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An assessment of the contribution of design education to the knowledge economy in South Africa

Abstract

The Education White Paper (SA, 1997) identifies that the knowledge economy is dependent on knowledge workers that can contribute to the economical development of the country. The White Paper further motivates that it is the role of higher education to provide education and training to develop the skills and innovations that are necessary for national economical development and successful participation in the world economy.

It is the purpose of reformed South African higher education policies to provide guidance, rebuild the nation and drive transformation that is needed in a post-apartheid society and economy. State policies such as the White Paper fulfil an important function in providing guidance and strategic vision to higher education in ensuring alignment to national goals and objectives. State policies and developmental plans assist in identifying the critical performance areas that should be placed on the higher education agenda in order to contribute to the national economic growth and development.

This paper uses the vision for economic growth as presented in the Education White Paper 3 (SA, 1997:1.12), as a backdrop to assess the contributions that are made by design education in present higher education undergraduate programme offerings. The paper investigates the following research question: What are the contributions that are made currently by higher education design education towards the development of the South African knowledge economy?

The research question is investigated through using the following methodology:
Firstly, through conducting a literature survey and policy analysis the paper aims to identify and present the proposed role of higher education in relation to economic development as communicated within the Education White Paper 3. Focus is placed on the training and development needs that are required for the development of a knowledge economy within South Africa.

Secondly, the research design follows a qualitative research approach in order to document and assess the perspective and practises of lecturers within higher education. A case study approach is adopted in examining design departments within a single higher education faculty, which is the Faculty of Art, Design and Architecture.

The assessment process is concluded with a discussion of the research findings.

Key Words:
State policy, knowledge economy, knowledge workers, design programme offering

Introduction:

In 1994 the new South African government faced a number of challenges. One of these challenges was that the South African economy had to be: "integrated into the competitive arena of international production and finance which has witnessed rapid changes as a result of new communication and information technologies." (SA, 1997:1.7) The national agenda were required to address political, social and economic transition for South Africa which included economic reconstruction and development.

It was identified that new technologies placed a premium on knowledge and skills and as a result transformed the way in which people work. The unprecedented development of information and communication technologies became one of the most important factors that contributed to the creation of a globally competitive economy. The post-apartheid government was required bear the global economic requirements in mind within the vision and strategic direction that was presented in the reformed state policies. Due to the nature and requirements of the knowledge centred global economy it was therefore identified that: "higher education must provide education and training to

develop the skills and innovations necessary for national development and successful participation in the global economy. " (SA, 1997: 1.11)

In 1997 the Education White Paper 3 (SA, 1997) was published. This policy aimed to identify the role and agenda for higher education within the societal and economic transformation and reconstruction requirements of the country. The changing context for higher education and the impact of a knowledge society is also addressed in the Council of Higher Education (2002) document; *New Academic Policy for Programmes and Qualifications in Higher Education* and repeated in the National Plan for Higher Education (SA, 2001).

Today, ten years after the publication of the White Paper, it is expected that higher education would haves adopted the proposals as presented in the White Paper and that programme offering have embraced training and development requirements needed within a knowledge economy. This paper therefore aims to assess the current design education practices in comparison to the proposed agenda as presented in the White Paper.

Training and development requirements for a knowledge economy

Harrison, Wheeler and Whitehead (2004:94) state that "the change in the world of work from a traditional to the professional and service sectors, together with the new economy, has led to the dependence on professionals and the emergence and the strengthening of the development of the knowledge worker." In the knowledge economy, knowledge workers are regarded as valuable assets to an organization. The University of London has developed a model (model as presented in Harrison, Wheeler and Whitehead, 2004) in which they have defined four important activities that are associated with the knowledge worker; these activities are:
- Make decisions
- Execute decisions
- Assimilate information
- Receive information

Knowledge workers are described by Harrison, Wheeler and Whitehead (2004) as the people in the organizations who make judgments, have the know-how and know-why of the business and acquire their knowledge through training, experience or both. Knowledge workers are dependant on the knowledge that is gained through formal and informal training and of the information that is accessed through information systems, artifacts and organizational and technical knowledge. The sharing of knowledge between knowledge workers contributes to the acquiring of knowledge as well as creating a knowledge culture in the work place.

