UNIVERSITEIT VAN PRETORIA
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A CRITICAL ASSESSMENT OF POSTGRADUATE REAL ESTATE EDUCATION IN THE REPUBLIC OF SOUTH AFRICA

by

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research submitted in compliance with the requirements for the degree of

DOCTOR OF PHILOSOPHY IN REAL ESTATE

FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

UNIVERSITY OF PRETORIA

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March 2010

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CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 Introduction

It is important to ensure that postgraduate real estate education in South Africa remains relevant to the real estate industry and adapts to changes in society. Based on changes that have taken place in South Africa in the recent past, new patterns of real estate education and investment, political, social and economic trends have emerged (Ghyoot, 2002; and Chikafalimani and Cloete, 2006b). Following from this, it is important that these changes and demands are understood and be incorporated into the postgraduate real estate curriculum of the country's future real estate professionals (Chikafalimani and Cloete, 2007). The specific area of concern is relevance of the nature of course content of postgraduate real estate education and to what extent it is appropriate for the real estate industry, clients and consumers.

The real estate business can be viewed as a market-oriented game (Wurtzebach and Miles, 1994). In real estate markets, as in all business, change is constant; the "rules of the game" are also ever-changing; and the winner of the game usually is the person who can anticipate future change and act on the opportunity it presents (Wurtzebach and Miles, 1994). In addition to the above, real estate as an asset affects most of the world's economic and financial activities. Greater real estate effects are even seen in the physical and social dimensions of many lives (Wurtzebach and Miles, 1994). For these reasons, it is important that the understanding of the effects of real estate and changes taking place in the real estate industry are an integral component of the postgraduate education of real estate professionals if they are to remain effective in their different real estate involvements.

Many factors including culture and changing tastes of the society are responsible for shaping the real estate business (Gibler and Nelson, 2003). Therefore, it is imperative that real estate education provide a comprehensive understanding of these factors if real estate decisions and services are to be relevant to the clients and consumers who pay for the services and live with the end products and their effects for relatively longer periods.

Means and methods of understanding the influential elements that are causing and bringing change in the real estate industry should be emphasised in the future education of real estate professionals. Advanced technology and research methods are supporting the industry to understand and analyse factors which make real estate business a challenge. Kinnard (1968) noted that the application of new techniques of forecasting and analysis has made real estate decisions to be more effective and less uncertain. It is therefore important for real estate educators to make sure that the relevant advanced analytical tools are investigated and be incorporated into the postgraduate real estate curriculum.

Real estate has several constituents which include: property development, property management, property valuation, property economics, property finance, property investment, property marketing and property law (Black *et al*., 1996). The understanding of the importance of constituents of real estate, which are interlinked, is fundamental, as it will assist in the design and development of real estate curriculum, which will produce more competent real estate practitioners for the industry.

It must also be pointed out that it is significant for real estate educators to seek input from real estate practitioners in the industry in curriculum development processes to ensure that real estate professionals that meet industrial requirements are produced (Butler, Guntermann and Wolverton, 1998; and Galuppo and Worzala, 2004).

1.2 The statement of the problem

The aim of this research is to determine if the course content of postgraduate real estate education in South Africa is relevant to the real estate industry. Its underlying purpose is to investigate the challenges that have emerged in the real estate industry and promote the development of postgraduate real estate curriculum which will support the production of competent real estate professionals, who will easily adapt to new industrial challenges. In addition, the dissertation will investigate the requirements of the real estate industry which will improve academic research and real estate practice.

As a discipline, the real estate profession is responsible for supporting the delivery of products and services in different real estate activities which include property development, property management, property valuation, property finance, property investment, property

marketing and property law with the purpose of improving the utilisation of real estate as an asset. The profession has an important role to play in the better utilisation and management of society's land and its improvements, which are a scarce resource. The study will ensure that postgraduate real estate curriculum remains relevant to continue fulfilling this significant role for the society.

Due to the rapidly changing conditions in South Africa it is important that the university curriculum for postgraduate real estate education remain relevant to changing economic and societal demands all the time. The nature of university education is aimed at higher quality of learning (Manning and Roulac, 2001). However, over time the course content can become out-of-date and irrelevant to the industry. Therefore, it is appropriate to consider processes of systematic review of the course content and evaluating current requirements of the industry and society as a means of intelligently incorporating new insight into education programmes to maintain their objectives and quality. Any system that ignores prevailing public concerns and priorities risks becoming irrelevant (Manning and Roulac, 2001). As a consequence, one of the major motives of this research is to ensure that postgraduate real estate education programmes in South Africa remain relevant to the industry and society. Finally, based on the conclusions drawn by the investigation, recommendations will be made which will support the improvement of postgraduate real estate curriculum in South Africa.

The main research question is outlined below as follows:

- **What is the most appropriate nature of course content for Masters Real Estate Education in South Africa that will effectively support the training and production of competent real estate professionals for the industry in the future ?**

1.3 The sub-problems

To provide solutions to this research question four sub-problems (research objectives) were identified to provide the structure of the study. The objectives are sequential and linked by offering support to each other in progression order in the process of critically assessing existing postgraduate real estate curricula and in providing specific recommendations for curriculum improvement. The sub-problems are as follows:

1.3.1 Sub-problem 1

- **What are the important elements influencing real estate education in South Africa?**

To solve this sub-problem, a detailed investigation of the characteristics of real estate as a discipline was done. Influential factors causing change in real estate education and industry were also examined. This was achieved by a comprehensive review of relevant literature in Chapter 2 of the study (Literature Review).

1.3.2 Sub-problem 2

- **What is the nature of course content of existing postgraduate real estate curricula offered in South Africa and other parts of the world?**

This sub-problem was solved in Chapter 4 of the study (The Curriculum Survey) by conducting a survey of postgraduate real estate curricula world-wide as well as in South Africa to identify and compare real estate topics included in the existing curricula which supported the industry.

1.3.3 Sub-problem 3

- **What are the current requirements of the real estate industry in South Africa with respect to the content of postgraduate real estate curricula?**

To solve this sub-problem, a property industry survey was undertaken in Chapter 5 of the study to identify curriculum requirements of the industry and to determine the importance of real estate topics from industry perspective.

1.3.4 Sub-problem 4

- **What is the content of a postgraduate real estate curriculum that satisfied the real estate industry in South Africa?**

After establishing the current requirements of the real estate industry it was possible to formulate curriculum requirements to meet those needs in the future. Based on this, it was now possible to develop a postgraduate real estate education model curriculum which satisfied industry requirements identified in objective three to complete the research process. This was achieved in Chapter 6 (The Model Curriculum).

1.4 The hypotheses

Development of a successful postgraduate real estate education programme is based on the establishment of supportive relationships among several players in the real estate industry and society including practitioners and educators responsible for postgraduate real estate education (Galuppo and Worzala, 2004). Mutually beneficial relationships between postgraduate real estate education and the industry can best be maintained by a systems approach in the process of improving postgraduate real estate curriculum to meet industrial and societal requirements. The three interrelated assumptions, upon which a systems approach could be based, in the process of improvement of postgraduate real estate curriculum as identified by Ackoff (1981) are as follows: (a) that the behaviour of each element of a system has an effect on the behaviour of the whole, (b) that the behaviour of the elements and their effect on the whole are interdependent, and (c) that the elements of a system are so connected that independent subgroups of them can not be formed. In addition, the essential characteristics of a system are derived from the interaction of its parts acting as a whole and not the parts acting separately (Capra, 1996). As a result essential characteristics of a system will be lost if it is broken apart. The parts of a system can also only be understood if they are studied in their systemic context. Consequently, to improve postgraduate real estate education in South Africa, the process should be comprehensive by involving the industry which it intends to influence.

A systems or holistic approach in the process of improvement of postgraduate real estate curriculum which meets industrial requirements involves understanding, arranging and managing the interrelated elements that impact on real estate education and industry. Due to changes which have taken place in South Africa in the recent past the real estate profession has also changed to adapt with social, political, technological and customer demands. The important question at this juncture is whether postgraduate real estate curriculum in South Africa has similarly adapted to industrial and societal requirements and changes.

It is believed that if postgraduate real estate education stays behind the developments in the industry, the development of real estate profession will retard as client and societal requirements cannot be met by insufficiently trained and educated real estate professionals.

It will be pointed out by the findings of this research that new challenges and requirements have merged in the real estate industry in South Africa in recent years. As a consequence, it will be appropriate to examine the existing postgraduate real estate curricula to adapt them to current requirements in the industry. To test the premise whether the existing postgraduate real estate curricula are meeting the requirements of the industry the following hypotheses are postulated:

1.4.1 Hypothesis 1

Topics included in the existing Masters Real Estate curricula in South Africa are important for the real estate industry in South Africa.

1.4.2 Hypothesis 2

New challenges and needs had emerged in the real estate industry in South Africa, which are inadequately being addressed by topics included in the existing Masters Estate curricula in South Africa.

1.5 The assumptions

The main assumption of this research is that postgraduate real estate education in South Africa will benefit from an improved awareness of the requirements of the real estate industry. It is further assumed that greater understanding of industrial requirements would lead to the development of postgraduate real estate curriculum that would be desired by the industry. In addition, it is further assumed that a desired curriculum in terms of its balance in meeting the requirements of different players in the real estate industry would contribute to further development of the industry in South Africa by producing well educated, trained and competent future real estate professionals.

It is again assumed in this research that its findings and recommendations will provide the improved understanding of various players in the real estate industry and that this would lead to the continuing process of postgraduate real estate curriculum assessment and feedback from the industry and society; resulting in improved postgraduate real estate education for the industry all the time.

1.6 The delimitations

The selection of curricula which were used for critical assessment of postgraduate real estate education in South Africa was restricted to curricula which are completed by course work and are offered in English and whose details were accessible.

Another major limitation for the research is its inability to directly create changes in the postgraduate real estate curricula offered in South Africa. Any appropriate adaptations in the curricula would originate from outcomes of deliberations and decisions to be taken by appropriate university administrations and their lecturing staff.

1.7 Definitions of terms

Adapt – To become adjusted to new conditions (Oxford Advanced Learner's Dictionary of Current English, 1995).

Appropriate – Suitable, acceptable or correct in the circumstances (Oxford Advanced Learner's Dictionary of Current English, 1995).

Change – The action or an instance of becoming different (Oxford Advanced Learner's Dictionary of Current English, 1995).

Community – The people living in one place or district, considered as a whole (Oxford Advanced Learner's Dictionary of Current English, 1995).

Core subject – A course subject which is compulsory for a student to complete a course (see Urban Land Institute Directory of Real Estate Education Programs, 2005) (10th edition).

Course – Means the whole degree (common in the UK and other British Commonwealth countries) (Baum and Lizieri, 2002).

Course subject – Means a subdivision of course (Baum and Lizieri, 2002).

Credit – The value assigned to ten notional hours of learning and assessment for a student (University of Johannesburg – Diploma in Education, Training and Development Practice Study Guide, 2005).

Credit hours (notional hours of learning) – The learning time that is conceived to be adequate for a student to complete the defined outcomes for the curriculum to obtain a qualification, and includes concepts such as contact time and time spent on individual learning (University of Johannesburg – Diploma in Education, Training and Development Practice Study Guide, 2005).

Curriculum – The subjects included in a course of study or taught at a particular school, college or university leading to a qualification. From comprehensive point of view, a curriculum includes the documented objectives, learning themes, course subjects, evaluation techniques and their integrated organisational pattern designed to impart knowledge in a particular area of study (Oxford Advanced Learner's Dictionary of Current English, 1995; and Murphy, 1999).

Curriculum development – The conscious effort of putting together subjects to be taught in a course of study in response to needs of the industry and students, most often for the first time; or the process of improving an existing course of study in response to opportunities, or emerging needs and new challenges the industry was facing (see Galuppo and Worzala, 2004).

Education – The process of training and instruction for students which is designed to give knowledge and develop skills (Oxford Advanced Learner's Dictionary of Current English, 1995).

Examination – Means a formal student assessment, conducted within an officially designated examination session, usually invigilated, and bound by time constraints (University of KwaZulu-Natal, Faculty of Engineering Handbook, 2008).

Globalisation – The process of covering or affecting the whole world (Oxford Advanced Learner's Dictionary of Current English, 1995).

Holistic – A comprehensive way that leads to an understanding of the relationships among system components as well as an understanding of the individual components themselves (Murphy, 1999).

Needs – Things required by people because they are important or useful (Oxford Advanced Learner's Dictionary of Current English, 1995).

Paradigm – A set of beliefs forming a pattern or model of reality that provides the basis for judgements (Oxford Advanced Learner's Dictionary of Current English, 1995).

Practitioner – A person who regularly does a particular activity, especially one requiring skill (Oxford Advanced Learner's Dictionary of Current English, 1995).

Profession – A vocation or calling in which the members render a service to society. The service rendered is reliant upon a pre-existing body of knowledge, the skilful application of procedures, and for which there is a responsibility to observe standards of conscientious and ethical conduct on behalf of those who are recipients of or are affected by the service (Murphy, 1999).

Professional – A person qualified or employed in one of the professions (Oxford Advanced Learner's Dictionary of Current English, 1995).

Property – Term used interchangeably with real estate and it means land and its improvements (Wurtzebach and Miles, 1994). This term is popular in UK and other British Commonwealth countries (Baum and Lizieri, 2002).

Property industry – Encompasses all parties and things involved, influencing, and affected with property at local, national and international levels including: property professionals and practitioners; property users; property owners; property developers; property investors; attorneys; estate agents; building contractors; building material suppliers; land resources;

government; and financial institutions (see Roulac, 1996; Hauptfleisch, 1999; and Schulte, 2003).

Real estate – Term used interchangeably with property and it means land and its improvements. This term is popular in the USA (Baum and Lizieri, 2002).

Relevant – Appropriate in the circumstances and for the society (Oxford Advanced Learner's Dictionary of Current English, 1995).

Society – A community of people living in a particular country or region, sharing similar values (Oxford Advanced Learner's Dictionary of Current English, 1995).

Student – A person usually over the age of sixteen who is studying at a university or college (Oxford Advanced Learner's Dictionary of Current English, 1995).

System – A set of interacting elements in which the behaviour of each one has an effect on the behaviour of the whole (Capra, 1996).

Systems approach – The concept that elements of a related set (or a system) must be addressed as a unified and integrated entity in order to understand their interrelationships or predict their purpose and function (Ackoff, 1981).

Topic – Means a course subject or a subdivision of a course. The term is common in the USA (see Black and Rabianski, 1999 and 2003).

Transformation – The process of changing the appearance or characteristics of some thing completely (Oxford Advanced Learner's Dictionary of Current English, 1995).

University – The highest level of educational institution, in which students study for degrees and academic research is done (Oxford Advanced Learner's Dictionary of Current English, 1995).

