demand driven). It is important to realize that although the acquisition of knowledge and skills alters people’s minds and their attitudes, it is their values, their ideals, their motives and intentions that will make them educated persons (Higgs 2002: 144-145). But these value-laden activities should not overrule the formative demands of an economic and technological rationality: “Essential is the development of both competence and wisdom that will enable us to both make a living and sense of life” (Rossouw 2000: 101).

### 3.2.2.3. Strategic research

To increase problem solving or applied research while maintaining a core knowledge base in basic academic disciplines, *strategic research* could change the phrase “publish or perish” into “publish and perish”. Time has come where the external environment dictates that science for the sake of science (puzzles and questions to be found in the literature with the aim of creating more knowledge or of embarking on compensation by means of subsidy or of acquiring credit for promotion purposes or of curriculum vitae building) could become less appropriate than science for the sake of humanity (producing valid and useful knowledge to satisfy the needs of the real world). Outcome based education (OBE) does not cater for similar educational concepts being implemented in research - the words *outcome based research* appears to be absent and lacking in education terminology. Universities should in addition to their core activities, also commercialize opportunities culminating in products other than degrees or publications - they should run enterprises within an enterprise turning educational institutions into academic institutions “where material is produced that could be used by knowledge producers outside the universities” (Moja and Cloete 2001: 247). “Higher education” is now regarded as “big business” and must be “moved from institutions seeking the truth to institutions packing knowledge for sale” (Lategan 2003: 192). These views propose that universities take ownership of their own research achievements.

If it is true that an academic institution cannot be divorced from its social and economic environment the question remains why it cannot be identified with it either (Strauss 2002: 7). “A workable twentieth century definition of institutional autonomy is the absence of dependence upon a single narrow base support” (Babbidge and Rosenzweig 1962: 158). Ideas often seem to end up in failure: contract research and consultation show that universities tend not to deliver:

“While the leading universities were seen by users to have appropriate skills and experience involving consultancies, research contracts and IP

licensing, they failed to meet agreed deadlines and produce the agreed research outputs” (Gallagher 2000: 27).

Since ideas are the limiting resources (and not financial capital or managerial skills), the contrary could also rule i.e. that the intellectual capital could set the point for departure. Individuals or corporate models outside the boundaries of a university could respond and become part and parcel of the problem-solving process. The promotion of partnerships seems to be inevitable. These views could become relevant issue in those instances where terms of agreement between employers and employees cannot be negotiated, or where financial burdens or the appropriate skills and apparatus present in the internal environment are limiting factors.

Others question the ability of universities to do both teaching and research (Hollinger 2000: 5). This view believes the “and” should change to “or” in order to bring about more desired results - but at present both activities are present and implemented in one single institution. Various consequences ensue:

- The will to “drive an organization up the learning curve to get better in what they’ve always been doing” instead of “jumping learning curves and being willing to constantly redefine the environment (business, product and processes) to self-renew” (Bartlett 2002: 46) should be more vigorously pursued. This approach would be feasible only if different management routes and strategies exist that could accommodate academic entrepreneurship by establishing non-tenure-track faculty lines to address emerging instructional and analytic needs in the market place (Hearn and Anderson 2001: 125-149).
- There should be no threats towards becoming instrumental in the success or failure of any entrepreneurial initiative or of any phenomena that could overrule the basic principles ascribed to coherent team effort and team spirit within the internal environment. “Internal winners are resented by relative losers because there is no clear set of central organizational principles around which debate and renewal can occur” (Gallagher 2000: 40). Furthermore, organizational structures should also be put in place to ensure that the required entrepreneurial character of academic institutions do not stifle the collegial spirit.
- It appears obvious that the employer should determine how an employee’s efforts should be rewarded when the employee gives access to intellectual property located outside the borders of the service contract. Many employees develop over time yet find themselves in the same position year after year. “In many institutions the prevailing atmosphere suggests that a number of academics and wannabe bosses have embraced the concept of enforcing a set of rules and regulations to compel academics to sit in offices and lurk in institutional hallways to satisfy the whims of functionaries and officials”.....“clearly perceiving the dangers of our lemming-like, follow-my-

leader, mindless capitulation" (Nel and De Beer, 2004: 159) and "toothless passive, moribund senates (Nel and De Beer, 2004: 161) transpiring in "garnering more financial wealth to remunerate managers" (Nel and De Beer, 2004: 159).

- Since financial capital is limited, academic institutions will also have to differentiate between important and less important research inputs. Since employees do not always enjoy equal environments and conditions (funding, apparatus, decision-making processes) when competing for promotion, the criteria for promotion and reward should be carefully determined - existing criteria for promotion appear to ignore entrepreneurial skills and activities.
- Labour law practices (working hours) come into play. Nobody can do everything within specific time-imposed constraints.