The Council of Higher Education (CHE, 2002) suggested in the New Academic Policy for Programmes and Qualification in Higher Education, that higher education should be providing individuals for society that are trained to respond to the demands of the knowledge-based work place. This proposed policy identifies that the role of higher education has changed. In the past higher education was allowed to impose definitions of knowledge on society, however society is demanding that higher education provides more instrumental definitions of knowledge and more operational knowledge products. Higher education is therefore expected to be more responsive to societal needs. The policy indicates that: "Globally, higher education is now expected to focus on the employability of its graduates and to contribute, at least in part, to national economic development." (CHE, 2002:3.1)

The curriculum that is developed to produce knowledge workers should emphasize lifelong learning and the teaching and learning of generic skills. Knowledge workers and students, should have the ability to put generic knowledge and skills in action. It is for this reasons that South African Qualifications Authority (SAQA) presented the critical cross-field outcomes and have insisted that these outcomes should be included into all qualification at all levels on the National Qualification Framework. (CHE, 2002: 3.1)

The role of higher education in the development of a knowledge economy as defined in reformed Higher Education policies

Higher Education state regulation and policy-making in post-apartheid South Africa

The first five years of the New South Africa, was landmarked by the emphasis placed on the introduction of new policies and legislation. Past Minister of Education, Kader Asmal identified in the foreword of the National Plan for Higher Education (NPHE) that: "The victory over the apartheid state in 1994 set policy makers in all spheres of public life the mammoth task of overhauling the social, economic and cultural institutions of South Africa to bring them in line with the imperatives of a new democratic order." (SA, 2001: Foreword)

The vision for the transformation of the higher education system was communicated in 1997 with the publication of the Education White Paper 3: A Programme for the Transformation of Higher Education (SA, 1997a). Asmal (SA, 2001: Foreword) describes the focus of the vision as follows: "Central to this vision was the establishment of a single, national co-ordinated system, which would meet the learning needs of our citizens and the reconstruction and development of our society and economy."

The White Paper (SA, 1997a) was immediately followed by the Higher Education Act 101 of 1997, which together with the White Paper provided the first indicators of a new regulation structure in higher education in post-apartheid South Africa. The White Paper provided a policy framework with goals, values and principles for the higher education system. The Higher Education Act (SA, 1997b) established a legal basis for a single national system. The Higher Education Act replaced three existing Acts namely; the University Act 1995, the Tertiary Education Act 1988 and the Technikon Act 1993.

The White Paper and Higher Education Act were followed by the NPHE (SA, 2001) which provided a strategic framework for the re-engineering of a higher education system. The NPHE included the strategic objectives that were developed according to the higher education goals as identified in the Education White Paper and aimed to address the implementation vacuum that was left after the publication of the White Paper.

Programme development and design received attention simultaneously and resulted in the development and implementation of the National Qualification Framework (NQF). This framework was developed in line with the objectives as referred to in the South African Qualifications Authority Act of 1995. Waghid *et al.,* (2005) explain that the introduction of the NQF resulted in the standardization of all higher education qualifications within an outcomes-based and occupationally differentiated notion of organized fields.

The role of policies and procedures

Thompson et al, (cited in Louw and Venter, 2006:427) identifies that policies and procedures are designed to guide and align an organization's members in their activities and behaviour." Policies and procedures can therefore assist in facilitating strategic alignment across institutions in order to contribute to the national reconstruction and development of our society and economy.

Lynch (2002) indicates that it is important to understand the implications of the decisions taken by government. The government has a variety of functions of which aspects such as stimulating national economies, encouraging new research projects and introducing new initiatives are but a few examples that can impact on institutional strategic planning and programme offering. In South Africa policies and procedures therefore fulfil an important role in providing guidance and strategic vision to higher education.

Thompson et al, (cited in Louw and Venter, 2006:427) clearly identify that too many policies and procedures can create a bureaucratic dilemma, since it will have the potential to block activity and stifle ingenuity. The authors highlight that policies should rather create a sense of boundaries and decision-making to guide and facilitate effective and efficient behaviour.