1.8 Abbreviations

AACSB – Association to Advance Collegiate Schools of Business

AIDS – Acquired Immunity Deficiency Syndrome

APC – Assessment of Professional Competence

ARES – American Real Estate Society

ARICS – Associate of the Royal Institution of Chartered Surveyors

BBA – Bachelor of Business Administration

BBS – Bachelor of Business Studies

CBD – Commercial Business District

CEEC's – Central and Eastern European Countries

ERES – European Real Estate Society

FRICS – Fellow of the Royal Institution of Chartered Surveyors

ETQA – Education and Training Qualification Authority

IRES – International Real Estate Society

IPD – Investment Property Databank

IT – Information Technology

MAVPM – Master of Arts in Valuation and Property Management

MBA – Master of Business Administration

MBP – Master of Business (Property)

MBSVPM – Master of Business Studies (Valuation and Property Management)

MLERE – Master of Land Economics and Real Estate

MP – Master of Property

MPLE – Master of Philosophy in Land Economy

MPS – Master of Property Science

MRE – Master of Real Estate

MREC – Masters Real Estate Curriculum

MRED – Master of Real Estate Development

MREE – Masters Real Estate Education

MRICS – Member of the Royal Institution of Chartered Surveyors

MSBE – Master of Science in Built Environment

MSc – Master of Science

MSEM – Master of Science in Estate Management

MSLMRE – Master of Science in Land Management and Real Estate

MSP – Master of Science in Property

MSPDM – Master of Science in Property Development and Management

MSPS – Master of Science in Property Studies

MSRE – Master of Science in Real Estate

MSREBM – Master of Science in Real Estate and Business Management

MSRECM – Master of Science in Real Estate and Construction Management

MSRED – Master of Science in Real Estate Development

MSREULE – Master of Science in Real Estate and Urban Land Economics

NMMU – Nelson Mandela Metropolitan University

NPEC – National Property Education Committee

NQF – National Qualifications Framework

NSB – National Standards Body

OBAU – Obafemi Awolowo University

RICS – Royal Institution of Chartered Surveyors

RMIT – Royal Melbourne Institute of Technology

RQS – Registered Quantity Surveyor

SA – South Africa

SAPOA – South African Property Owners Association

SAQA – South African Qualifications Authority

SGB's – Standard Generating Bodies

TEGOVAFA – The European Group of Valuers of Fixed Assets

UCLAS – University College of Lands and Architectural Studies

UCT – University of Cape Town

UFS – University of Free State

UK – United Kingdom

UON – University of Nairobi

UP – University of Pretoria

USA – United States of America

UW – University of Witwatersrand

1.9 The importance of study

Real estate education deals with a significant sector of the economy called the real estate industry. The importance of real estate to the national economy in South Africa can be viewed from different perspectives.

Firstly, the importance of real estate can be viewed in terms of its value contribution to the national economy. Based on information supplied by Investment Property Databank (IPD) South Africa, as of the year 2007 the total market value of commercial property in South Africa was over R100 billion (www.ipd.com/southafrica) (15.09.2008). According to South African Property Owners Association (SAPOA) (which is a recognised representative body and official voice of the commercial and industrial property investors in South Africa), its members own a combined portfolio in excess of R150 billion (www.sapoa.org.za) (15.09.2008). SAPOA members control approximately 90% of all commercial and industrial property in South Africa. These figures show substantial contribution of real estate to the wealth, social and economic development of the country. It is also important to note that the quoted figures do not include the value of residential property.

Secondly, the importance of real estate can be viewed from employment creation point of view. Real estate is strongly linked to the construction industry. In 2001, as many as 520,000 people were employed by the construction industry (CIDB, 2004) while in 2007 the figure increased to 966,000 (Statistics SA, 2007). This trend reflects the increased reliance on subcontracting and particularly on labour only subcontractors (CIDB, 2004). From these statistics, it is noted that real estate education has an important role to play in producing competent professionals who will be able to competently safeguard and look after this significant sector of the economy which is worth billions of Rands. The study will contribute towards this role through postgraduate real estate curriculum improvement.

Thirdly, the importance of real estate can be viewed from its social and economic impact on people's lives and society in general (Wurtzebach and Miles, 1994). Real estate offers shelter to human beings, business and social activities. Further, the study of real estate involves land issues. Economically, land is regarded as one of the four major factors of production along with labour, capital and management (Appraisal Institute, 1992). Unfortunately, the supply of land is fixed. From this it is evident that real estate is a scarce resource and plays a crucial role in society and people's lives.

South Africa is a culturally diverse country consisting of people with different values and aspirations regarding real estate. By mid-year of 2008, the total population estimate of people increased to 48,687,000. This figure is comprised of 38,565,100 Africans (79.2%); 4,379,200 Coloureds (9%); 1,243,500 Indian / Asian (2.6%); and 4,499,200 Whites (9.2%) (Statistics

SA, 2008). Its cities are experiencing urbanisation problems just like other cities in the world which include: urban decay, crime and increasing travel times from residences to work places (Ghyoot, 2002; and Prinsloo, 2004). Increasing democratisation, the AIDS pandemic, and diminishing environmental quality are also prevalent. With all these new challenges being experienced in society, it is appropriate for higher education in real estate to adapt accordingly as these have equally affected the real estate industry.

It has also been observed that institutions of higher education tend to develop curricula that are similar to other peer institutions irrespective of geographic, cultural, historical and political differences within their respective localities (Murphy, 1999). This may have to be checked as it may lead to the development of curricula that are incompatible with the needs of the local community and industry if the process is not handled properly. This study will address this criticism by ensuring that postgraduate real estate education in South Africa is also relevant in the local context.

Furthermore, it has been observed in the USA that universities to some extent are not preparing the students adequately for the work they will likely be required to do when they join the industry (Butler, Guntermann, and Wolverton, 1998; and Manning and Roulac, 2001). This observation may also be applicable to South Africa. This is undesirable at a time when the industry and society are facing numerous new challenges that require professionals to intervene with the objective of developing solutions to improve people's lives. The findings of this study will support to change postgraduate real estate curriculum so that it adequately prepares the future professionals to deal with problems at the workplace more competently.

The purpose of professional education is to make a lead in developing solutions for society's problems with the objective of improving the quality of people's lives (Manning and Roulac, 2001). This study will contribute towards the discovery of ways how postgraduate real estate education could be made more focused in its mission to address real estate related problems in society as well as improve effectiveness of real estate professionals. Hoppe (1967); Patterson (2000); McCrea (2001); and Shelton (2002) applauded education in real estate for making real estate professionals better practitioners.

Of importance, the results of the research will support the improvement process of postgraduate real estate education course content through continuing research and dialogue in the future. In that process, suitable postgraduate real estate curriculum could be developed to create a basis of debate among educators, practitioners in the industry and other interested parties. It is believed that critical assessment of postgraduate real estate education in South Africa will create the beginning of more research in related areas that will lead to more discoveries as to the ways of making higher education more relevant to the industry and society in general.

To complete the research process, a postgraduate real estate education model has been developed based on industry requirements. The model which will be made available to the universities offering the courses shows how a socially acceptable curriculum can be produced to meet student and industry requirements in the future. The intention is to illustrate to the institutions delivering the courses a scientific process which can be followed to make postgraduate real estate education remain relevant to industry and society. The actual responsibility of improving the curricula rests with the universities offering the courses.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The property discipline today is subjected to extraordinary forces that redefine its attributes and introduce new expectations for those with property involvements (Roulac, 2002). Some of the prominent factors (forces) which have caused change in the real estate industry include: urban form changes and problems; globalisation; information technology advances; environmental concern; political, legal, social, and economic factors. These forces can be viewed as influential elements of university real estate curriculum development processes. A comprehensive understanding of these factors can support real estate educators in the processes of curriculum review and development.

In this chapter the following relevant areas are reviewed in order to set out the theoretical framework underpinning the study:

- Real estate discipline
- Critical issues of real estate education
- Influential elements of real estate curriculum development

2.2 Real estate discipline

2.2.1 Definition and characteristics of real estate

Wurtzebach and Miles (1994) defined real estate (traditionally) as physical land as well as structures and other improvements that are permanently attached. This concept of bricks-and-mortar is probably the most common approach to the definition of real estate. However, the space or the void is the essence of real estate and not the solids. In addition, the three-dimensional concept of real estate (i.e. as artificially delineated

space) is important to the understanding of the nature of real estate (Graaskamp, 1977; and Pyhrr *et al*., 1989). Furthermore, this concept becomes more relevant with the introduction of time as a fourth dimension. Consequently, real estate as a product is today appropriately viewed as a space-time unit. It is also significant to note that the investor in real estate is very interested in money. Therefore, it is appropriate to correctly conceptualise real estate as conversion of space-time into money-time, or money flows over time. Viewing real estate investment as conversion of space-time into money-time is fundamental to investors since it shows the perishable nature of real estate. As space-time can not be stored, it is therefore essential for real estate investors to avoid vacancies (Graaskamp, 1977; and Pyhrr *et al*., 1989).

The main characteristic of real estate is its association with land. All the features that distinguish real estate from other assets originate from this association. Some of these key features include: immobility, unique location, scarcity and high acquisition costs of real estate. In addition, lack or incomplete information and poor education characterise real estate markets (Pyhrr *et al*., 1989; and Wurtzebach and Miles, 1994). As a consequence, most property investors either expend considerable effort in time-consuming research or delegate responsibility to an expert since they lack the interdisciplinary education required to make sound investment decisions. It is these essential characteristics of real estate which have contributed to the existence and development of real estate education into an area of specialisation in order to produce knowledgeable professionals who will support the industry and society to effectively deal and manage this complex asset.

2.2.2 Changing real estate discipline

2.2.2.1 New values

The pressure which extraordinary forces have exerted on the property industry and society over the past years has caused the property discipline to change. These forces have changed people's and organisations' values which represent the foundation of the property discipline (Roulac, 2002). Values are essential in property involvements because they dictate property outcomes which are eventually reflected in societal spatial patterns. The societal spatial patterns emerge from: the how, where, when, which, what and why questions people and organisations ask about property in society and industry. Roulac (2002) added that the societal spatial patterns represented the penthouse of the property discipline. It is also significant to realise that property outcomes are the by-product of how values are translated into societal spatial patterns through a multitude of institutions, processes, regulations, practices, as reflected in the multiple elements of the property discipline. Seventeen elements which formed an edifice of the property discipline, built floor by floor, starting from values and ultimately leading to societal spatial patterns were identified by Roulac (2002). These elements are: values; world view; political economy; environmental institutional context; stakeholders; technology; paradigms and framework; theory, concepts, tools, and techniques; information; players and decision makers; property functions and decisions; markets: property, services, regions, capital, and market space; form of the built environment; places and spaces; interests in property; real property and virtual property; and societal spatial patterns.

With changing values which have resulted from emerging forces in society and industry, different trends of societal spatial patterns manifested in new property investment decisions have equally emerged. Further, the dynamic forces of change realigning the environments in which the real estate professional operates are similar to those occurring within society, the global economic system, and the financial services markets in particular (Roulac, 2002). As a consequence, the real estate professional has similarly been forced to change since there are new demands on the part of those delivering property goods and services. These new pressures include the need to "bridge" the traditional world of property and the cultures of the new participants. Thus, those who would be effective in their property involvements in the future must blend the traditional with the innovative, the entrepreneurial with the fiduciary, private sector initiative with public sector policy concerns, and the immediacy of specific project focus with the continuity of going concern enterprise and institutional time horizons (Roulac, 2002).

2.2.2.2 New decision makers

To complicate matters, the types of people making property decisions in the property industry have also changed. Roulac (2002) noted that previously, the property discipline was dominated by real estate people who knew little of business, finance and technology. In the twenty-first century, by contrast, real estate is increasingly dominated by finance and technology people who have much less knowledge of real estate. Indeed, one author describes corporations' space use decisions as dominated by "people who hate real estate" (O'Mara, 1999 cited in Roulac, 2002). However, not appreciated sufficiently by these people is that property, rather than being an aggravation or even an irrelevancy, can be the means to achieving extraordinary business outcomes.

Of significance, the property discipline embraces a multitude of stakeholders in property decisions, beyond the primary decision maker who initiates and controls the decision. However, Roulac (2002) argued that while sensitivity to the system consequences of property is of great importance to both the success of a specific transaction and also to society broadly, stakeholders' concerns were not often explicitly considered in the property decisions.

2.2.2.3 Required knowledge

The evolution of the property discipline embraces multiple perspectives of licensing, professional designations, university-based education, adult continuing education, applied courses, theoretical research, applied research, multi-faceted application of theory and learning as well as multiple public interest concerns (Roulac, 2002). Further, the contemporary orientation of the discipline is reflected in the different paradigms employed for considering property, including economics, finance, geography, engineering, highest and best use, city planning, brokerage, legal, corporate decisions, the consumer transaction, and a multidisciplinary approach.

However, in the twenty-first century a larger view of the requisite knowledge for the property discipline is significant considering changes which have taken place in the property business and in particular given the changing composition of decision makers who exert the most influence upon critical decisions concerning the design, creation and use of the built environment. Roulac (2002) noted that the fundamental disciplines, which can be considered to embrace the tools, theories and concepts that a real

professional must know as a precondition to be effective in property involvements are: accounting, managerial accounting, valuation, architecture, archaeology, behavioural economics, computer science, computer technology, construction management, decision science, decision theory, ethics, environmental science, economics, managerial economics, engineering, finance, geography, history, history of design, history of science, humanities, information theory, institutional economics, investment, land economics, landscape, law, management, management science, marketing, philosophy, planning and control systems, political science, project management, psychology, public administration, quantitative methods, regional and urban planning theory, religious studies, sales, science, sociology, spirituality, strategy, statistics, transportation, and urban land economics. In addition, for a real estate professional to be effective in property involvements exposure to certain allied sectors of the economy, whose goods and services are utilised and employed in creating real properties and delivering property services is also required (Roulac, 2002). These critical allied sectors are: advertising, agriculture, building materials, communications, energy, equipment and appliances, furniture, health care, hospitality, insurance, mining, security, transportation, timber, and utilities. Additionally, to be effective in the property sector it is necessary to have an understanding of institutional relationships, the technical tools necessary to perform fundamental tasks, and the personal style and attributes necessary for effective performance. Further, knowledge of the basic business environment – who the players are, how transactions work, the major forces that influence decisions, the fundamentals of the business – is a necessary condition for effective property participation for a new property professional. At the same time, superior application of managerial skills and techniques should go hand in hand with such business environmental knowledge. Critical for a real estate professional to be effective in

property involvements in the twenty-first century is also to appreciate the importance of the global context. Of significance, real estate encompasses the physical structures that house society's personal, commercial, recreational and institutional involvements and interactions. As a consequence, any factor relevant to the human condition is relevant to property. This knowledge can be acquired by real estate professionals from schools, by personal inquiry, and through experience (Roulac, 2002).

This picture of necessary knowledge in a changing property discipline requires a real estate professional to understand history of the property discipline, including knowledge of forces that have shaped contemporary places, spaces and urban form. Indeed, effective property involvement then employs multiple perspectives and skill sets to address the crucial questions for effective property involvements, and applies the capacity to reframe questions, select appropriate methodologies and tools, gather the requisite information, and be self-educating to learn what one needs to know to address the problems one encounters (Roulac, 2002).

The required knowledge attributes which a real estate professional need to balance and integrate in order to be successful in the property sector in the twenty-first century and in the global context are summarised and adapted from Roulac (2002) as follows:

- **Business environmental knowledge: Understanding of the "territory" fundamental to successful participation in any business is particularly crucial in the property sector.**
- **Strategic outlook: As rapidly accelerating pace of change within the structure of the property business is causing traditional relationships to crumble and new power alliances to emerge, positioning one's self and one's organisation strategically assumes importance.**

- **MBA technical skills: The skills that are developed through the MBA learning experience – particularly the analytical methods for problem solving, systems and procedures to achieve economy of operation and control of performance, and forecasting techniques to plan future operations and facilitate capital budgeting decisions – have an important role in the "tool kit" of the property manager.**
- **Entrepreneurial initiative: The property business is inherently entrepreneurial.**
- **Institutional style: The increasing dominance of the role of capital control by institutions mean that an important prerequisite for effective operation in the property sector will be appropriate "presence" in the institutional settings. This requirement is both a departure from past practices and alien to many who are involved in various facets of the property business.**
- **Managerial orientation: More competitive conditions, larger organisations and higher expectations of more sophisticated participants place a premium on a managerial orientation to the business. A structured approach emphasising planning systems and controls is becoming increasingly important.**
- **Marketing flair: The property business is ultimately concerned with the merchandising of space in the context of the relationship of supply and demand. A manager's ability to perceive the unrecognised opportunity, to structure creative purchase terms, and to perform effectively the many functions involved in the property process determine his capacity to answer such critical questions as: What do people want? What factors influence decisions? What else is available? How does our space compare to that of the competition? How can we differentiate and merchandise our product to achieve a premium return? Marketing flair can be instrumental in promoting space and achieving superior returns.**
- **Personal skills and people orientation: While the "people factor" is important in any number of businesses, it is especially important in property, given the influence that property decisions have on one's personal and organisational life, as well as the role that emotional factors play in many property decisions. Thus, creating the appropriate personal rapport can often be fundamental to achieving good property results. At the same time, such basic personality traits as creativity, integrity, persistence, persuasiveness, diligence and attention to detail, are all factors that increase one's likelihood of success in the property business.**

Unfortunately, the perspectives of property knowledge requirements mentioned above transcend the scope of the majority of undergraduate and graduate real estate curricula and some are not even part of the property discipline. As a consequence students graduating with a specialisation in real estate are not exposed to all these topics and skills. The challenge today is then to determine what relevant knowledge is but not part of the property discipline and what is in fact part of the property discipline. Roulac (2002) concluded that many approaches to the discipline are overly narrow in focus and limited in scope, and more specifically, the traditional approaches.