### 3.2.3 Resources

The challenge for educational institutions today is to maintain high quality and competitive standing despite severe and increasing resource constraints (Hearn 2003: 1). Universities do not have to strain their resources in order always to satisfy the demands of all people. They must accept that knowledge outruns resources (Clark 2000: 11). These views could be misleading. It is the identification of niche areas in the over-all national system (intellectual capital) that needs attention and will promote identity and competitive standing. Human resources in the form of skills and human resources in the form of intellectual capital are not identical.

### 3.2.4 Interdisciplinary- and multidisciplinary actions

"A major characteristic of this multi-departmental and interdisciplinary approach is that the knowledge production (in all its formats) is increasingly becoming interdisciplinary in its quest to address complex technological, cultural and social problems" (Ensor in Lategan 2003: 192).

What is absent in the credos of many academic institutions is a constructive and integrating ideal of the collaborative unity of all disciplines, guided by a particular life and world view. A key element in the development of universities as centres of discovery and innovation is the power hidden in the cross-fertilization of different academic disciplines (including the humanities) to create opportunities through multidisciplinary actions (Castells 2001: 194). Furthermore, a department's academic emphasis or location does not often indicate its adaptive capabilities (Davies 2001: 25-43). Universities do not utilize and incorporate into their structures sufficiently their scope - the idea that they are better positioned (*'universitas scientiarium'*) than private academic institutions to involve so many different academic disciplines in problem solving.

Science for the sake of science produces faculties that maintain what is known as

a *studium generale* in which a unifying perspective amidst the diversity of scholarly disciplines prevails. The central concern is scholarly reflection itself which has succumbed to the practice of a *multi-versity* in spite of the unity - *uni-versity* (Strauss 2002: 7). Unwillingness to make professional contact across the traditional borders of specific sciences often causes a tunnel vision: The rationale for post graduate studies often reflects a deep commitment to specialization within a specific science. But effective outcomes are often achieved by the fact that scientists can identify and in the process avoid the constraints and limitations brought about by the scientific inability to measure change. In this process perspectives are often distorted. These personalised distortions pose less threat or impediment for entry for other scientists specialized in other fields to identify an opportunity. The challenge is to build a sustainable advantage that competitors would struggle to emulate. This can be done by improving the organization of the institution, and by improving the level of work of members of the organization. Both these improvements may be achieved by overcoming the rigidity of specialization within the institution, and developing a more integrated approach between disciplines. This requires the skills to alter the internal environment to create a frictionless communication network. This environment will attract, engage and retain talented individuals with the requisite entrepreneurial skills and expertise to formulate newly-founded market-driven initiatives (Bartlett 2002: 46-47). These processes could give all concerned meaning and room for further development. A direct consequence will be the enrichment of the internal milieu of the institution.

#### **4. METHOD TO CREATE NEW REVENUE VALUE**

A method is a way to a goal. Implementing the *integrated forces* inherent in *financial-* and *intellectual* capital shaped by *entrepreneurial* managerial skills (IFIE-concept) will activate dormant and dominant synergistic effects. This will create added revenue value. Although financial capital and managerial skills tend to dominate, consciously pursuing an integrated approach is crucial. In order to acquire control of an innovative product and prevent its exploitation by employees outside the boundaries of a specific service contract, the following three challenges, unless resolved, could become a constraint in creating new revenue value:

##### **4.1 Responsiveness towards different value systems**

The profit-seeking values of the market (educational institutions) to survive and the commitment of higher education to the disinterested pursuit of knowledge, produces different value-systems and conflict. Social norms (as voiced by central government), and academic values (represented by undebated self-determining institutions, basic units, and individuals) will generate tension/conflict in a cyclic form of dominance (Kogan 1992: 47). We have to accept that these values at stake are incompatible and that their conflict is more fundamental than a simple distinction between rational and irrational or the rationalities of different traditions (Fourie 2004: 18). It is therefore essential that the values themselves and the

conflicts between them should be exposed and encountered in a responsive and responsible way in the light of a profound understanding of the essence of higher education itself, educational autonomy (Fourie 2004: 18), and individual autonomy.

#### 4.2 Attitude

Though employees are usually loyal to their institution, they may be corrupted by circumstances. To get the most out of employees, and to use their skills most beneficially to the advantage of the institution, may require transforming the institution: old, restrictive practices must be removed. And employees must be given opportunity and scope to use their talents.

A case could be put forward that employers try to capture the innovative intelligence of their employees. In these instances employers should realize that competitors tend to react rapidly to new information and new opportunities (Moja and Cloete 2001: 247). This tendency applies also to academic institutions. Worse then, is to retreat into a conservative reactionism: of such institutions Timmons has written:

*"What they lacked in creativity and the flexibility to deal with ambiguity and rapid change, they made up for with rules, structure, hierarchy, and quantitative analysis"* (Timmons 1999: 517).