In South Africa public higher education is accountable to both the Ministry of Education and society who are investing resources in education in order to ensure national development and growth. Higher

education is expected to align to state policies and the state therefore has steering mechanisms in place to ensure that the policy goals and objectives are addressed. Policies therefore act as drivers of economic and societal change

The Education White Paper 3: Communicating a vision to develop a knowledge-driven society

In 1997 with the publication of the White Paper, it was evident that education was considered as a central role player in the development and training of a knowledge society and economy. The White Paper (SA, 1997a:1.1) identifies within the first paragraph of chapter one that: "Higher education plays a central role in the social, cultural and economic development of modern societies." In the purpose statement the need to develop a knowledge-driven society and take part in the international knowledge economy is expressed as follows:

> "To address the development needs of society and provide the labour market, in a knowledge-driven and knowledge-dependent society, with the ever-changing high-level competencies and expertise necessary for the growth and prosperity of a modern economy. Higher education teaches and trains people to fulfill specialised social functions, enter the learned professions, or pursue vocations in administration, trade, industry, science and technology and the arts." (SA, 1997a:1.3)

The White Paper (SA, 1997) did not only present a future vision and purpose for education but assessed the shortcomings that were identified in education during the 1990s. These shortcomings identified the future needs and challenges that have to be addressed in the higher education system. The following challenge was presented in the White Paper (SA, 1997) and relates directly to the training output requirements in a modernising economy:

> "There is a chronic mismatch between the output of higher education and the needs of a modernising economy….and this has been detrimental to social and economic development." (SA, 1997a:1.4)

The White Paper (SA, 1997) identified that the economic and technological challenges that are presented within a knowledge economy creates an agenda for the role of higher education in reconstruction and development. It is proposed that this agenda should include the following (SA, 1997:1.12):

- "Human resource development: the mobilisation of human talent and potential through lifelong learning to contribute to the social, economic, cultural and intellectual life of a rapidly changing society.
- High-level skills training: the training and provision of personpower to strengthen this country's enterprises, services and infrastructure. This requires the development of professionals and knowledge workers with globally equivalent skills, but who are socially responsible and conscious of their role in contributing to the national development effort and social transformation.
- Production, acquisition and application of new knowledge: national growth and competitiveness is dependent on continuous technological improvement and innovation, driven by a well-organised, vibrant research and development system which integrates the research and training capacity of higher education with the needs of industry and of social reconstruction."

Assessing the contributions made by design education

Conducting the assessment through the use of a case study and interviews

Babbie and Mouton (2004:281) describe the case study as an intensive investigation of a single unit. They continue to explain that a case study is interested in the examination of multiple variables and the interaction of the particular unit within its context. This research paper assessed design department within one faculty, which is the Faculty of Art, Design and Architecture (FADA). The faculty operates within an institutional context or setting which is the University of Johannesburg (UJ) and furthermore within a national higher education context which is regulated by the Ministry of Education through the presentation of state policies.

In order to conduct an assessment of the contributions made by higher education design education it was decided to conduct individual face-to-face interviews with lecturers within FADA. The interviews were conducted with full-time lecturers from the following departments that offer design programmes in FADA: Architecture, Fashion Design, Industrial Design, Interior Design, Multimedia and Graphic Design. The aim of the interview was to determine the manner in which lecturers interpret the relevance of the knowledge economy within their curriculum. This feedback was interpreted by using qualitative analysis methods in order to present findings and draft conclusions and recommendations of this assessment.

Presenting the findings

The research findings as presented in this paper have been grouped under sub-headings to represent the themes and patterns identified in the text of the documented interviews. The narrative production of the research findings will aim to present a thick or rich description as suggested by Babbie and Mouton (2004), Miles and Huberman (1994) and Taylor and Bogdan (1989). Bogdan and Taylor (1989: 174) further suggest that illustrative quotations and descriptions should be included to convey a deep understanding of the context and the people involved and could also provide support to the researcher's interpretations. These authors state that quotes and descriptions help readers to understand how the researcher has reached conclusions and interpretations.

Involvement in programme and module design and development

The majority of the lecturers have indicated that they are involved in the development and design of individual modules within each programme. The modules are presented within a programme structure and curriculum which is published with authorities such as SAQA. Modules are designed and developed within the requirements of the Department of Education and the NQF requirements and expectations. Changes that relate to the reconfiguration of the programme have to be approved by the FADA faculty board and UJ Senate. Module content is revisited annually by the majority of the respondents.

Two lecturers considered their modules to be outdated; both these lecturers have however indicated that they only revisit the module content over a period of two or three years. A number of the lecturers indicated that they consider the input of industry as valuable and important guidance to any changes that are considered in the programme offering and module content. A lecturer stated that his/her department: "Work with the relevant industry needs in order to develop the curriculum" and another lecturer indicated that the department: "Continually met with industry, specifically stakeholders that takes part in experiential learning."