2.3 Critical issues of real estate education

Gallupo and Worzala (2004) indicated that real estate education has been taught since the early 1890s. Another author (Davies, 1958 cited in Nourse, 1995) noted that formal education in real estate began with a lecture course at the West Side YMCA of New York in 1904 resulting from activity by the Real Estate Board of Brokers of New York. This means that real estate has now been taught for nearly a century. Therefore, in the context of this research, a review of literature on critical issues of real estate education offers useful insights on real estate curriculum development over the past years as well as curriculum requirements for the future.

In this section the following relevant areas are reviewed:

- **Education**
- **Real estate education approaches**
- **Real estate curriculum**
- **Guides for real estate education**
- **Real estate body of knowledge**

2.3.1 Education

2.3.1.1 The definition of education was given by the Oxford Advanced Learner's Dictionary of Current English (1995) as a process of training and instruction that is designed to give knowledge and develop skills. Education is more concerned with exposing students to theory and principles and providing fundamentals necessary for application to a wide variety of activities while training presents techniques and methods of approaching specific problems (Brown, 1981). Real estate education is differentiated from other types of education in that it refers to courses that specialise in real estate topics or contain a substantial element of real estate material (Baum and Lizieri, 2002). From society and industrial point of view, the definition of education identifies the need for university real estate education to instruct and provide appropriate training to real estate professionals that will develop their knowledge and skills by offering well designed curriculum.

2.3.1.2 The demand for education by individuals has reasons. Hakfoort, Berkhout and Manshanden (2003) questioned why individuals spend time and money on education when there are obvious opportunity costs to this behaviour. Neo-classical economic theory provides a possible explanation. It assumes that individuals are utility maximisers. If education would not provide utility, there would be no demand for it and the market for education would not exist. As a result, education must have some benefits. According to the so-called human capital theory, the utility derived by participating in education is partly enjoyed in the short run; there is a consumption element in education derived from the pleasure of learning. In addition, the demand for education is also motivated by dynamic considerations. Education can be regarded as an investment of current time and money for future (additional) income that is the result of an increase in productivity. Further, education may also serve as a signal to employers of the innate capabilities of an individual, or as a selection mechanism of employees for different positions in the firm.

Based on the considerations for alternative approaches to the demand for education, it is therefore possible to abstract four different motives for participating in education programmes. Education can either be a consumption good, an investment, a signal to employers, or a selection mechanism for employers (Hakfoort, Berkhout and Manshanden,

2003). In reality, these motives which drive the demand for education are likely to go hand in hand.

2.3.1.3 The role of university education in society is significant. Aroni, Gradus and Lazin (1988) edited studies that investigated the reasons for the existence of universities and university education. The three editors together with the late James S. Coleman of the University of California at Los Angeles brought together scholars studying the impact of universities on various aspects of development from less developed countries of Africa, Asia and South America and the more developed nations of North America, Europe and the Far East at a conference on the role of universities in developing areas at the Hubert H. Humprey Institute for Social Ecology at Ben Gurion University of the Negev in Beersheva, Israel in December 1983. Over forty scholars from fourteen countries presented papers on diverse subjects including the role of the universities and university education. Participants came to the conclusion that many universities perform similar functions in their respective environments despite the significant differences in economic development, culture, and standard of living between countries. In addition to the traditional function of disseminating knowledge and education, universities as institutions of higher learning supported the society to cope with certain social and environmental needs, the training of professionals, regional growth and development, and nation building (Aroni, Gradus and Lazin, 1988).

However, Manning and Roulac (2001) argued that while it is appreciated that a number of innovations have been introduced to improve university education to serve society and the industry, it is widely recognised that university education is being slower to respond than other institutions in society to recent social, technological and economic changes. The lesson to be learnt from this is that university real estate educators should constantly find ways of adding value to university education so that it can remain relevant to the students and industry in future.

2.3.1.4 Motives for professional real estate education to the real estate industry and professionals were outlined by Hakfoort, Berkhout and Manshanden (2003) who did a study on the demand for professional real estate education in the Dutch real estate industry. The research was based on a survey among managers of six types of real estate firms, alumni of the main postgraduate course in The Netherlands and persons that had shown an interest in following such a course. The results suggested that human capital and signalling arguments

are the most important motives for real estate professionals to take part in real estate courses, while firms are motivated by screening and firm capital arguments. Hakfoort, Berkhout and Manshanden (2003) outline the motives for attending professional real estate education from the viewpoint of firms and individuals as follows:

a. The knowledge deficiency motive: there is a gap between the knowledge of the employee or the firm and the knowledge and skills that are perceived as necessary.
b. The network motive: employees add to their network by following a course with employees from the same industry, which may benefit both the employee (in terms of job opportunities) and the firm.
c. The perks motive: for many specialised positions in the real estate industry, only a few persons are "in the market", and in this segment head-hunters approach people on a regular basis.
d. The labour market motive: following a course allows individual employees to increase their opportunities in the labour market. Implicitly, the education is used as a signal to employers, showing the abilities of the individual and their likely productivity.
e. The selection or screening motive: firms use the results obtained in courses or the degree obtained in the course as a selection argument to promote "high potential employees" from middle to top management.

The significance of the study by Hakfoort, Berkhout and Manshanden (2003) to real estate educators is that it offers insight for the reasons why students and employers are interested in their course offerings. Based on these motives real estate educators can strive to design relevant curricula.

Anderson and Webb (2000) also conducted a related study to determine if education of real estate salespeople maximised the expected value of the real estate brokerage firm. The results of their study support the general observations noted by Hakfoort, Berkhout and Manshanden (2003) that investing in education and professional development has the potential to yield great benefits to individuals, firms and the real estate sector as a whole.

2.3.2 Real estate education approaches

Real estate education approaches are different throughout the world. Schulte and Schulte-Daxboek (2003) differentiated the approaches as: (a) the "interdisciplinary

approach" (which is practised in Central Europe); (b) the "surveying approach" (which is typically in the UK and other countries of the British Commonwealth); and (c) the "investment and finance approach" (which dominates in the USA). To add, Schulte (2003) indicated that in the future the interdisciplinary approach of real estate education and research will strengthen due to some of the following reasons:

- In continental Europe, including the transition economies and in developing countries in Africa, Latin America and South-East Asia, real estate is seen not only from the perspective of an investment vehicle. The influence of researchers from these countries within the IRES network will become stronger in the years to come. This will have an effect on real estate education and research focuses worldwide.
- The other factor pointing in the same direction will be "the export of the chartered surveyor to the USA." An American Association of Chartered Surveyors was founded in 2003. As the chartered surveyor dedication gets more and more attractive worldwide, other USA universities will seek RICS accreditation for their real estate programmes but this requires a broader approach to real estate education than investment and finance.

Gallupo and Worzala (2004) indicated that it was in the late 1970s and early 1980s when a major debate began to take place and real estate education began to take two separate paths: multidisciplinary approach (Graaskamp 1977, 1978, and 1984) and financial management approach (Dasso and Woodward, 1980; and Boykin, 1985). These thought leaders started to challenge whether dominance of the finance perspective is the appropriate and preferred paradigm for property involvements. Real estate educators were in disagreement on the state of the discipline. It is in the last quarter of the twentieth century when a clear schism between the British and American perspectives to education concerning real estate emerged (Roulac, 2002). By the end of the twentieth century, a disproportionate number of American real estate academics placed a primary emphasis on finance in their approach to the subject while the British approaches continued to reflect a property primacy, with a broader view of the discipline. However, certain real estate education programmes in continental Europe seek to bridge the property emphasis of the UK and the financial emphasis of the USA. An interdisciplinary approach, bringing together the multiple perspectives of business management, finance, and the school of the built environment, prospectively offers a more balanced and richer course of preparation (Roulac, 2002).

It is significant to note that real estate education approaches are critical to students and employers in the sense that they determine the type of real estate education a graduate will receive in the end. If a student pursues real estate studies in the USA, most likely will take courses from and study predominantly with professors housed or affiliated with the department of finance in a college of business. Such a curriculum can provide a comprehensive exposure to the multiple disciplines of business, which exposure is very relevant, for each property is itself a business. However, a business school of study will omit the learning that could be obtained through a UK School of the Built Environment, with its heavy emphasis on the classic surveying curriculum, involving an orientation to basic close-to-the-land disciplines. Consequently, strange as it might seem, the majority of graduates of USA real estate programmes may be blissfully ignorant of the subject of geography, generally, and how it relates to issues of property and place specifically (Roulac, 2002).

On the other hand, if students have chosen to study real estate in UK, they will have much exposure to the real of real estate, following from the classic surveying tradition. These students in the school of built environment will have much more particular knowledge of the tangible than would their American counterparts. This background better prepares such students for hands on involvement with land and buildings. However, the disadvantage of emphasis taken by the classic School of the Built Environment is that graduates tend to have much reduced exposure to business administration and international context. An interdisciplinary approach offers a compromise between the American and British perspectives to the study of real estate (Roulac, 2002).

By comparison, Roulac (2002) concluded that real estate curricula of major institutions that aspire to educate people (a) to make informed decisions concerning society and (b) to assume management and leadership positions within society, would do well to have a programme that

emphasises property. This priority suggests, then, that the higher level orientation of the British system should be emphasised over the lower level of the American system.

Black *et al*., (1996) also described real estate education as being both multi-disciplinary and interdisciplinary in nature. It is multidisciplinary because competent understanding requires reference to a combination of disciplines e.g. civil engineering, architecture, marketing, economics, finance, law and management. It is interdisciplinary because it joins concepts and theories of several disciplines to create a new whole e.g. discounted cash flow analysis is the result of interdisciplinary melding of accounting, finance and economics. As a result, it is recommended that real estate should be taught as a process of dynamic interactions, rather than as functional areas and historical numbers and facts. In support of the multidisciplinary approach to real estate education, Graaskamp (1977:63) stated that "through this approach the University of Winsconsin programme expects to produce a master who has the creativity of Leonardo da Vinci, the sensitivity for the natural world of John Muir, and the political humanity with cash management for profit of James Rouse".

2.3.3 Real estate curriculum

Black *et al*., (1996) emphasised that any well-rounded real estate curriculum should reflect the interdisciplinary and multidisciplinary nature of the field, although a curriculum can be designed in many forms. In addition, a real estate curriculum has to recognise the different constituents whose needs and concerns must be met. Furthermore, the aim of the curriculum should be to provide effective real estate decision makers, managers armed with the concepts, techniques and skills required to solve the problems of today and tomorrow.

As society moves into twenty-first century, property, as well as who work within it and are influenced by it, will undergo singular changes. Therefore, central to property involvements in the future will be the capacity to recognise, adapt and lead change. According to Roulac (2002), these changes will:

- Modify traditional patterns of space use and the functions within types of property;
- Introduce new influences on space locations decisions;
- Redefine the parameters of real estate value;

- Change the basic structural demand, resulting in less, in the aggregate, in different locations and of different types;
- Impact the strategies, structures and systems of organisations serving those involved in and using real estate;
- Create new needs for professional services;
- Elevate to a new standard the requisite knowledge, skills and style of professionals working in the real estate sector; and
- Render obsolete many of yesterday's accepted principles and practices.

Any property curriculum that fails to prepare professionals for the implications of these changes, by definition is, dysfunctional (Roulac, 2002). The rest of this section identifies a number of significant issues in relation to the real estate curriculum.

2.3.3.1 Real estate curriculum change

In reviewing the literature concerning demands for real estate curriculum change, two basic issues are most conspicuous. The first concerns the curriculum paradigm (What knowledge and skills should be taught) (Butler, Guntermann and Wolverton, 1998). The intention of a curriculum is to graduate students who are better prepared to assume responsible positions in the real estate industry. To address this concern it is important for real estate educators to seek input from leading real estate practitioners to assist in defining knowledge and skill goals of a curriculum. Some of the key skills and knowledge needed as part of a real estate curriculum, which were identified in a study of real estate professionals in the USA are summarised from Black *et al*., (1996) as follows:

Skills:

a. Negotiation - a critical skill needed for professionals to utilise in dealing with internal bureaucracies of an organisation as well as in handling external relations.
b. Information processing - abilities associated with identifying information needs, obtaining information, and transforming information into models for decision making.
c. Management - needed in managing people and processes, mustering resources and handling administrative tasks.

d. Communication - needed to perform tasks involving persuasion as well as presenting information and materials to others.
e. Problem-solving - involves applying abilities and skills to resolve unique situations that require innovative solutions as well as to efficiently resolving common challenges encountered in the field.

Knowledge:

a. Market evaluation
b. Corporate and business environments
c. Physical aspects of real property
d. Laws, regulations and legal procedures
e. Financial dimensions of real property

The second issue concerns the learning paradigm (How should the curriculum be taught) (Butler, Guntermann and Wolverton, 1998). One approach has been identified as the text book model which involves adopting a text book and teaching whatever is in the book (Epley, 1996). The typical learning environment for this approach is passive in nature, built upon the lecture-discussion model, which may or may not get students involved in the learning process depending upon the interest and skill of the instructor. This approach to learning has been criticised as to whether students can be prepared well to function successfully in the industry due to its limited ability to confront reality. Those who hire graduates expect their new hires to be able to work in an active environment of changing concepts, new technology and collaborative relationships. To address this challenge Butler, Guntermann and Wolverton (1998) suggested that the learning paradigm requires a change from the traditional passive educational delivery system into the disquieting arena of active learning and real-world experience.

2.3.3.2 Composition of real estate curriculum

Black *et al.*, (1996) provided a blueprint for real estate curriculum. They noted that a comprehensive real estate curriculum should be envisioned as a four-cornered approach to cover the many specific topics of the field required to produce a competent real estate professional. Courses that cover specific subjects add knowledge in the field by embracing concepts, theories, factual information, techniques, and skills. Each course focuses primarily

on one or two of the cornerstone elements but links with knowledge found in other environments.

Four cornerstones or fields of study for a comprehensive real estate curriculum are summarised from Black *et al*., (1996) as follows:

a. The market environment

The market-oriented portion of the curriculum generally focuses on the broad topics of market analysis and valuation. Specifically, the student must learn the underlying economic theory to understand the major variables affecting demand and supply for each type of property market. This knowledge allows the student to analyse the markets and make judgements about further directions of market indicators such as quantity of space demanded and supplied, price, rent, absorption, occupancy levels, and vacancy levels.

b. The financial environment

The finance section of the curriculum is perhaps the easiest to define, given the traditional link between real estate and finance as well as the proliferation of available teaching text books. Courses cover the mechanics of finance, such as time value of money, together with descriptive elements, such as the various types of mortgage instruments. Real property finance encompasses both the analysis of debt and equity instruments.

c. The legal and public policy environment

Courses focusing on the legal and public policy environment embrace both the regulatory aspects of government involvement in real estate operations and the total role public institutions play in the operation of real property markets.

d. The physical and development environment

That portion of the curriculum focusing on the physical and developmental environment involves subjects dealing with land resources, site development, design, engineering, management, developmental processes, and environmental impact. Some courses are designed to teach such topics as site and structural analysis, development design, construction management or environmental management.