An encouraging managerial attitude towards reaching terms of agreement on profit-sharing with employees who create added revenue value could give the institution access to intellectual property located outside the borders of a service contract.

#### 4.3 Reward / financial incentives

Indisputably, the internal organization of an institution produces the type of employee behaviour that management encourages and rewards. If intellectual capital/entrepreneurial skills are important for the creation of value, then an institution needs to find ways to distribute more of the value to the employees - not as a secondary but as a primary responsibility. This is what sole proprietors do; this is what partnerships do; this is what small start-ups do; but this is what some of the large educational institutions haven't done. They are still measuring, evaluating, and rewarding employees by the traditional ways. "A concomitant increase in salaries is not, however, even considered because, you see, enough propaganda has been disseminated to induce academics into thinking that theirs is a profession founded on the noble principles of charity and selfless devotion" (Nel and De Beer 2004: 157) or the perception that an academic career would allow opportunities for self-motivated research (Marsicano et al. 1999: 131). Unless these views are reconsidered, an effective *talent retention strategy* (review Swanepoel 2004: 229-237) will become a reality.

And this old approach simply perpetuates an unnecessary layer of bureaucracy (which leaves the organization more vulnerable).

*"When they do attack, the new entrant companies find the established players to be easy and unprepared opponents"* (Timmons 1999: 29).

Forming joint ventures seems a feasible method of counter-acting the possibility of creative employees becoming the competitor of the institution.

## **5. CONCLUSION**

The rate of exponential social change within the external environment of educational institutions has changed the face of the internal environment of higher education forever. Competition amongst universities and between universities and private institutions is also increasing. Furthermore, unresponsiveness towards exponential change could impact on economic growth and the development of any existing or newly founded enterprise.

Although the credo of an academic institution can never ignore society, universities must be more than the mere factotum of society. An academic institution cannot be divorced from its social and economic environment, but it must not be totally identified with it either.

What is the position of an educational institution in the commercial life of its society? The ultimate goal of any revenue-diversification effort should be the generation of new nett returns, not simply the generation of new revenue (Hearn 2003: iii). One way to generate new nett return is simply to generate new revenue value. New revenue value can be added to the indicators of financial capital by gaining access to intellectual property located outside the borders of a service contract: by utilizing intellectual capital present within the internal or external environment of the institution. Intellectual capital and skills are not synonymous and the promotion of forming joint ventures seems to be inevitable.

A constructive and integrating ideal of the collaborative unity of all disciplines, guided by a particular life and world view, appears to be absent in the credos of many academic institutions. Since knowledge production (in all its formats) is increasingly becoming interdisciplinary in its quest to address complex technological, cultural and social problems, traditional educational institutions should focus on the powers hidden in the cross-fertilization of different academic disciplines to create opportunities through multidisciplinary actions.

When the place of the university within society is contemplated, the ideological one-sidedness of positivism should not be replaced by a plea for societal relevance that simply transforms the university into a mere extension of some or other non-academic societal institution (Strauss 2002: 1) i.e. the university must not be turned into the handmaiden of industry (Smit 2002: 13; Lategan 2003: 192). However, "a workable twentieth century definition of institutional autonomy is the absence of dependence upon a single narrow base support" (Babbidge and

Rosenzweig 1962:158). Universities should commercialize opportunities culminating in niche products other than degrees or publications - commit themselves towards differentiated and applied outcome-based strategic research (OBR) to produce valid and useful knowledge to satisfy the needs of the real world. Furthermore, universities must own these research achievements with the implication that *educational* institutions must become *academic* institutions and "big business that packages knowledge for sale".

The challenge is to elicit and link knowledge and expertise in such a way as to disperse them, and to develop people and relationships as a source of organizational capability. By implementing the integrated forces resulting from the synergistic effects embedded within the integration of financial and intellectual capital shaped by entrepreneurial activity (IFIE-concept), universities could activate dormant and dominant synergistic effects, create pockets of excellence and find their own niche markets. This concept asks for a clear set of central organizational principles and changes (new identities, structures, cultures, reward systems, information processes and work designs) around which debate and renewal can occur (Gallagher 2000: 40). This action would break through the status quo, allowing renewal at all levels in academic institutions, including their ability to produce economic growth.

## 6. REFERENCES

- Babbidge, D. and Rosenzweig, R.  
1962. The federal interest in higher education. New York. McGraw-Hill.
- Bartlett, C.  
2002. Viewpoint in Business the Ultimate Resource. Bloomsbury Publishing PLC. London.
- Bowden, H.R.  
1980. The costs of higher education: How much colleagues and Universities Spend per Student and How Much Should They Spend? San Francisco: Jossey-Bass.
- Castells, M.  
2001. Universities as dynamic systems of contradictory functions. In Muller J, Cloete N and Badat S. Challenges of Globalisation. Pretoria: Maskew Miller Longman. 206-223.
- Clark, B. R.  
2000. Creating Entrepreneurial Universities, Organizational Pathways of Transformation, Imhe General Conference 2000, Paris.