Understanding and interpretation of the knowledge economy

During the interviews the respondents were required to indicate if they were familiar with the term knowledge economy. The findings indicate that the majority of the respondents were not familiar with this term as one respondent indicated: "First time I hear the term." The findings further revealed that four of the respondents indicated that they are familiar with the term, but only though limited exposure to situations in which the term has been used. One respondent answered as follows: "Yes, I have heard the term being used" and another vaguely stated: "Yes, I think so."

Respondents were requested to provide an explanation or an interpretation for the term knowledge economy. Only one respondent confidently stated that the term was understood and this individual continued to provide an accurate description of the particular meaning of the term knowledge economy. The majority of the respondents were not familiar with the term and approached the question through separating the two words and thereafter linking the individual meaning in order to present a final description of the term. This resulted in descriptions such as: "Knowledge is value. The term is related to the value of knowledge." and; "Economy of ideas and information. Knowledge is the sphere of education that becomes a commodity."

Respondents were requested to indicate if their programme curriculum equipped student to participate as knowledge workers in the knowledge economy after completion of the programme. A wide variety of responses were provided which ranged from: "Do not know." to; "Yes. We prepare them to take part in the economy once they enter it [work place] and add value." A number of the respondents identified that the students are trained to meet industry expectations. This observation was presented as follows: "We [department] speak to industry. Students are trained to be designers." However in a number of the interviews the respondents indicated that industry prefer skill to knowledge. One respondent indicated that: "Mostly we try and give students skills. The industry expects more skills than qualifications." This observation was also expressed as follows: "Industry prefers skills to knowledge."

Finally, the majority of the respondents consider training and development of knowledge workers as essential within programme design and offering. One respondent commented as follows: "I think with the way education has shifted to be part of the knowledge economy, knowledge would be embedded in everything we do." Another commented that: "The exit level of the student should be of the standards that they can contribute to the generative knowledge base of their particular practice area. Students should take knowledge and develop it further."

Conclusion

The purpose of these interviews was to assess the findings against the vision and strategic direction presented in the White Paper. The aim of the conclusion is therefore to identify and understand the contributions that are currently made in the offering of these design curriculums, to the training and development of knowledge workers.

Lecturers lack knowledge and understanding of the knowledge economy
A large majority of the respondents were not familiar with the term knowledge economy. A number of respondents indicated that they had heard the term before but, they remained unsure of the exact meaning of the term. The lack of knowledge that lecturers have in relation to the economic environment in which students are educated, can jeopardise the output that is delivered to the market place. The White Paper (SA, 1997) identifies that higher education plays a central role in the development of the knowledge economy. This will not be possible if lecturers do not have a thorough understanding of the knowledge economy. The translation of the knowledge economy requirements within programme design and development, was therefore seldom evident during the interviews.

It was surprising to identify that although the majority of the lecturers were not familiar with the term knowledge economy, the findings indicated that they considered the training and development of knowledge workers as essential in programme offering. It was observed that this comment was often sparked by the use of the word knowledge worker by the interviewer. A number of the respondents related the term knowledge worker to the role and function of education in providing students with discipline related knowledge and skills. This was evident in the following comment: "knowledge would be embedded in everything we do".

Programme offering and development focus on industry requirements

A number of the respondents identified that the students are trained to meet industry expectations. The programmes that are currently offered within FADA formed part of the previous technikon-type programmes and can be described as being vocational. These programmes were developed and offered parallel to industry needs and requirements. It is evident that departments are continuing contact and interaction with their related industries. Reference was made to experiential learning that takes place and to feedback that is regularly received after completion of this training.

The interaction with industry indicates that the students are taught and trained to meet the requirements and needs of their specific industry. This aspect addresses the most important requirement of the knowledge economy as well as the expectation as presented in the White Paper. The White Paper (SA, 1997) requires that: "Higher education teaches and trains people to fulfill specialised social functions, [and] enter the learned professions". The students that enter the work

place are therefore appropriately trained and prepared to deliver a meaningful contribution to the economy.

It was of concern to note that some respondents presented comments such as: "Industry prefers skills to knowledge." Harrison, Wheeler and Whitehead (2004) described knowledge workers as the people in the organizations who make judgments, have the know-how and know-why of the business and acquire their knowledge through training, experience or both. The programmes offered at FADA aim to present a student with generic skills, within the national requirements as defined by SAQA. If industry benchmarking plays an important role in programme development, then it could be expected that industry demands are not made out of selfish needs but that they embrace the potential of each student that enters the work place. The White Paper (SA, 1997) indicates that the economy requires high level skills training and that this training should develop knowledge workers with globally equivalent skills.