2.3.3.3 Real estate curriculum presentation

Real estate courses can be presented by real estate educators by using one of the three available options. These options are summarised below from Black *et al*., (1996) as follows:

a. The first option is a service orientation that involves a one or two-course package. It provides a broad approach to real estate analysis with business and professional applications. This option is the most realistic for many business schools and can be handled by one faculty member trained in real estate analysis.

b. A second, more pragmatic option involves the development of four to six real estate courses presented as a major of concentration for BBA or MBA students. Besides a principles course, this type of programme should include other basic courses covering real estate topics such as investment analysis, mortgage finance, real property law and public regulation, market analysis and real property asset management. These topics should be focused on preparing the business manager or executive to deal with real estate, an approach that more clearly identifies real estate as an integrative function of management. Four faculty members in real property are needed to staff this type of arrangement, or at least two full-time faculty members and access to several qualified part-time faculty willing to teach on a regular basis.

c. The third option is a comprehensive real estate programme offered and administered by a full academic department, and may include coursework both within the college of business and from other academic units such as engineering and architecture. This option involves the creation of a full programme to prepare business managers in making real estate decisions and also prepares professionals for a variety of real estate specialisations. In addition to courses offered in the pragmatic option above, advanced coursework for example in asset valuation, commercial property management and international real estate investment can be offered. To implement such a comprehensive curriculum, access to a faculty of eight to ten real estate specialists and to a pool of part time instructors active in real estate practice is required. Clearly the third option is optimal for the professional constituency of the field and to delimit boundaries that define the breadth of real estate studies.

Black *et al*., (1996) also highlighted problems related to curriculum implementation and presentation. In this regard, they noted that the ability to implement a comprehensive curriculum might be constrained in various academic environments by financial resources, faculty manpower and institutional structure.

2.3.3.4 Real estate curriculum review

Real estate curriculum review is relevant in order for real estate education to continually meet industry requirements (Callanan and McCarthy, 2003). This is achieved through continuing change and development of real estate teaching programmes. The property industry is a changing environment with new regulations and requirements being introduced regularly. For the graduates to be at the leading edge of the industry, the educators need to maximise the use of the student's time and prepare them to be adaptable to a changing workplace. This requires regular curriculum review in order to ensure that educators are delivering the best programmes possible.

In order to meet industry needs through curriculum review, Callanan and McCarthy (2003) conducted a study on property education and industry requirements in New Zealand. The survey was part of regular evaluation and curriculum review process of valuation and property management education at Massey University. They indicated that the most appropriate way of obtaining feedback on the valuation and property management course was to survey past and present students and their employers. Final year Bachelor of Business Studies (BBS) (Valuation and Property Management) students at Massey University were surveyed on their perceptions of the property professions and their preferred area of employment. Recent graduates were also surveyed to determine how the BBS (Valuation and Property Management) degree prepared them for a career in the property industry. Finally industry employers were surveyed to assess the theoretical and practical knowledge of recent graduates. The research revealed that graduates feel that more practical fieldwork should be included in their programme, whereas employers feel that graduates lack sufficient practical expertise to be able to relate theory to practice. The results were in accord with the current paradigm shift in university teaching to producing learning that recognises the importance of industry involvement. Furthermore, the research was an ongoing study, undertaken every three to five years to ensure that any new initiatives are accepted and that the curriculum is achieving the result; a well-rounded adaptable property professional. It is important to note that the focus of this study tends to identify the need to appropriately balance theory and practice in the curriculum to best serve industry and hence the discipline. As such Callanan and McCarthy (2003) identify a need to revisit a programme's balance of these two key issues on a three-to-five year cycle.

2.3.3.5 Real estate curriculum development

Real estate curriculum development processes require consideration of important elements. This was demonstrated in a study by Galuppo and Worzala (2004) who described the process followed to develop curriculum for Master of Science in Real Estate (MSRE) degree at the University of San Diego's Burnham-Moores Centre for Real Estate. The study emphasises the potential alternatives and describes the choices made by Centre faculty regarding the type of programme, the desired topics and skills to be taught, course content and delivery. The results of their study indicate that the essential need of any graduate real estate programme is to provide up-to-date, high quality real estate education that fosters the development of technical, social and technological skills.

Galuppo and Worzala (2004) mentioned that the faculty and staff of the University of San Diego's Burnham-Moores Centre for real estate relied on the academic literature concerning real estate education, discussions with several focus groups and a task force, as well as results from two surveys: graduates of an established real estate programme (graduates of the University of Wisconsin – Madison real estate programme) and real estate professionals from the San Diego community to develop the MSRE programme. By making use of the information from these sources, a programme and curriculum was created for graduate studies in real estate. The research methodologies employed demonstrated that real estate is a complex asset and that the real estate industry is a multidisciplinary field. A relatively unique programme, the MSRE at University of San Diego borrows from the University of Wisconsin – Madison programme, but is differentiated by an emphasis on developing socially responsible real estate professionals. Galuppo and Worzala (2004) further noted that as stewards of a finite natural resource, communities and individuals involved in the real estate industry have social, moral and ethical responsibilities to balance the needs of the individual with the needs of the community at large. This is necessary to ensure that the needs of all constituents are recognised and addressed.

The significance of this study is that it identifies some of the important issues that must be considered and followed by the universities in the process of creating and developing a relevant and socially acceptable real estate curriculum for students, local communities and real estate industry.

2.3.3.6 Real estate curriculum analysis

Brown (1979) and Epley (1996) recommended research within real estate education as a solution to in-depth understanding of diverse real estate education content. Analysis of real estate curricula supported educators in the processes of curriculum development by discovering coursework offered in the curricula; extending literature on real estate curriculum; and providing insights to be considered in the establishment of new or improvement of existing real estate programmes (Finch and Weeks, 2003). Apart from supporting educators, results of curricula analysis supported students and industry in the processes of selecting suitable real estate programmes which are meeting accreditation requirements and other needs by comparing the courses offered.

The benefits of curriculum analysis were demonstrated by Finch and Weeks (2003) in a study they conducted for all business schools in the USA accredited by AACSB International to determine the depth and breadth of curriculum requirements for concentrating or majoring in real estate. The results provided surprising insights into the variety of coursework completed by students either concentrating or majoring in real estate. It was revealed that the education product that constitutes a real estate concentration is much different than that of a real estate major. Carn and Rabianski (1986) identified five classes beyond the Real Estate Principles course that should constitute a real estate curriculum: Investment Analysis, Real Estate Finance, Market Analysis, Appraisal, and Policy and Law. Many real estate majors were required to study these topics, while students pursuing real estate concentrations were not.

2.3.3.7 Traditional real estate curriculum

Traditional real estate curricula are based on simply accumulating knowledge and passive learning (Butler, Guntermann and Wolverton, 1998). Roulac (2002) criticised traditional curricula for being biased, narrow and restricted in their approach to the study of real estate; and characterised by misplaced emphasis and insufficient attention to critical issues that should be considered in this new era and in the global context. More specifically, Roulac (2002) described the traditional curriculum approaches as weak by:

- **Viewing property involvements primarily from an outmoded deal-making transaction approach, without sufficient consideration of the important policy and portfolio issues;**
- **Failing to address how large scale political and economic forces generally and capital flows specifically drive markets and therefore property values and returns;**
- **Ignoring the profound implications of advances in information and communication technology concerning how society relates to space and place; and**
- **Paying scant attention to corporate management issues associated with the second largest expense line item on the income statement.**

Based on weaknesses highlighted above, graduates of prevailing traditional real estate programmes are unlikely to possess the required knowledge and skills needed by the industry. With these complaints, university faculty are being challenged to rethink their course and programme offerings to bring them in line with the diverse needs of the student population and the changing demands of the workplace that students eventually enter (Butler, Guntermann and Wolverton, 1998; Manning and Roulac, 2001; Marcus and Mehdi, 2001; Hoyt, 2002; Roulac, 2002; Born, 2003; and Burton and Rutherford, 2007). To achieve this real estate educators are required today to challenge traditional real estate curriculum and learning paradigms by introducing innovative learning approaches.

As universities and their faculty faced challenges, some have responsibly redesigned their curricula to keep up with marketplace change and need. These initiatives are observed within goals, efforts and design of the majority of recently upgraded real estate programmes for some of the business schools (Manning and Roulac, 2001). Some of the important innovations in real estate education aimed at addressing weaknesses associated with the traditional curricula which were identified in this literature research are outlined below.

a. An integrated real estate programme was developed at Arizona State University following the criticisms on the traditional real estate programme from the students and workplace (Butler, Guntermann and Wolverton, 1998). As a solution, the integrated real estate programme has tremendous potential to enhance the education experience of students but it requires an enormous commitment of time, effort and resources on the part of faculty, the business community and the university. The programme emphasises on both skills and knowledge in an attempt to enhance the educational experience of students. An active learning approach is used in the classroom with students gaining experience by applying concepts through actual projects that require students to work in teams (Butler, Guntermann and Wolverton, 1998). In addition, the greatest advantage to students of the integrated programme is that concepts are not learned in isolation and compartmentalised but are reinforced and integrated through "real-world projects". Emphasis on team building is combined with communication and computer skills and offers students the opportunity to go beyond simply accumulating knowledge by applying what is learned to real-world projects.

However, the use of cooperative and collaborative learning techniques in class requires considerable re-education of the faculty (Butler, Guntermann and Wolverton, 1998). Numerous issues must be resolved for an integrated programme to be successful, such as students who lack experience working in teams, developing an assessment system based on evaluating skills and personal responsibility as well as knowledge, and significant limitations on academic freedom associated with the need for classroom activities related to mutually agreed team cases and projects. While the time commitment is substantial on the part of affected faculty and administrators, there can be tremendous benefits to students and faculty from an integrated programme.

b. Problem-based learning is an educational technique that employs real world problems, scenarios and cases in order to enhance the problem-solving and critical thinking skills of real estate students (Anderson, Anthony and Webb, 2000). It is another method which can be used by real estate educators to solve some of the deficiencies associated with the traditional approaches to teaching and curriculum but which appears to have been overlooked or underemphasised. As a technique, problem-based learning promotes active learning environment in real estate courses. Along with its well-known counterpart, the case studies method, problem-based learning may be broadly classified under the category of "cooperative learning", a pedagogy that relies on collaborative problem-solving through the use of teams

whose members share interdependent goals (Anderson, Anthony and Webb, 2000). Delaney and Rose (2007) argued that case studies have long been recognised as an important pedagogical tool in real estate education. Whether derived from a real-life situation or constructed as a hypothetical scenario to illustrate a teaching point or an analytical technique, case studies go beyond end-of-chapter problems to provide a superior application-based link between academia and the real world (see Bao and Sweeney, 2008).

Anderson, Anthony and Webb (2000) further noted that problem-based learning has a five-stage learning process, which include: (a) introduction of a problem; (b) inquiry and formation of hypotheses; (c) self-directed research, including data collection; (d) testing of the hypotheses; and (e) evaluation and conclusions. In the introduction the facilitator presents the class with a succinct problem that gives the students a well-defined role that they can easily relate to. In the inquiry stage, the facilitator guides the student toward the issues that need to be resolved and where information on the issues may be found. Third stage requires students to commit to the hypotheses that they wish to test, which will involve collection of data and other information. Students then revisit their hypotheses and share information about the outcome of their research, followed by an evaluation of the problem and their success at solving it. As students work through each stage, the facilitator oversees the problem-solving process to ensure that they are modelling it correctly.

2.3.4 Guides for real estate education

Published literature on real estate education has revealed two guides which are supporting the study of real estate. These guides together with the available real estate text books have supported real estate educators to disseminate real estate knowledge and skills during this difficult time the academic field of real estate is struggling to find a niche within the academy. These guides are "strategic real estate framework" by Roulac (1996) and "house of real estate economics" by Schulte (2003). The guides are reviewed next.

2.3.4.1 Strategic real estate framework

Based on the fact that currently the real estate discipline lacks coherence and concurrence about what is the essence of real estate and what are the operative paradigms for comprehending and making order of the discipline (Roulac, 1996), the strategic real estate framework offers an alternative guide for the study of real estate. The strategic real estate framework which is simultaneously synthesizing, integrating and comprehensive; provides a comprehension of the multifaceted, multidimensional, and substantial segment of the real estate economy. The objective of the strategic framework is to give a contemporary perspective for an understanding of the real estate markets that can guide the participation and decisions for all sectors of society's direct and indirect involvements with the real estate process, resources and market participants (Roulac, 1996).

Central to the strategic real estate framework is consideration of the decision processes and strategy elements of critical segments of the real estate market. Roulac (1996) identified six major segments of the real estate discipline as follows: space users, investors, owner/managers, service providers, developers, and the public interest. He added that basic to the strategic real estate framework is the interdependency between market segments/participants and their actions as they interact in the real estate market directly with each other, both within and between categories, and especially directly with the property and through the property to other market participants.

The real estate market reflects a series of strategy interactions between users and suppliers of space, resulting in real estate transactions. The terms of these transactions reflect the implementation of the strategies of the decision makers. Among the factors motivating transactions by market participants are (Roulac, 1996): values; objectives, rational and irrational; risk tolerance; strategies; relocation; business expansion/contraction; changing space needs; market perceptions; needs/requirements; resources; decision models and criteria; time horizons; condemnation; and change in circumstances, i.e., bankruptcy, divorce, and death.

Another inherent concept fundamental to the strategic real estate framework is that of the life cycle of involvement with a particular real estate transaction, both at the property and enterprise levels. The real estate life cycle is comprised of four elements (Roulac, 1996): policy decisions that initiate the transaction; origination, following the acquisition of the property; operations, embracing the management of the property; and conclusion, involving the disposition and completion of the property involvement.

Overriding and occurring prior to the implementation of property-specific real estate involvements is consideration of the enterprise or investment programme life cycle. Roulac (1996) explained that the investment programme life cycle involves the discreet elements of investment policy, implementation and monitoring.

Further, Roulac (1996:345) said: "that the concept of the real estate strategy framework provides both the basis for getting insights into the real estate discipline and also represents a means to connect a strategic approach to real estate with the act of real estate deal-making. By understanding the real estate process, those strategic influences on transactions that follow from the real estate process can be identified. These strategic influences in turn, for each participant in the real estate process, are a function of that participant's real estate strategy, which in turn is derivative of that participant's overall enterprise strategy. For organizations directly involved in the real estate business, enterprise strategy and real estate strategy are one and the same. For organizations where real estate is not their primary business, but rather an input to another primary activity, the real estate strategy derives from and is influenced by the primary strategy."

In conclusion, Roulac (1996:345) noted that: "Real estate deal-making involves a multitude of choices in terms of how specific transaction elements are prioritised, addressed, and implemented. Just as each property is unique, so also is each transaction unique. Indeed, extraordinarily different approaches and outcomes can result from different participants' interactions with the identical real estate interests. These different approaches and outcomes from the application of a common process to the same real estate interests are the consequence of divergent real estate strategies that in turn reflect very different primary – enterprise strategies. This framework can enhance the quality, reliability and prudence of real estate decisions. By understanding these interdependencies and linkages, more effective

decision making that concerns real estate interests and the objectives of participants in the real estate markets can be achieved."

2.3.4.2 House of real estate economics

Schulte (2003, 2007) offered a clear prescription to guide real estate education called the "house of real estate economics". The guide illustrates the interdisciplinary approach to real estate studies and differentiates interdisciplinary, typological, institutional and management aspects. Its foundation consists of *business administration* which is supported by *interdisciplinary studies*, i.e. economics, law, spatial planning, architecture and engineering. The two pillars of (a) *real estate types* (commercial, residential, industrial and special real estate) and (b) *institutions* (real estate developers, real estate investors, construction companies, financial institutions, consultants, real estate users, and others) supported (a) *strategic studies* (real estate portfolio management, corporate real estate management, and public real estate management); (b) *functional studies* (real estate analysis, real estate valuation, real estate finance, real estate investment, and real estate marketing); and (c) *phase specific studies* (real estate development, construction management, and facilities management) which are *management aspects*.