Davies, J L.

2001. The emergence of entrepreneurial cultures in European Universities. *Higher Education Management*, 13(2), 25-43.

Fataar, A.

2003. Higher education policy discourse in South Africa: a struggle for alignment with macro development policy. *SAJHE* 17(2): 31-38.

Fourie, F.C.v.N. and Fourie, M.

2000. Striking a balance between becoming entrepreneurial and nurturing the academic heartland: Is it possible in a transforming higher education institution? *Imhe General Conference 2000*, Paris.

Fourie, M.

2004. *Autonomy and accountability: Keeping the balance in South African higher education*. Inaugural lecture. UFS.

Gallagher, M.

2000. The emergence of entrepreneurial public universities in Australia, *Imhe General Conference 2000*, Paris.

Hay, D and Hay, J.

2003. Postgraduate supervision in a globalised higher education system: Challenges for developing countries. *Journal for New Generation Sciences*. 2 (1): 1-10.

Hearn, J. C.

2003. *Diversifying Campus Revenue Streams: Opportunities and Risks*. American council on education. Washington. 1-37.

Hearn, J C and Anderson, M. S.

2001. Clinical faculty in schools of education: Using staff differentiation to address disparate goals. In W Tierney (Ed), *Faculty Work in Schools of education: Rethinking Roles and Rewards for the 21<sup>st</sup> Century*. Albany, NY: SUNY Press.

Higgs, P.

2002. Education for sustainable development and the virtue of education. *Acta Academia*. 34(2): 138-153.

Hollinger, S.

2000. Changing policy environments it is to change structures than cultures, *Imhe General Conference 2000*, Paris.

Jarvis, P.

2001. *Universities and corporate universities: The higher learning industry in global society*. London: Kogan page.

Kogan, M.

1992. Models of governance and developments in the United Kingdom. Higher Education in Europe. 17(3):46-58.

Kotter, J. P.

1996. Leading change, Harvard Business School Press, First Edition, Boston.

Lategan, L.O.K.

2003. The engaged University. Tydskrif vir Christelike Wetenskap. 1013-1116.

Luescher, T.M., and Symes, A.

2003: The transformation of Higher Education in South Africa: How much have we achieved? CHE, 5<sup>th</sup> CHE Consultative Conference. 1-33.

Marsicano, F., Marues, H. M. and Cukrowski, I.

1999: Towards a rational and flexible workload distribution system in a research orientated university Chemistry Department. South African Journal of Higher Education. 13(3): 131-142.

Moja, T. and Cloete, N.

2001. Vanishing borders and new boundaries. In: Muller, J, Cloete, N. and Badat, S. Challenges of globalization. Pretoria: Mashew Miller Longman. 244-277.

Morris, M. H. C. and Kuratko, D. F.

2002. Corporate Entrepreneurship, Harcourt College Publishers, Fort Worth, First Edition.

Nel, J. and De Beer, K J.

2004. Selling higher education to the highest bidder: Corporatising learning. Interim 3 (2). 157 – 165.

Roode, D.

1995. Leierskap tot optimum kwaliteit: die universiteit in tye van verandering. Acta Academica 27(3): 1-19.

Rossouw, H.W.

2000. Die universiteit as sentrum van intellektuele kultuur. Tydskrif vir Geesteswetenskappe 40/2: 101.

Sheehan, A.

2000. Introduction statement: Mebourne University Private, Imhe General Conference 2000, Paris.

Smit, V. A.

2002. Entrepreneurial Universities: A financial survival perspective. Inaugural lecture. UFS.

Strauss, D.F.M

2002. Historical and systematic considerations relevant to an assessment of the position of the university within a differentiated society. *Journal for Christian Scholarship*. Special Edition.

Strydom, A H.,

2004. Establishing quality assurance in the South African context. *Quality in higher education* 10(2): 101-111.

Swanepoel, L.

2004. Talent Retention: Development as retention Tool. *Interim* 3(1): 229-237.

Tight, M.

1988. So what is academic freedom? in *Academic freedom and responsibility* edited by Malcolm Tight. Milton Keynes: SRHE & Open University Press.

Timmons, J. A.

1999. *New Venture Creation: Entrepreneurship for the 21<sup>st</sup> Century*, McGraw-Hill International Editions, Boston, Fifth Edition.

Wheatley, M.

2002. *Viewpoint in Business the Ultimate Resource*. Bloomsbury Publishing PLC, London.

Zook, C. and Allen, J.

2001. *Profit from the core*, Harvard Business School Press, Boston. First Edition.