Recommendations

The following recommendations were identified:

- It is recommended that lecturers should be fully aware of the requirements of the knowledge economy in order to ensure that these are met within the programme offering.
- The input and interaction with industry should enable the department to present knowledge workers that meet the requirements of industry. However programme offering should guard against over-specific industry requirements and include generic and globally equivalent training.
- Opportunities for life-long learning should be included in the range of programmes that are offered in higher education. Life-long learning can assist in making valuable contributions towards the acquisition of new knowledge and foster the intellectual life of knowledge workers within the work place.
- Lecturers should engage with research in order to assist in the production of new knowledge and development of new systems. Lecturers should not only assist in training the knowledge workers, they also contribute through individual research to the production and development of new knowledge.

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SHORT CV A BREYTENBACH
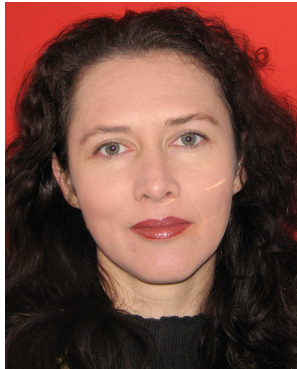
Academic Qualifications and work experience

I commenced with formal studies towards a B Arch (Prof) in 1989 at the University of Pretoria and completed this qualification at the end of 1993. A two year practical period followed from 1994 until March 1996. In April 1996 I was appointed as a full-time lecturer at the Department of Interior Design which formed part of the Faculty of Art, Design and Architecture (FADA) at the former Technikon Witwatersrand. Promotions followed to the level of senior lecturer in 1998, acting Head of Department (HoD) in 1999 and later contract HoD in 2000. I remained in the HoD position until the merger with Rand Afrikaans University (RAU).

I accepted a contract position for both HoD and Deputy Dean of FADA in January 2005 with the newly merged institution; University of Johannesburg. In April 2007 I was re-appointed for a three year period as Vice Dean of FADA. In June 2007 I completed a MBA degree at the University of Johannesburg, which I originally enrolled for at the then Technikon Witwatersrand.

Current responsibilities:

As FADA Vice Dean and HoD I am involved in faculty and department management and I continue to fulfil lecturing responsibilities within the Department of Interior Design. Due to my interest in higher education quality assurance I also assist in coordinating quality assurance and programme development in FADA.

Involvement with DEFSA:

Since 2000 I am the FADA representative on the DEFSA Executive Committee. In 2004 I was nominated as Vice-president and in September 2006 I was nominated as President-elect of DEFSA. During the past eight years I have chaired the Interior Design DEFSA workgroup and since 2006 I have been representing DEFSA at *Once Voice* meetings. I have also taken part in the coordination and organisation of a number of DEFSA conferences which include the previous International DEFSA conference that took place at Museum Africa in September 2001.

An assessment of the contribution of design education to the knowledge economy in South Africa

Amanda Breytenbach

What are the **contributions** that are made currently by higher education design education towards the **development** of the South African

knowledge economy?

RESEARCH METHODOLOGY

Firstly, through **conducting a literature survey** and **SA** HE **policy analysis** the paper aims to **identify and present the proposed role of higher education** in relation to economic development as communicated within the South African Education White Paper..

RESEARCH METHODOLOGY

Secondly, the research design follows a **qualitative research** approach in order to document and **assess the perspective and practises** of lecturers within higher education. A **case study approach** is adopted in examining design departments within a single higher education faculty, which is the **Faculty of Art, Design and Architecture**.

INTRODUCTION

"The victory over the apartheid state in 1994 set policy makers in all spheres of public life the mammoth task of overhauling the social, economic and cultural institutions of South Africa to bring them in line with the imperatives of a new democratic order."

(SA, 2001: Foreword)

"…**integrated** into the **competitive arena** of international production and finance which has witnessed rapid changes as a result of **new communication** and **information technologies.**"

(SA, 1997:1.7)

The national agenda were required to address **political**, **social and economic transition** for South Africa which included **economic reconstruction** and **development.**

"…higher education must provide education and training to develop the **skills** and **innovations** necessary for national development and successful participation in the **global economy**. "

(SA, 1997: 1.11)

Central to the vision for the transformation of the higher education system was: "…the establishment of a **single, national co-ordinated system**, which would meet the **learning needs** of our citizens and the **reconstruction** and **development** of our society and economy."