2.3.5 Real estate body of knowledge

Epley (1996) noted that the chosen area of teaching and research labelled "real estate" has struggled for many years to determine its body of knowledge and obtain a consensus of opinion. He chronicled a two-year commitment made by the Board of Directors of the American Real Estate Society (ARES) to study the current state of a body of knowledge of real estate. After surveying the ARES academic membership and available publications, it was observed that the existing real estate curriculum paradigms were:

- Four-course "text-book" model in real estate. This approach follows the traditional four-academic-course approach for an undergraduate degree. It includes a course in real estate principles, finance, law, and appraisal.

- Two-to- four course model with an emphasis / tract / concentration in real estate without a major. This approach is the same as the one above except that a major does not exist, which means that fewer courses can be justified in the budget.
- Elective area within the MBA. If the MBA is structured to allow electives, one to four courses can be offered.
- Specialization with MSc in real estate.
- Terminal degree in real estate. A wide variety of concentrations can be found in terminal degree requirements i.e. PhD degrees.

Other paradigms also existed which may or may not be implemented in the existing curriculum. These included: emphasis on development, emphasis on land economics, emphasis on analysis and decision-making, emphasis on a systems or management approach, emphasis on an employer need approach, and emphasis on AACSB requirements. Weimer (1956) advocated the teaching of real estate to shift emphasis away from land economics towards real estate administration. Based on these different paradigms, Epley (1996) concluded that the real estate area has not evolved through the detailed debate that is required to delineate the topics and receive consensus among educators about the necessary knowledge and skills required. He further indicated that these paradigms are so diverse that the task appears too large for one person to address or resolve.

Epley (1996) further argued that a number of authors tried to define body of knowledge for real estate based on their opinions rather than survey approach (Brown, 1981; Lahey and Webb, 1987; and Black *et al*., 1996). Additionally, apart from calling for the body of knowledge in real estate, Black and Rabianski (1998) also called for the creation of a body of knowledge in real estate brokerage.

Carn and Rabianski (1986) emphasised the lack of agreement over a common body of knowledge among academics by noting that Real Estate Principles, the entry level core course covering a variety of real estate topics, remained an elective in many programmes. Furthermore, Finch and Weeks (2003) found that there was no single real estate class which was offered uniformly by schools offering an undergraduate major in real estate.

An attempt to define a body of knowledge for real estate in the global context by asking real estate educators and practitioners about the importance of various real estate topics worldwide was undertaken by Black and Rabianski (2003). They too noted that defining a body of knowledge in real estate is extremely difficult, since there appears to be no clear cut consensus on the boundary lines of the discipline, either academic or professional. Academic real estate programmes in the United States are often housed in business schools and most often have a finance and investment focus, while programmes in the United Kingdom, Australia and New Zealand may be housed outside the business school and focus on the built environment, a broader programme that encompasses physical as well as financial concepts. Further, programmes in other parts of Europe are centred on the physical aspects of real estate, such as construction technology and engineering. Real estate professions in the USA include brokerage, asset management, property management, construction, planning, law, investments, finance, government regulation, forestry and natural resources, architecture, housing policy, and numerous other jobs related to the consumption of space overtime. To conclude, Black and Rabianski (2003) indicated that the results of their survey showed that the field of real estate has a broad perspective and that no global consensus on what constitutes the body of knowledge prevailed. However, they noted that while there were many areas of disagreement, there is also substantial agreement on most important topics in real estate. Black and Rabianski (2003) pointed out that in future the understanding of a body of knowledge will not fully emerge until the activity nodes are defined, participants identified, and the attitudes, practices, research and academic teaching are collected within the resulting sample frame.

Black *et al.*, (1996) indicated that real property is sociology, psychology, geography, environmental science, design, engineering, construction, architecture, planning, management, economics, finance, law, and many more. They added that it also involves market analysis (examination of supply and demand forces), physical analysis (examination of site and structure), spatial analysis (examination of location and sites), and legal analysis (examination of rights and obligations of real property ownership). Next Black *et al.*, (1996) posed a question: "But if real property is so many things, is it not in danger of becoming nothing at all?" Indeed, the lack of a consensus about the boundaries of the field leads to an easy conclusion that real estate is not a discipline, but rather an ill-defined mutation that steals its identity from other disciplines such as finance and management that have well-defined paradigms, focused research efforts and the desirable boundaries that give an

academic/professional field its shape and substance (Black and Rabianski, 2003). However, Diaz (1993) has argued that real estate is analogous to engineering. Real estate is not defined by paradigms, but by activities (consuming, lending, governing, etc). Following from this logic, an attempt can be made to identify a body of knowledge by surveying the participants in the activity nodes of real estate, even though the identification of nodes to be included presents the next problem (Black and Rabianski, 2003).

2.4 Influential elements of real estate curriculum development

A review of literature on elements influencing the development of real estate curriculum provides real estate educators and researchers a comprehensive understanding of factors which have affected real estate, real estate education and the industry. The understanding of these factors would support real estate educators in the processes of developing relevant curriculum for students and industry. This would contribute towards further improvement of real estate education and industry. The rest of the section reviews important influential elements identified in the study which have affected the development of real estate curriculum and education.

2.4.1 Accreditation bodies

Real estate education accreditation bodies are established to enforce and regulate laws responsible for governing issues related to real estate professionals including: registration of professionals, observance of professional ethics, and continuous professional development (Isakson, Rabianski and Schulte, 2003). They are also responsible for accreditation of real estate courses. In so doing they scrutinise real estate curricula to ensure that the curricula are always of high quality in order to produce competent graduates who would serve the public well. As a result, accreditation bodies' suggestions during accreditation exercises are influential in real estate curriculum development processes. Internationally, the RICS is a good example of a professional body which has enormously influenced the development of real estate curricula in different parts of the world (Schulte, 2003).

Accreditation of real estate programmes is a significant development in real estate education. Its objectives include assurance that quality standards were met in education programmes and to guard against unacceptable practices (Isakson, Rabianski and Schulte, 2003). In addition,

accreditation raises the reputation of the real estate discipline, academic staff, the graduates and the students of an accredited real estate department of a university. Student exchanges between universities in different countries were also gaining importance. Therefore, for quality reasons, credit points which students earn at universities abroad should only be accepted if the foreign partner university is an accredited institution. Furthermore, it is also important to note that in nearly every other country higher education is more or less controlled and monitored by the national government, which promulgated higher education policy (Isakson, Rabianski and Schulte, 2003).

Countries with more developed accreditation systems are the USA and UK. The driving forces behind this process have been professional bodies which have defined the minimum standards of qualification for their members. In the UK the most important accreditation body is the RICS (Isakson, Rabianski and Schulte, 2003).

In the UK and many countries of the British Commonwealth, RICS has a long tradition of accreditation of real estate programmes. This professional body is committed to upholding standards of competency and integrity among its members (Schulte, 2003). Standards in two main areas are set and enforced: education / training and professional conduct. In addition, the RICS Accreditation Policy is very successful which demonstrates that the idea of accrediting real estate programmes is widely accepted (Isakson, Rabianski and Schulte, 2003). Further, it is important to note that internationally, the designation of a chartered surveyor is a very prestigious attainment in the professional areas of the real estate industry, and to become a chartered surveyor, the first step for a student is to pass an RICS accredited programme at a college or university (Schulte, 2003).

In South Africa, real estate courses at universities are also subject to scrutiny for accreditation by local and international bodies for example the RICS (Cloete, 2002). Locally, the South African Council for the Property Valuers Profession and Estate Agents Board look at issues related to qualifications and courses for property valuers and estate agents, respectively. These bodies ensure that the quality of education and registration of professionals is up-to-date and in line with industry requirements. In addition, government established national qualifications framework (NQF) which is administered by the South African Qualifications

Authority (SAQA) to promote quality of higher education in South Africa, including real estate education. Cloete (2002) noted that some of the guiding principles of SAQA and NQF are to standardise all education and training, recognise learning skills which may have been acquired through experience, facilitate mobility and progression within education, training and career paths and provide a framework for life-long learning. The emphasis throughout is to test competence in the various learning fields by means of defined outcomes.

Professional associations both local and international have also supported efforts of accreditation bodies to improve and develop real estate curriculum. In South Africa, at local level bodies like SAPOA and the South African Institute of Valuers have contributed to curriculum development for property education. Through member interaction, professional associations share experiences and challenges in the real estate industry. In that process they recommend new issues to be added in the curriculum so that the curriculum can remain relevant to the real estate industry. Internationally, the International Real Estate Society together with its affiliate member societies in different continents of the world: American Real Estate Society, European Real Estate Society, Pacific Rim Real Estate Society, Latin America Real Estate, and African Real Estate Society have played a significant role to develop real estate education in different parts of the world.

2.4.2 Buildings, climate and environmental concerns

Real estate development process partly involves the creation of artificial space for human beings to live comfortably in different climatic conditions. To achieve this, real estate professionals have a critical role to play in the formulation of appropriate design criteria for buildings (Hauptfleish, 1999; and Cloete, 2001) depending on the specific local climatic conditions. In addition, real estate professionals have a duty to design for clients buildings which offer other advantages, for example minimisation of future building operational costs and building maintenance works arising from adverse effects of weather as well as wear and tear. These issues are required to be covered in the curriculum for real estate professionals.

Further, today buildings which are energy efficient are desired in society for being friendly to the environment by reducing air pollution (Milford, 2008). Worldwide, 30 to 40% of all primary energy is used in buildings (UNEP, 2007). While in high and middle income countries this is mostly achieved with fossil fuels, biomass is still the dominant energy source

in low income countries. In different ways, both patterns of energy consumption are environmentally intensive, contributing to global warming. In addition, the pattern of energy use in buildings is strongly related to the building type and the climate zone where it is located. For being part of the building professional team, real estate professionals have an important role to play in reducing building energy consumption by suggesting remedies at design and operational stages of the building cycle. These solutions include: thermal insulation, high performance windows and solar shading, air tight structural details, ventilation and heat / cold recovery systems, and integration of renewable energy production in the building (UNEP, 2007).

Like in the other sectors, today environmental concerns are significantly affecting the real estate industry. The UNEP (2007) noted that while construction, use and demolition of buildings generate substantial social and economic benefits to society, they are contributing serious negative impacts on the environment. Milford (2008) pointed out that construction which is linked to real estate is viewed as one of the major contributing factors to global climate change and environmental degradation. Furthermore, with more people placing greater emphasis on spirituality and environmental sustainability, considerations of property as a commodity are becoming less and less accepted (Roulac, 2002). These concerns together with pressure from lobbying groups around the world against global warming and to protect the environment and endangered species, have forced the real estate sector to adapt. For example, in South Africa, regulations requiring that environmental impact assessment reports accompany proposals for new property developments are being implemented by local authorities. In that way, the real estate curriculum is being challenged to accommodate relevant climate and environmental issues. Milford (2008) suggested that educators should consider incorporating the following significant climate and environmental issues in the curriculum: regulatory and control instruments such as building codes and appliance standards, energy efficiency standards, environmental management systems, assessment systems, and new technologies and materials. Depending on the way the curriculum is structured topics on buildings, climate and environmental concerns could form part of the physical subjects of the real estate curriculum (Black *et al*., 1996).

2.4.3 Client needs

Real estate clients can be categorised into two main groups: public and private clients (Cloete, 1994). The objectives of these two types of clients are different. The private client is more interested in maximising profit while the public client is motivated by meeting social needs of the society. The real estate profession is characterised by giving professional services to these clients. Historically, the client has demanded high quality services from a real estate professional to meet: time, cost and quality parameters specified for a real estate activity to be executed. Satisfaction of client needs is crucial as current and future prospects in the real estate industry depend on the extent to which clients are satisfied by real estate professionals (Storms, 2000; and Mbachu, 2003).

In the twenty-first century real estate clients are experiencing new challenges. Of significance are financial and economic problems. At the moment the world is experiencing the worst financial and economic crises in history which started in the USA and spread to other parts of the world (http//en.wikipedia.org/wiki/ Economic_crisis_of_2008) (8/10/2008). Negative effects accompanying these crises are: decline in house market prices; a sub prime mortgage crisis; high oil prices; rising inflation; high food prices; a substantial credit crisis leading to the bankruptcy of several large and well established investment banks; increased unemployment; and global recession. With increasing financial, economic and social problems, the budgets of real estate clients globally have become tighter, and their real estate needs have all over a sudden changed due to mainly unaffordability reasons. Adding to the negative effects of the global financial and economic crises, the South African economy has also recently experienced increasing mortgage interest rates and building costs. One of the noticeable consequences of these negative effects has been government's failure to deliver projects and other infrastructure services which were promised to the poor people, including housing. This has forced the poor masses in some townships to protest for poor service deliver.

These new challenges which the clients are going through have created new needs and expectations for services from real estate professionals (Roulac, 2002). This has three important implications on the curriculum. Firstly, educators will have to conduct research to identify relevant factors which are challenging clients to meet their real estate needs and goals. Secondly, educators should investigate possible causes of the crises which clients are going through. Thirdly, educators should immediately investigate important services which the clients will expect from real estate professionals to support them to come out of the

current problems and to avoid repetition of similar crises in the future. Two immediate expectations from real estate professionals to support clients over-come the crises will be improvements to be made to real estate investment risk analysis process, and the development of new real estate lending regulations. Real estate educators will be forced to address these issues in the curriculum in order to support the professionals and future graduates to competently deal with client needs.

2.4.4 Demographic factors

Important demographic factors which have influenced real estate in South Africa include: population size, population group composition, population income distribution, migration, family size, mortality, and fertility (Prinsloo, 2004). These factors influence the demand and supply of real estate, and play a significant role towards the success of real estate investments in different locations and real estate markets. The patterns of demographic factors in society are changing. These changes are giving real estate professionals challenges in the processes of real estate investment decisions, which have necessitated more care in decision-making to ensure real estate investment success than before.

Roulac (2002) identified demographic factors including an older population, maturing baby boomers, continuing immigration, and more lifestyle diversity as part of the elements responsible for redefining societal spatial patterns. As it was indicated earlier societal spatial patterns arise from: the how, where, when, which, what and why questions of the role of property in society asked by the population; and they determine the need for property goods and services. Ultimately, societal spatial patterns are manifested in the decisions that influence economic regions, property types, investment forms, business strategies, services offers, public services demands, and government fiscal outcomes through the population (Roulac, 2002). As a result it is essential for educators to constantly study the influence of demographic factors on real estate and get them updated in the curriculum. Depending on the way the curriculum is structured, study themes involving the impact of demographics on real estate can form part of the Property Economics course subject of the curriculum (see Prinsloo, 2004).

2.4.5 Economic development

This element is maybe the major influential factor differentiating the development of real estate curricula offered in developed countries from those offered in developing countries. Africa is the least urbanised continent, contributing only one percent of worldwide industrial production (Ghyoot, 2002). Not surprisingly, agriculture, fisheries and related education are well represented on this continent mainly in the poorest countries on the continent. Furthermore, due to underdevelopment and low literacy, the concepts of real estate and property industry as a business are unfamiliar in some countries (Ghyoot, 2002). As a consequence, the sizes of property industries and real estate business in the African countries are smaller when compared with developed countries. Based on this, fewer real estate programmes are offered in African countries than in the developed countries.