The White Paper therefore aims to identify **the role and agenda for higher education** within the societal and economic transformation and reconstruction requirements of the country.

THE KNOWLEDGE WORKER

Harrison, Wheeler and Whitehead (2004:94) state that: "…the change in the world of work from **a traditional** to **the professional** and **service sectors**, together with the **new economy**, has led to the **dependence on professionals** and the emergence and the strengthening of the **development of the knowledge worker**."

FOUR IMPORTANT ACTIVITIES

Activities that are associated with the knowledge worker are:

- Make decisions
- Execute decisions
- Assimilate information
- Receive information

Knowledge workers are described by Harrison, Wheeler and Whitehead (2004) as the people in the organizations who:

- make judgments,
- have the know-how and
- know-why of the business and
- acquire their knowledge through training, experience or both.

Knowledge workers are dependant on the knowledge that is gained through **formal** and **informal training** and of the information that is accessed through **information systems, artifacts** and **organizational** and **technical knowledge**. The **sharing** of knowledge between knowledge workers contributes to the acquiring of knowledge as well as **creating a knowledge culture** in the work place.

Higher Education should be **providing** individuals for society that are **trained** to **respond** to the demands of the knowledge-based workplace.

The role of higher education **has changed**.

In the past higher education was allowed to **impose definitions of knowledge** on society, however society is demanding that higher education provides more instrumental definitions of knowledge and more operational knowledge products. Higher education is therefore **expected** to be more **responsive to societal needs**.

"Globally, higher education is now expected to focus on **the employability** of its graduates and to contribute, at least in part, to national economic development."

(CHE, 2002:3.1)

THE PROPOSED CURRICULUM

The curriculum that is developed to produce knowledge workers should emphasize **lifelong learning** and the **teaching and learning** of **generic skills**. Knowledge workers and students, should have the ability to put generic knowledge and skills in **action**. It is for this reasons that South African Qualifications Authority (SAQA) presented the **critical cross-field outcomes** and have insisted that these outcomes should be included into all qualification at all levels on the National Qualification Framework (NQF).

(CHE, 2002: 3.1)

The White Paper (SA, 1997a:1.1) identifies within the first paragraph of chapter one that:

"Higher education plays a **central role** in the social, cultural and economic development of modern societies."

WHITE PAPER PURPOSE STATEMENT

"To address the development needs of society and provide the labour market, in a **knowledge-driven** and **knowledge-dependent** society, with the ever-changing high-level competencies and expertise necessary for the **growth** and prosperity of a modern economy. Higher education **teaches and trains** people to fulfill **specialised social functions**, enter the learned professions, or pursue vocations in administration, trade, industry, science and technology and the arts."

(SA, 1997a:1.3)

CHALLENGES IN HIGHER EDUCATION

"There is a chronic **mismatch** between the **output** of higher education and the needs of a modernising economy….and this has been detrimental to social and economic development." (SA, 1997a:1.4)

AGENDA FOR HIGHER EDUCATION

- **Human resource development**: the mobilisation of human talent and potential through lifelong learning.
- **High-level skills training**: the training and provision of person power to strengthen this country's enterprises, services and infrastructure.
- **Production, acquisition and application of new knowledge**: national growth and competitiveness is dependent on continuous technological improvement and innovation, driven by a well-organised, vibrant research and development system.

ROLE OF POLICIES

"Policies and procedures are designed to **guide** and **align** an organization's members in their **activities** and **behaviour.**"

Thompson et al, (cited in Louw and Venter, 2006:427)

POLICIES ACT AS DRIVERS OF CHANGE

In South Africa public higher education is accountable to **both** the Ministry of Education and society who are investing resources in education in order to ensure **national development** and **growth.** Higher education is expected to **align** to **state policies** and the state therefore has steering mechanisms in place to ensure that the policy goals and objectives are addressed. Policies therefore **act as drivers of economic** and **societal change.**

WHAT IS HAPPENING IN HE?

Today, **ten years** after the publication of the White Paper, it is expected that higher education would have adopted the proposals and guidance as presented in the White Paper; and that **programme offering** have embraced training and development requirements needed within the **knowledge economy**.

CONDUCTING THE ASSESSMENT

- Used a **case study** and **conducted interviews**
- This research paper assessed six departments within one faculty, which is the **Faculty of Art, Design and Architecture** (FADA).
- The faculty operates within an institutional context or setting which is the **University of Johannesburg (UJ)**
- The institution operates within a **national higher education context** which is regulated by the **Ministry of Education** through the presentation of state policies.

AIM OF THE INTERVIEWS

The aim of the interviews was to determine **the manner** in which lecturers interpret the relevance of the **knowledge economy** within their curriculum. This feedback was interpreted by using **qualitative analysis methods** in order to present findings and draft conclusions and recommendations of this assessment.

PRESENTING THE FINDINGS

The research findings as presented in this paper have been grouped under **sub-headings** to represent the **themes** and **patterns** identified in the text of the documented interviews.

NARRATIVE PRODUCTION

The **narrative production** of the research findings aim to present a **thick** or **rich description.**

Illustrative quotations and **descriptions** are included to convey a **deep understanding** of the context and the people involved and could also provide support to the researcher's interpretations.

Research indicates that these **narratives** and descriptions help readers to understand how the researcher has reached **conclusions** and **interpretations.**

Involvement in programme and module design and development

- The **majority** of the lecturers are involved in the development and design of programme modules.
- Modules are presented within a programme structure and curriculum which is **published with authorities**.
- Modules are **designed** and **developed** within the **national** and **institutional requirements** and expectations.
- Certain lecturers indicated that they consider the **input of industry** as valuable and important guidance to any changes that are considered in the programme offering and module content.
- A lecturer indicated that his/her department: "**Continually meet** with industry, specifically stakeholders that takes part in **experiential learning**."

Understanding and interpretation of the knowledge economy

- The findings indicate that the **majority** of the respondents **were not** familiar with the term knowledge economy. One respondent indicated: "First time I hear the term."

- Proposed **explanations** of the term:

"Knowledge is value. The term is related to the value of knowledge."
and;
"Economy of ideas and information. Knowledge is the sphere of education that becomes a commodity."

Student readiness: Training knowledge workers to take part in a knowledge economy

- Respondents were requested to indicate if their programme curriculum **equipped student to participate as knowledge workers** in the knowledge economy.
- A number of the respondents identified that the students are trained to meet industry expectations.

"We [department] speak to industry. Students are trained to be designers."

- A large number of the interviews indicated that **industry prefer skill to knowledge.** One respondent indicated that: "*Mostly we try and give students skills. The industry expects more skills than qualifications.*" This observation was also expressed as follows: *"Industry prefers skills to knowledge."*
- The majority of the respondents consider training and development of knowledge workers as **essential** within programme design and offering.

CONCLUSIONS

The purpose of these interviews was to assess the findings **against** the **vision** and **strategic direction** presented in the White Paper. The aim of the conclusion is therefore to identify and understand the **contributions that are currently** made in the offering of these design curriculums, to the training and development of knowledge workers.

Conclusion 1: Lecturers lack knowledge and understanding of the knowledge economy

- A **large majority of the respondents** were not familiar with the term knowledge economy.
- The **lack of knowledge** that lecturers have in relation to the economic environment in which students are educated, can **jeopardise** the output that is delivered to the market place.
- The translation of the knowledge economy requirements within programme design and development, was therefore **seldom evident** during the interviews.
- Ironically, the findings indicated that lecturers considered **the training and development of knowledge workers** as essential in programme offering.

Conclusion 2: Programme offering and development focus on industry requirements

- Students are trained to meet **industry expectations**.
- The interaction with industry indicates that the students are taught and trained to meet the **requirements and needs of their specific industry.**
- "Industry prefers skills to knowledge."
- The programmes offered at FADA aim to present a student with **generic skills**, within the national requirements as defined by SAQA.
- Industry demands should not be made out of **selfish needs and desires** but to embrace the potential of each student that enters the workplace.

RECOMMENDATIONS

The following recommendations were identified:

- Lecturers should be **fully aware** of the requirements of the knowledge economy in order to ensure that these are met within the programme offering.

- The **input and interaction** with industry should enable the department to present knowledge workers that meet the requirements of industry. However programme offering should guard against **over-specific** industry requirements and include generic and globally equivalent training.

- Opportunities for **life-long learning** should be included in the range of programmes that are offered in higher education.

- Lecturers should **engage with research** in order to assist in the production of new knowledge and development of new systems.

THANK YOU