In addition, Africa is different from developed countries in many other ways including real estate needs, tastes, services, technology, and infrastructure. Real estate in developing countries is also not only viewed from the investment perspective (Schulte, 2003). All these factors have contributed to the differences between real estate curricula offered in Africa and in developed countries. Emphasis of curricula differed. With the exception of few programmes offered in South Africa, generally in Africa real estate curricula contained more subjects touching on agriculture and rural land development issues. Therefore, it was important for real estate educators to understand the economic developmental level needs of their countries so that appropriate real estate technologies and topics are incorporated in the curriculum. Inclusion of developmental considerations would lead to the production of real estate professionals who would make sound decisions with regard to real estate technologies to be procured for their specific locations and countries. This relates to considerations of ease of maintenance and management of those technologies particularly in the developing countries where certain technologies were introduced and later got abandoned because of failure to sustain them resulting in huge losses being incurred in those real estate transactions.

2.4.6 Employers

Employers recruit the graduates from real estate programmes. Therefore, real estate programmes are only validated and legitimised when companies hire their graduates (Richards-Wilson, 2002). Furthermore, employers test the competence of students who have graduated. They want their new hires to be able to “hit the ground running” (Gallupo and Worzala, 2004). As a result employers can direct educators which areas of the curriculum require change or addition to improve the quality of graduates. In addition, employers have

real estate industrial experience and are aware of the challenges real estate is facing as a profession. In that way they are in the right position to recommend real estate knowledge and skills that require emphasis (Black *et al*., 1996; Butler, Guntermann and Wolverton, 1998; Bridal and O'Callaghan-O'Brien, 2003; Galuppo and Worzala, 2004; Ford and Elkes, 2008; and Yiu, 2008).

Real estate educators can be directed by the employers on many other relevant issues connected with improvement and delivery of real estate education. These issues could be picked up in real estate education forums organised with industry players which focus on industrial challenges with the intention of improving education. For example, in 2002 representatives from two dozen of the top real estate firms participated at the Institute of Real Estate Management's Corporate Education Leadership Forum in Chicago, USA to discuss education challenges they faced (Druckman, 2002). Compensation trends, learning contracts, knowledge management, career paths, online education and training were key concerns of today's top real estate companies which real estate educators noted that could contribute significantly towards the development of the curriculum and teaching programmes for the industry in future.

2.4.7 Entrepreneurship

Entrepreneurship relates to activities undertaken by individuals and organisations to start and manage businesses. This adventure is a risk undertaking and is linked to financial gain or loss. Diaz (1993) argued that at the heart of the real estate system lies entrepreneurial activity. In real estate, entrepreneur activity involves creating, managing, and trading space over time. Entrepreneurship is not only for private individuals or organisations. Even government entities may engage in entrepreneur activity, for example, revitalisation of CBD's in the cities. Roulac (2002) added that the property business is inherently entrepreneurial in that it marshals resources and influences behaviour patterns in settings that are largely unstructured and where precedents may be few if any. Entrepreneurship, as it is related to business activity is always experiencing new challenges and change. Roulac (2002) commented that those who need order, structure, and predictability; and who are uncomfortable with uncertainty, ambiguity, pressure and volatility in real estate involvements, would do well to apply elsewhere. Further, as the tenants of non-residential buildings are businesses, the more students know about business, the more effectively they will interact with those tenants after

graduation. As a result, it is important for real estate educators to improve the curriculum by accommodating new entrepreneurship skills and developments to maintain the production of successful real estate entrepreneurs who are required by the industry in this new era.

2.4.8 Finance

Historically, real estate asset has been treated as a financial asset (Black *et al*., 2003). As a result, finance has been a major influential element in changing real estate curriculum. The importance and emphasis of finance came to the scene when financial crises lead to the huge losses in property investments in America, Europe and Asia (Dasso and Wood, 1980; Black *et al*, 2003; and Nappi-Choulet, 2003). Many financial institutions and investors became bankrupt. A major lesson learnt from these financial crises was to introduce a strong component of real estate finance in real estate studies. In America the loss was so much felt that the approach to real estate education changed to become more finance focused until today (Schulte, 2003).

Emergence of real estate education in French business schools with real estate finance as one of the subjects being emphasised is new evidence where finance has influenced development of real estate curriculum (Nappi-Choulet, 2003). The change of French real estate education from a curriculum of urban management, law and town planning to one considering issues of real estate finance reflects the importance of finance in real estate and the need to best serve the industry. Recently, Tu *et al*., (2009) conducted a study on perceptions of the stakeholders on elements of successful graduate real estate programs. One significant finding of the study was that respondents considered finance as the most critical subject in the graduate real estate curriculum.

However, the dominance of finance in real estate has recently been questioned. In a study by Schulte (2003) it was noted that currently real estate finance and investment play an important role in real estate education and research, but this importance will decrease in future. To establish the importance of finance and investment, he conducted a study on the different topics of papers for the programmes of the conferences of two largest regional societies: the American Real Estate Society (ARES) and the European Real Estate Society (ERES), held in the years 1999, 2000 and 2001. Papers for the programme of International Real Estate Society (IRES) World Congress 2001 were also included. Overall 31 percent of

all papers presented at the IRES, ERES and ARES conferences were focused on real estate finance and investment. This finding stood for the paradigm of real estate as a finance and investment vehicle. However, Schulte (2003) argued that in future dominance of finance and investment will decrease partly because real estate educators and researchers not coming from America and Canada, whose participation in the continental and international real estate conferences is going to grow, view real estate broadly and not only from the finance perspective. This will change real estate education and research focuses in the future.

Black *et al*., (2003) also commented on the present dominance of finance in real estate that must be balanced with other courses. They noted that academic and professional real estate research in the USA has finance as its primary focus. There are several reasons for this concentration, including the alliance of USA real estate programmes with finance following the criticism of academic real estate programmes by the Ford and Carnegie reports in the 1950's. However, while the link to finance has proved to be a beneficial one, it has also resulted in the setting of artificial boundaries on real estate research. Real estate programmes patterned after the built environment programmes in the UK have not been as severely restricted, but have a broader focus (Black *et al*., 2003). The authors propose a broader look at real estate and the lowering of disciplinary boundaries. In addition, if every real estate problem is seen as a finance problem, researchers miss the opportunity to use tools and thoughts from other disciplines. Black *et al*., (1996) further argued that real estate is not finance, but it is much more though it has a distinct finance dimension. The observations noted by the authors propose to real estate educators to balance finance and other courses in the curriculum in order to produce competent well-rounded real estate professionals for the industry.

2.4.9 Globalisation

Schulte (2002) noted that internationalisation is gaining importance in all sectors of the economy including the real estate sector. As a consequence, internationalisation of real estate education has also gained importance. Today it is common to see students going to study real estate courses in foreign countries either because in there countries no such courses are offered or merely to gain international exposure in real estate education and transactions (Schulte, 2002; and Chikafalimani and Cloete, 2006a). The interest expressed by real estate

schools to have their programmes accredited by the RICS has also grown (Schulte, 2003). To be accredited, the RICS insists on certain standard requirements to be met in a real estate curriculum. This has partly contributed to the acceleration of internationalisation of real estate education.

In addition to globalisation of real estate education, there is an increase in the globalisation of real estate transactions being undertaken by investors in different real estate markets of the world (Roulac, 2002; and Schulte, 2002). Roulac (2002) noted that with business enterprise expanding the scope of its geographical concerns, drawing resources from distant markets and selling throughout the world, physical proximity no longer is the primary defining guideline or constraint to access labour and customers. Therefore, it was important today that real estate education convey the knowledge required for property involvements in the global context. Some of the reasons why today global orientation in real estate education is significant were highlighted by Schulte (2002) as follows:

- Institutional investors can no longer afford to restrict their investments to one country.
- Leading developers have long ago set the trend towards global engagements.
- Banks are forced through competition and the expanding business of their customers to finance real estate internationally.
- Real estate consultancies and brokers merge across national borders and continents, bundling international know-how and experience in growing entities.

Global orientation of real estate can be achieved by including international aspects into the curriculum and by initiating international exchange programmes between the real estate departments of universities (Schulte, 2002). In addition, the international exchange of real estate knowledge was important as the field of real estate education and research was a young discipline and many aspects of real estate have not yet been investigated sufficiently. As different countries have focused their real estate education and research on different issues it turns out to be even more important to internationalise real estate education (Schulte, 2002). Some of the subjects with international contents which can be incorporated into the real estate curriculum are: foreign real estate markets, international real estate investment, globalisation of real estate markets, and comparison of international standards and practices in real estate.

Roulac (2002) emphasised that fundamental to effective property involvements in the twenty-first century, then, is appreciation for the importance of the global context and multiple geographies and levels of concern. He argues that the orientation of the majority of participants in real estate is predominantly parochial rather than global. Such an orientation is increasingly vulnerable to miscalculation, disappointment, financial reversal, if not overt failure, in a time of globalisation in which local outcomes are largely influenced by far distant decisions and actions (Friedman, 2000 cited in Roulac, 2002).

Juxtaposed to the importance of the global orientation is the imperative of sensitivity to and emphasis upon the inherent localness of real estate (Roulac, 2002). Indeed, Gair (2001) commented that today's real estate companies operate locally and think globally. Therefore, to be global but to ignore sensitivity to the localised perspectives of real estate is equally risky. Roulac (2002) advised that global and local perspectives in real estate investment decision-making can be reconciled by considering that property embraces many discrete segments or levels of involvement, orientation and experience. He noted that effective property involvements derive from consideration of the most macro to the most micro as well as the many intermediate concerns. One framework that has proven useful is to consider that every property involvement consists of 16 attributes of place and space relationships (Roulac, 2002). Place embraces the 12 critical elements of continent, country, county, state/providence, region within state/providence, metropolis, city, region, community, neighbourhood, street, and site, which in aggregate are the attributes of location. Space embraces the four critical elements of site, building structure, interior design/floor plan, room and personal space, which collectively comprise the particulars of the built environment personally experienced. Place and space intersect at and share site, and each is influenced by the attributes of the other. Effective property involvement is informed by knowledge of the forces that influence each of these 16 levels, and how each of these 16 levels influence specific property interests, functions, decisions and involvements (Roulac, 2002). As a consequence, it is important today that real estate educators design curricula which convey the knowledge required for property involvements both in the local and global contexts.

2.4.10 Government and political factors

Government and related institutions influence change to real estate curriculum. The responsibility of government and related institutions is to set and enforce laws which include property laws for the benefit of the country and society. Generally, countries with good legal systems which offer assurance and security to property ownership rights are conducive to property investment. Importantly, South Africa has sophisticated land surveying and property ownership registration systems which have minimised disputes of property ownership (NPEC, 2004). It is significant for real estate students to be exposed to these systems and laws in the curriculum for them to function competently when they graduate. Real estate educators should regularly up-date the curriculum to incorporate new laws and government regulations which are important to real estate students and industry. In addition, countries practising good governance and exercising rule of the law, and which are politically stable are regarded by investors as good destinations for property investment. This stimulates growth of real estate industries and development of curricula to meet educational needs in such countries.

In the USA, most States determine competency of licensed real estate agents by administering an examination (Pancak and Sirmans, 2008). The purpose of real estate licensing is to safeguard the interests of the public by ensuring that persons engaging in the real estate agency business are competent to do so. By law, the examination must cover current real estate practices and licensing laws. In so doing government is influencing curriculum development for real estate agents.

Following political stability and election of a democratic government in South Africa in 1994, property markets and real estate education are equally transforming to accommodate government and society concerns (Chikafalimani and Cloete, 2006b). Blacks prior to 1994 were excluded from property education and never experienced the benefits and responsibilities of property ownership due to racially discriminatory policies and laws. To address inequalities of the past, government introduced new laws and policies which include: involvement of blacks in property education; introduction of property and construction charters; and land transformation policies. With respect to property education, a significant development after 1994 has been the increasing participation by blacks and women in real estate education programmes. A noteworthy aspect within the land transformation process is land restitution. Land restitution is an ambitious attempt being implemented by government

in this new democracy to restore land expropriated (compulsorily purchased) in the past under racially discriminatory laws (Ghyoot, 2002). The volume of work is daunting, with about 40,000 claims to be settled. This has created a significant source of work for the property valuation profession in this new democracy.

In the new democracy, the South African government has also implemented laws to liberalise the economy. Liberation of the economy has enabled life companies and pension fund asset managers to invest offshore since 1995 (Kriel, 1999 cited in Ghyoot, 2002). Combined with more short term investment objectives, this will reduce their dominance of local real estate investment as they liquidate some assets. State organisations have also started selling surplus real estate (Ghyoot, 2002). In future, asset divestment by state organisations, life companies and pension funds will create opportunities to the general public for acquiring and securitising portfolios of investment property in South Africa. It is the duty of real estate educators to take note of these new real estate educational needs and developments in the property market which have come with the new democratic government in South Africa and get them incorporated in the curriculum.

Another area of emphasis taken by the new democratic government in South Africa which has affected real estate practice is occupational health and safety. Laws have been passed to make sure that building contractors and property owners provide health and safety measures to protect workers and people using buildings in order to reduce accidents. This is being monitored by asking building contractors and property owners to comply with the provisions of Occupational Health and Safety Act, No.85 of 1993. Real estate educators are required to identify such new legal requirements and include them in the curriculum for the students to know in order to promote health and safety on construction sites and buildings.

Political stability and changes have also influenced real estate education in other countries of the world. For example, the transformation of political situation in Central and Eastern European Countries (CEEC's) from socialism (controlled economy) to capitalism (market-related economy) changed real estate expectations of societies and educational needs of property valuers (North (1997). Government and local professional associations had to organise property valuation courses and training to equip property valuers with new skills on how to approach market-based valuations more especially due to high volumes of work arising from privatisation processes in the new political era. Education and training support

had to be sourced from professional bodies and companies from the Western countries (North, 1997).

2.4.11 Information technology advances

Bill Gates, Chairman and founder of Microsoft Corporation, the world's largest computer software company, identified real estate as one of the industries which will be revolutionised by technological change (Bridal and Laing, 1998). The change, accelerated by the internet and other forms of information technology has already started and is moving at fast pace. Bridal and Laing (1998) noted that those who realise this change and welcome it will ensure survival in the profession. This revolution has indeed influenced the adaptation of real estate curriculum to equip students with relevant information technology skills (Redman, 2001; and Wolverton and Wolverton, 2003).

The real estate brokerage sector in particular has radically been transformed by the cyberspace technology (Jud, Sirmans, and Winkler, 2002; and Larsen, Coleman, and Gulas, 2008). The flow of information in the real estate market is increasing quickly because of the proliferation of company websites, email, cellular phones, personal digital assistants, online linkage to financing sources and other technological advances. In addition, the new technology is transforming established institutions and opening up new venues, as many traditional brokerage activities can be delivered more quickly and with more efficiency.

Other real estate professions and sectors have also been affected by advances in information technology (Gair, 2001) either negatively or positively. Just like real estate brokerage, real estate appraisal is one of the real estate professions under threat due to the rising predominance of information technology. With the growth of structured databases, more appraisals will be automated, resulting in fewer appraisers who will be paid less money to complete more appraisals in less time, Bridal and Laing (1998) lamented. In South Africa, property valuers offering private property valuation services to banks for home loan purposes are going through similar threats. Appraisers face two options to survive: become generalists and diversify their reliance on other aspects of real estate; or become specialists, focusing on one exclusive niche in appraisal or on some other innovative way to add value (Brown, 1965; and Bridal and Laing, 1998). Bridal and Laing (1998) recommended to the Appraisal Institute of Canada to move rapidly towards introducing a new programme to train candidates to be

competent over the whole range of subjects related to real estate. They added that today's competitive environment due to advances in technology demanded professionals who are innovative, creative and adaptable.

Roulac (2002) indicated that in this new era advances in telecommunications and information technologies are some of the major forces which have introduced powerful implications for property demand. These advances in telecommunications and information technologies have dramatically transformed the means and location of work, changing what activities happen in physical spaces and where those physical spaces are located. Additionally, these technology advances have simultaneously introduced very different patterns of organisation, which in turn lead to different physical forms of working, shopping, living, and leisure. Furthermore, there has been a shift of business transactions occurring at the time, place, and convenience of the vendor to the time, place, and convenience of the consumer (Roulac, 2002).

With separation of transaction from physical environments as a consequence of non-store shopping as well as redefining the role of corporate headquarters as a consequence of pervasive non-office working arrangements, a very different agenda of location factors are introduced (Roulac, 2002). In addition, the combination of sophisticated electronic telecommunications and advance logistics delivery systems, have dramatically changed the proximity parameters of workers and customers to the work place. Information technology advances have also altered relationships of store purpose to the retail space function. With all these implications, it is important for real estate educators to address the changes information technology advances have introduced to real estate business in the curriculum in this new era.

2.4.12 Land

Real estate studies in different parts of the world are influenced to a great extent by land issues. In the USA, the Appraisal Institute and Urban Land Institute are the two important bodies which have continually supported a curriculum paradigm which puts emphasis on land. Significantly, Epley (1996) added that the educational material and body of knowledge of the Appraisal Institute was based on land economics. Worthy noting is also that the mission of Urban Land Institute is to provide leadership in the use of land in order to enhance the total environment (ULI, 2005). Further, Graaskamp (1977) supported the perception that

land economics had influenced real state curriculum when he noted that land economics was a basis upon which the subject of real estate was built at four-year universities.

Land has influenced real estate studies because it is a major resource in the real estate industry and society (Appraisal Institute, 1992). Uses of land are many, including: agriculture, commerce, industry, habitation, and recreation. In addition, land use decisions are influenced by a number of factors like: climate, topography, distribution of natural resources, population, and industry. Economic conditions, technological practices, and cultural influences have also affected land use. Over the years it has further been observed that changes in land use patterns, economics, laws, and management practices have influenced the development of real estate curricula differently in different parts of the world. For example in South Africa, following the abolition of apartheid laws in 1994, real estate course content has adapted by accommodating relevant new land issues and laws.

2.4.13 Local communities and professionals

Local communities and professionals have an influential role in the development of real estate curriculum because they also benefit from a relevant curriculum offered by a university within their vicinity. Ferguson (1975) noted that a successful real estate education programme must meet diverse community demands. Therefore, it is important for real estate educators to take into account real estate needs of local communities and professionals in the processes of curriculum development. In that way the curriculum also supports local communities in the processes of solving their real estate problems. This issue also relates to the social and moral obligations universities have to undertake by serving their local communities.

Local professionals can be very helpful contributors in the process of real estate curriculum development because most of the time they support, employ or work with real estate graduates from a local university. They are also in constant touch with new developments in the real estate industry. As result they are in a good position to recommend topics and other relevant issues to be considered in curriculum development. Based on this, it is advisable for real estate educators to involve local professionals in the processes of curriculum development. The University of San Diego involved local communities and professionals in

the process of developing a socially acceptable MSRE programme (Galuppo and Worzala, 2004).

2.4.14 Publications, research and textbooks

Recommendations for curriculum development which are based on scientific research findings provide strong justification for introducing changes in real estate curriculum. This is in line with university culture whereby changes to education are normally based on concrete evidence and facts, rather than on hearsay (Murphy, 1999). Finch and Weeks (2003) noted that findings of real estate education research gave insights for new or revision of existing real estate programmes. Noteworthy is a relatively unique and socially acceptable MSRE programme at the University of San Diego which was developed by making use of academic publications concerning real estate education and results from surveys (Galuppo and Worzala, 2004). This investigation is another practical example where academic literature and results of a survey of the property industry have supported to develop a model curriculum to be used for improvement of Masters Real Estate Education in South Africa. It is therefore advisable for real estate educators to continuously investigate useful research findings and publications which they can make use in curriculum development.

Research by South African academics covers the entire spectrum of real estate topics encountered in the international journals (Ghyoot, 2002). However, the small number of real estate academics restricts their contribution to the field. This weakness is noted in the local built environment and construction conferences where few papers in real estate and more specifically in real estate education are presented. To make matters worse, South Africa has no accredited real estate journals (Ghyoot, 2002). Academics have to publish in business and other journals. This was undesirable state of affairs as it hindered research progress in real estate whose findings could have supported real estate curriculum improvement which could have in turn further promoted the development of real estate industry.

Internationally, a number of organisations have supported development of real estate education through research and publications. For example, the American Real Estate Society (ARES) launched a number of journals including Journals of Real Estate Research, and Real Estate Practice and Education to promote the development of real estate industry, research, curriculum and instruction through a number of ways which include the exchange of

instructional methods and materials, and discussion of the nature of real estate field (Black *et al*., 1996; Urbancic, 2007; Gibler, Sah, and Chen, 2008; Harrison and Manning, 2008; and Allen and Dare, 2009). Furthermore, internationally, academics today have several other journals they can use to publish. However, as the number of refereed scholarly journals grows, authors have to choose among a wider range of outlets for their work. Gibler and Ziobrowski (2000) conducted a study to investigate factors which academic real estate authors considered when choosing where to submit a manuscript for publication. They found that in the USA, academic real estate authors perceived quality of a journal as most important in choosing where to submit a manuscript. Faculty at doctoral degree-granting institutions and AACSB-accredited schools place more importance on promotion and tenure considerations, while faculty at teaching colleges are more concerned about the ease and fairness of the editorial process (Gibler and Ziobrowski, 2000).

Souza (2000) questioned the direction of real estate research to be followed in the future. He noted that the majority of academic real estate research has been criticised for being out of touch with the reality of the marketplace and for conflicting with what the industry truly find useful. Souza (2000) also argues that professional real estate research has similarly been criticised for being too basic and out of touch with the rigors and theoretical discipline of the academy. As a compromise, he recommends that for real estate research to be much more meaningful in the future a combination of academic and professional approaches with more scientific and rigorous in nature and a fundamental foundation will be appropriate for the real estate discipline.

In addition to academic journals, the intellectual foundation on which the knowledge structure of the real estate subject is built is also presented in the textbooks that are used for teaching real estate as a principle course (Roulac, 1994). Consequently, the efforts of those involved in creating real estate textbooks and the choices made by those who select which real estate textbooks to be used assume great significance. It is also important to note that all subsequent course offerings at the undergraduate level, advanced work at the graduate level, doctoral study, research, teaching, and knowledge-based professional practice build on the core body of knowledge presented in real estate principles textbooks (Roulac, 1994).

To promote the development of real estate education, a number of academics have sacrificed valuable time in their lives by producing real estate textbooks to be used for teaching real

estate. Roulac (1994) reviewed twelve important real estate books which have supported the development of real estate education: *Real Estate Principles and Practices* (Jerome Dasso and Alfred A. Ring); *Real Estate: Analysis and Strategy* (Gary Eldred); *Principles of Real Estate Decisions* (Donald R. Epley and Joseph Rabianski); *Real Estate Principles and Practices* (Edmund F. Ficek, Thomas P. Henderson, and Ross H. Johnson); *Real Estate Principles* (Charles P. Floyd); *Real Estate Principles* (Bruce Harwood and Charles J. Jacobus); *Real Estate Principles and Practices* (George R. Karvel and Maurice A. Unger); *Real Estate* (James B. Kau and C.F. Sirmans); *Managerial Real Estate: Corporate Real Estate Asset Management* (Hugh O. Nourse); *Real Estate Perspectives: An Introduction to Real Estate* (Halbert C. Smith and John B. Corgel); *Real Estate* (Larry E. Wafford and Terence M. Clauretie); and *Modern Real Estate* (Charles H. Wurtzebach and Mike B. Miles).

Locally, the South African Property Education Trust has made a significant contribution to the development of real estate education in South Africa and other African countries by producing about 16 property education textbooks under the National Property Education Series for tertiary education.

2.4.15 Real estate educators

Real estate educators can also be viewed as very influential in the process of real estate curriculum design, review, quality control, development, and delivery (Butler, Guntermann, and Wolverton, 1998; Callanan and McCarthy, 2003; Gallupo and Worzala, 2004; and Musil, 2005). Responsibilities of real estate educators include: introducing new innovations in the traditional curriculum, applying high quality teaching techniques, and teaching relevant material. Additionally, real estate educators are always required to investigate needs of the industry and students, and to conduct relevant research so that curricula are regularly updated based on those needs and not necessarily based on their personal desires and satisfaction (Manning and Roulac, 2001; and Callanan and McCarthy, 2003). Weinstein (2002) (cited in Gallupo and Worzala, 2004) believes that for a programme to be competitive and successful it must possess several additional attributes such as a faculty who understands business and dedicated to research and publications, strong industry ties, provide conferences, scholarships, and career opportunities. As a result, hiring of experienced and well qualified educators is fundamental to improved real estate curriculum delivery and development (Hardin III, 2000; and Finch, Hardin III, and Weeks, 2007) and programme success.

Educators also investigate course contents of peer institutions offering similar curricula to ensure that they are offering competitive programmes. A unique MSRE programme at the University of San Diego was developed by borrowing ideas from the University of Wisconsin-Madison programme (Gallupo and Worzala, 2004).

The historical background of real estate professors, schools and departments also plays an influential role in curriculum development. Brown (1979) identified differing backgrounds of real estate professors as a contributing factor to the variation of content in real estate curricula. In Africa, many academics were trained in American or European universities (Ghyoot, 2002). When combined with local influences and legal systems, the result is a wide variety of terminology, analysis methods and philosophies in the curricula. Real estate schools and departments in the British Commonwealth countries tended to design and develop curricula following the British property education system partly due to the past educational influence (Schulte and Schulte-Daxboek, 2003).

One important area which is desired by the industry where educators can be influential through the curriculum is the teaching of real estate decision making. The challenge facing real estate educators today is how to produce graduates who will be competent real estate decision makers in the industry, considering the weaknesses which come with the traditional curriculum. However, Kelly (1990) argued that it was still possible for universities to prepare real estate students for real estate decision making as long as certain precautions were to be followed by real estate educators. To undertake this challenge Kelly (1990) offered a four stage logical process normally followed by real estate professionals in decision making which can be adopted by educators. These four intellectual steps are: (a) referring to experience; (b) developing understanding; (c) arriving at a judgement; and (d) making a decision. For this to be imparted in students, it requires innovative real estate educators.

2.4.16 Real estate constituents

As indicated earlier, the real estate industry comprises of a number of constituents including: real estate development, real estate valuation, real estate management, real estate finance, real estate economics, real estate investment, real estate marketing and real estate law. Black *et al*., (1996) argued that real estate educators should be guided by constituent needs in the processes of real estate curriculum development. They added that a discipline which fails to meet constituent needs loses its support and is doomed. Unfortunately, research findings have revealed that there was a glaring separation between constituent needs and curriculum requirements (Wells and Williams, 1993). As a consequence it is significant for educators to create a system that continuously assesses needs of the constituents to be used as basis for curriculum improvement.

Closely related to real estate constituents are real estate institutions, real estate functions, real estate types and real estate markets. These too are similarly influencing real estate curriculum development. Important real estate institutions that exist are: real estate developers, real estate investors, construction companies, real estate finance institutions, real estate service companies, and real estate users (Schulte, 2003). These institutions play different roles in the real estate industry. As a result they are also in constant search of specific real estate topics and knowledge which can assist them to handle different challenges they encounter as they deal with real estate. When these educational needs are identified by real estate educators, they could be incorporated in the curriculum.

The function-specific aspects of real estate include: real estate valuation, real estate management, real estate finance, real estate investment analysis, real estate marketing, real estate conveyance, and real estate development (Schulte, 2003). Functionally, real estate is facing new challenges due to changes taking place in the real estate industry. For real estate professionals to remain relevant for the real estate industry, they must continuously develop themselves to adapt and cope with new changes. Good example relates to the challenges the property valuation profession was facing due to the advancement of information technology (Bridal and Laing, 1998). The duty of real estate educators was to identify the challenges real estate professionals were facing from functional point of view and consider them in the processes of curriculum development to support their survival and improve their effectiveness in the industry.

Main types of real estate are: commercial, industrial, residential, and special real estate. Different types of real estate require different methods of analysis, problem-solving and management requirements (Schulte, 2002 and 2003). In addition, as society needs are changing, new demands had emerged which necessitated modification to the design, development, analysis and management of real estate types. Educators are required to update the curriculum to accommodate these new real estate typological developments for the students.

Real estate markets can be categorised into: commercial, industrial, residential, and special real estate markets. Unlike markets for the other commodities, real estate markets are not visible and centrally managed. In addition, it is so difficult to obtain information in real estate markets. The behavioural pattern of real estate markets is also changing all the time (Roulac, 2002). For real estate marketers and investors to survive they have to continuously understand what is happening in the markets. To deal with this they need to be equipped with new ideas on how to understand, analyse and solve problems in the market. It is the duty of real estate educators to identify new challenges which have emerged in different real estate markets and incorporate them in the curriculum.

2.4.17 Real estate consumer behaviour, social and cultural factors

Concepts of real estate consumer behaviour, social and cultural factors including beliefs, religion and heritage are also critical for the real estate professional to make appropriate real estate decisions in the industry. It is therefore relevant for real estate educators to consider these issues in the curriculum. Gibler and Nelson (2003) did a study on the significance of consumer behaviour applications to real estate education. They noted that most real estate study is based on neoclassical economics. However, Gibler and Nelson (2003) argue that human elements of decision making which include all aspects of non-financial decision factors normally called “tastes and preferences” should not be ignored in the study of real estate. By integrating the study of consumer behaviour with the economic approach to real estate, students, teachers, researchers and practitioners can benefit in their real estate decision making processes. In addition, great knowledge of real estate consumers and their behaviour will lead to better understanding and prediction of decision makers’ actions in the real estate market, and as a result, greater success in the marketplace

The study of consumer behaviour involves trying to understand complex human beings and the reasons why they act the way they do in the marketplace (Gibler and Nelson, 2003). It recognises that consumer decisions take place inside a person who has a distinctive personality and attitudes, yet is similar to other consumers exposed to the same external influences of society. The consumer behaviour perspective is identified as shifting real estate study to one with more consumer focus.

In this new era, social concerns have also a huge influence on real estate business and decision making. Today the co-operation of politicians and government with property developers, investors and providers of capital is gaining increasingly important by ensuring that economically viable property development projects are at the same time socially acceptable (Schulte, 2003). This is popularly being described as public-private sector partnership or concerns. In addition, Roulac (2002) noted that in the twenty-first century, the nature of major property developments, involving linking of public policy objectives and private sector motives, requires partnerships that blend the social and financial attributes of the property. Consequently, it is relevant for educators to develop a curriculum in such a way that it produces graduates for the industry and community who are socially, morally, and ethically responsible (Gallupo and Worzala, 2004). This is necessary because the community requires socially sensitive real estate professionals.

2.4.18 Real estate cycle

South Africa experienced a property boom from 2001 to 2006. During this period real estate activities increased, with a concomitant increase in real estate course enrolments. At University of Johannesburg for example, which is one of the largest universities in the country, total number of registered students for real estate and other built environment courses increased from 1,091 in year 2004 to 1,451 in year 2005, representing an increase of 33% (Chikafalimani and Cloete, 2006b). This demonstrated that a booming real estate sector influenced real estate curriculum development. It is up to the educators to identify specific real estate educational needs which come with a boom or a downward swing of the real estate sector and incorporate them in the curriculum for the students.

The impact of real estate cycles on the development of real estate curriculum in different countries of the world had similarities and differences. Susilawati (2002) noted that in

Indonesia the real estate cycle influenced the number of students who registered for real estate courses. When the property business declines, few students enrol for real estate courses because they believe property graduates will not have prospects in the future. Further, Susilawati (2002) indicated that as a result of the economic crisis in Indonesia, some real estate programmes had to be terminated. For example, a Masters in Real Estate programme offered jointly by The Real Estate Indonesian Association and Centre of Architectural and Urban Studies had to be closed due to the economic crisis which happened in the country. In contrast, Susilawati (2002) noted that in developed countries practitioners send staff back to school in times of recession and when property markets were down, believing such times were ideal for training.

In Hong-Kong, (Wong *et al*., 2008) found out that student intake quality was strongly positively correlated with the performance of the real estate market. This presented difficulties in real estate curriculum design to suit different cohorts of student quality.

2.4.19 Students

Students have a significant role to play in the process of real estate curriculum development. Together with scholars, programme directors, administrators, students are interested in the assessment of teaching, research and service (Hardin III *et al*., 2006). They are also influential in curriculum development because they investigate what skills they need to be able to function well in the workplace (Manning, 2002; and Callanan and McCarthy, 2003). In addition, feedback reports received from student assessment exercises can support educators in the efforts of improving real estate curriculum at the universities. However, Manning (2002) lamented that when it comes to the selection of specific course content, many faculty place little or no importance on suggestions from students because their students (particularly undergraduates) are too inexperienced and unfamiliar with the "bigger picture" to be a good judge of what specific topics would be better to include within a particular course. While this is true, real estate educators should not underestimate the value of getting today's students more involved in their own education.

While prospective employers obviously possess valuable knowledge that can assist faculty to select more useful and relevant course content, students are also in an excellent position to assist faculty to improve their courses for at least four reasons (Manning, 2002):

a. First, many students (particularly graduate MBA and executive MBA students) have had substantial work experience and already know much about what skills and knowledge they need in order to be successful at work or in a new career.

b. Second, getting prospective employers to describe in detail (as well as in a useful form) exactly what knowledge and analytical skills they wish their future employees to possess, selected from among course content possibilities available to an instructor, can be difficult. Furthermore, since most prospective employers graduated from college some time ago, many are not familiar with the latest theory and analytical techniques, nor are they aware of how much class time or student effort is required to successfully teach different course content alternatives that an instructor may be considering.

c. Third, many students (even undergraduates) seek out the knowledge of what skills, software, analytical techniques and theoretical understanding will be required of them to become successful in a particular employment area.

d. Fourth, while some students may not be familiar with what specific knowledge and skills would help them become successful (particularly undergraduates with little work experience), virtually all students can assist faculty with an evaluation of the effectiveness of their teaching materials and pedagogy and thus improve the quality of future student learning in a particular course.

Allen and Carter (2007) also argued that students' performance in core real estate courses taken in the earlier semesters of their studies is critical in curriculum improvement since it can act as an early signal in predicting students' future academic success. By making use of the records of grades obtained, real estate educators might be able to identify students who could benefit from early intervention in the processes of curriculum improvement to increase the probability of academic success in real estate studies. This research evidence supplements findings of previous research which suggest that both intellectual and non-intellectual variables may serve as useful predictors of a student's academic success.

Another way in which students can contribute towards real estate curriculum development could be viewed from the type of training real estate professionals would require. Kohnstamm (1995) posed a question: "What type of training will real estate professionals need in the twenty-first century? What sort of people will be required?" To address this question, real estate educators need to undertake detailed research on the type of students to

be taught so that suitable curricula are developed to meet their needs. For example, Epley and Manning (2006); and Manning, Seal, and Weinstein (2007) attempted to understand learning needs of chief executive officers (CEOs) of real estate companies. Results of their studies revealed that CEOs prefer to learn differently from other adult learners and require a different set of skills. This finding has implications on the way university real estate executive education programmes should be developed.

Furthermore, Kohnstamm (1995) noted that the big debate in the UK was about whether future real estate professionals should be given undergraduate training (full-time or part-time) immediately after secondary school or whether the profession has more need of people who have had a different academic education at degree level and need to be given extra training in real estate later at postgraduate level as a conversion route. A single answer cannot be given to this question. Both routes are possible. The significant point to be learnt from this is that students with different backgrounds will influence real estate curriculum development differently so that their unique educational needs are addressed.

Student entrance requirements could also influence the nature of postgraduate real estate curriculum. One of the admission requirements for most universities in South Africa offering Masters Real Estate programmes is that applicants should have at least two years relevant work experience to be admitted for the course. This requirement has an influence on the nature of curriculum. Real estate educators may allocate less hours for some activities like real estate practicals because it is assumed students have experience and are already exposed to most real estate practices demanded by the employer. In this case the real estate educators may consider allocating more time to other relevant subjects required at Masters Real Estate level like research, policy making, and management skills.

Undergraduate real estate education can have a huge influence on the nature of postgraduate real estate curriculum. A Masters programme for students who did Bachelor's and honour's degrees in Real Estate will be structured in a way that repetition of courses done already is avoided. Such programmes may consider only inclusion of advanced real estate subjects to make the course relevant and attractive to students. On the other hand a Masters Real Estate programme which is considered as a 'conversion route' for other built environment professionals would include both basic and advanced real estate courses.

2.4.20 Urban form changes and problems

Today many cities in the world are experiencing different challenges due to the effects of urbanisation. Problems which have emerged in urban areas that have influenced real estate include: traffic congestion, pollution, crime, urban sprawl, and increasing travel times from residential areas to work places (Prinsloo, 1994; Ghyoot, 2002; Roulac, 2002; and Ott and Read, 2005). These challenges have affected urban real estate and society negatively and the response has resulted in many cases into changes of the urban form and real estate business.

In South Africa, decentralisation of commercial real estate development, a global phenomenon, is being exacerbated by crime levels in major city centres (Ghyoot, 2002). For several years, centralised office and retail rentals have been decreasing and vacancies increasing. The effect on property values has been severe so much that in the present climate, central city investment should be evaluated carefully. Furthermore, since the election of a democratic government in 1994, decentralisation of residential real estate development has also increased. The main contributing factors to this trend are traffic congestion and increasing crime in the cities. To respond, city authorities have embarked on urban renewal schemes to stop urban decay and attract residents and businesses back to main city centres. These issues which have affected urban real estate and society in the recent times have influenced real estate educators to introduce new research initiatives for urban areas and redevelop curriculum to address challenges cities were facing.

2.5 Summary and application

2.5.1 Real estate discipline

Over the past years, the real estate discipline has changed due to several forces which have merged in society and industry. These forces have changed people's and organisations' values which represent the foundation of the real estate discipline (Roulac, 2002). With changing values, different trends of societal spatial patterns manifested in new real estate investment decisions have emerged in the industry. To complicate matters, the types of real estate decision makers in the twenty-first century have also changed. In response to these changes, the real estate profession has similarly been forced to change since there are new demands on the part of those delivering real estate goods and services.

A larger view of requisite knowledge for the real estate discipline in the twenty-first century due to the forces and changes which have taken place in the industry is relevant (Roulac, 2002). To be effective, the real estate professional requires exposure to several topics including: accounting, architecture, computer science, construction management, psychology, economics, engineering, and many others. In addition, the real estate professional requires knowledge of allied sectors in the economy relevant to real estate which include: advertising, agriculture, building materials, security, transportation, furniture, and many others. Furthermore, for the real estate professional to be effective a balance and blend of the following attributes is required: business environmental knowledge, strategic outlook, MBA technical skills, entrepreneurial initiative, institutional style, managerial orientation, marketing flair, and personal skills and people orientation.

Unfortunately, the majority of existing real estate curricula do not present the knowledge and skills required by the industry today and in the future, meaning that most students graduate without being exposed to meaningful topics (Roulac, 2002). To make matters worse, some of the required knowledge and skills are not even part of the real estate discipline. In addition, another challenge today is then to determine what relevant knowledge is but not part of the real estate discipline and what is in fact part of the real estate discipline. Furthermore, with the continuity of new developments taking place in society and industry, it is clear that the process of change in the real estate discipline will accelerate. This will similarly require a permanent process to be put in place within the university real estate education system to assess real estate education continuously in order to remain relevant to society and industry.

2.5.2 Critical issues of real estate education

South Africa as a developing nation and the new democracy is facing enormous challenges. To address the needs of a developing nation as well as eradicating inequalities of the past due to racially discriminatory policies and laws, government (together with the private sector) faces a huge challenge to improve quality of life of people. Most of these needs require real estate products to be provided to house the desired socio-economic services and functions as well as the people. Examples of these needs are: health facilities, schools, sports facilities, government offices, and housing. In addition, before 1994 blacks who are the majority of the population were excluded from property education and never experienced the benefits and

responsibilities of property ownership due to apartheid. Therefore, to solve some of these problems, transformation of education and land were required. Further, these challenges clearly illustrate that real estate education in South Africa has a large part to play towards the improvement of the quality of life of people, more especially of the previously disadvantaged groups of the population through promotion of property ownership and education. This can partly be achieved by strengthening and improving the existing real estate curricula so that they are capable of producing effective and well qualified real estate professionals to support the society, industry and government in addressing the challenges highlighted above. In order to establish an effective real estate education system in South Africa to deal with these challenges, a number of lessons can be learnt from the findings of literature review on critical issues of real estate education, which can be applied in the processes of improving the existing Masters Real Estate curricula in future (Chikafalimani and Cloete, 2009).

The first lesson to be learnt is that individuals and organisations are motivated to attend professional real estate education due to the following motives: the knowledge deficiency motive; the network motive; the perks motive; the labour market motive; and the selection or screening motive (Hakfoort, Berkhout and Manshanden, 2003). The overall understanding of the motives which drive the appetite to participate in education will support institutions offering the courses to develop programmes which will satisfy the needs of students and organisations attending the courses. Even though university education has been criticised for responding slowly to accommodate recent needs of society in the curriculum (Manning and Roulac, 2001), in future it will be necessary to check this weakness if universities will still wish to maintain their credibility as institutions of higher of education.

A second lesson to be learnt by institutions offering the curricula is that real estate education approaches are different throughout the world. Three approaches can be distinguished: the interdisciplinary approach (which is practised in Central Europe); the surveying approach (which is typically in the UK and other countries of the British Commonwealth); and the investment and finance approach (which dominates in the USA) (Schulte and Schulte-Daxboek, 2003). The interdisciplinary approach brings together the multiple perspectives of the investment and finance approach and the surveying approach to offer a more balanced and richer course of preparation for real estate professionals (Roulac, 2002). It is critical to notice that choice of a real estate education approach determines the quality and type of real estate graduates that are produced by the education system at the end. For universities that

aspire to educate people to make informed decisions about real estate in society, the surveying and interdisciplinary approaches are recommended because of their broader approach to the study of real estate.

A third lesson to be learnt is that any well-rounded real estate curriculum should recognise the different real estate constituents whose needs and concerns must be met (Black, Carn, Diaz and Rabianski, 1996). Its aim should be to provide effective real estate decision makers, managers armed with the concepts, techniques and skills required to solve the problems of today and tomorrow. Worth noting is that a comprehensive real estate curriculum offers a solution by covering all relevant topics required by a real estate professional at the workplace. It adopts a four-cornered approach, to cover the many specific topics in the curriculum which are required to produce a competent real estate professional. The subjects that form the four cornerstones of a comprehensive real estate curriculum are: market subjects; financial subjects; legal and public policy subjects; and physical and development subjects. Further, a real estate curriculum which fails to prepare professionals in readiness for changes taking place in the society and industry is dysfunctional (Roulac, 2002). As a result, when addressing the issue of curriculum change two concerns are dominant (Butler, Guntermann and Wolverton, 1998). First concern is what knowledge and skills should be taught. To address this concern it is important for real estate educators to seek input from employers and students. The second concern is how the curriculum should be taught. One approach to teaching is the text book model which is the traditional passive educational delivery system that has been criticised for not preparing graduates adequately to meet industrial requirements (Epley, 1996). In addition, traditional curriculum has misplaced emphasis and gives insufficient attention to critical issues that should be considered in the twenty-first century in general and more specifically in the global context (Roulac, 2002). To address these weaknesses a change from passive to an active learning environment of real-world experiences, changing concepts, new technology and collaborative relationships is recommended (Butler, Guntermann and Wolverton, 1998).

A fourth lesson to be learnt by the institutions offering the courses is that depending on education objectives and needs of students and organisations, real estate curricula can be presented by following one of the three available options: (a) service orientation that involves one or two-course package; (b) a more pragmatic option that involves four to six courses; and (c) a comprehensive programme that exposes graduates to a variety of real estate topics

(Black *et al*., 1996). The third option is optimal for the professional constituency of the field and to delimit boundaries that define the breadth of real estate studies. Ability to implement a comprehensive curriculum might be constrained in various academic environments by financial resources, faculty manpower and institutional structure.

A fifth lesson to be learnt is that real estate curriculum review is extremely relevant for real estate education to continuously meet industry requirements (Callanan and McCarthy, 2003). This was in line with current paradigm shift in university teaching to produce learning that recognises the importance of industry. Review of the curriculum on a predetermined cycle (e.g. three-to-five year cycle) is required; more especially to ensure that the theory and practice in the curriculum are appropriately balanced in order to best serve the industry. In addition, a new socially acceptable real estate curriculum can be developed by making use of relevant academic literature on real estate education and involving real estate professionals from industry in curriculum development processes (Galuppo and Worzala, 2004).

A sixth lesson is that research on real estate education and more specifically curriculum analysis are significant because they supported educators in the processes of curriculum development by discovering coursework offered in curricula; extending literature on real estate curriculum; and providing insights to be considered in the establishment of new or improvement of existing real estate curricula (Finch and Weeks, 2003). Further, research activity should be encouraged and supported since it is a key factor which differentiates the status of universities as institutions of higher learning from other ordinary education providers particularly in postgraduate studies.

A seventh lesson to be noted by the institutions offering the curricula is that two real estate education guides are available which are supporting the study of real estate. These guides are “strategic real estate framework” (Roulac, 1996) and “house of real estate economics” (Schulte, 2003). The guides together with available real estate text books are supporting real estate educators to disseminate real estate knowledge and skills during this difficult time the academic field of real estate is struggling to find a niche within the academy. Central to the strategic real estate framework is consideration of the decision processes and strategy elements of critical segments of the real estate market. In this framework six major segments of the real estate discipline are identified which include: space users, investors, owner/manager, service providers, developers, and public interest. Basic to the strategic real

estate framework is the interdependency between market segments/participants and their actions as they interact in the real estate market directly with each other, both within and between categories, and especially directly with the property and through the property to other market participants. On the other hand, the "house of real estate economics" illustrates the interdisciplinary approach to real estate studies. Its foundation consists of *business administration* which is supported by *interdisciplinary studies*, i.e. economics, law, spatial planning, architecture and engineering. The two pillars of (a) *real estate types* (commercial, residential, industrial and special real estate) and (b) *institutions* (real estate developers, real estate investors, construction companies, financial institutions, consultants, real estate users, and others) supported (a) *strategic studies* (real estate portfolio management, corporate real estate management, and public real estate management); (b) *functional studies* (real estate analysis, real estate valuation, real estate finance, real estate investment, and real estate marketing); (c) *phase specific studies* (real estate development, construction management, and facilities management) which are *management aspects*.

The final lesson to be learnt by the institutions offering the curricula is that the area of teaching and research called "real estate" has struggled for many years to determine its body of knowledge and obtain a consensus (Epley, 1996). As a result, real estate has not yet evolved through the detailed debate that is required to delineate the topics and receive consensus among educators about the necessary knowledge and skills. While there were many areas of agreement as to the most important topics in real estate, there is also substantial disagreement. To support the establishment of real estate body of knowledge, research is one of the significant tools to be relied on in these difficult times the field was struggling to obtain a consensus. Despite this problem, real estate education is currently required to support the country, society and industry to manage this precious asset and to deal with real estate challenges being encountered. Therefore, while the debate about the body of knowledge is in progress, institutions offering Masters Real Estate curricula are encouraged to continue strengthening and improving the quality of the existing curricula by introducing relevant innovations for the benefit of students, society, industry, and the country. This is significant because no matter what changes may be required in the curricula, the existing curricula will provide sound base for good education in the future.

2.5.3 Influential elements of real estate curriculum development

Today the society and real estate industry are subjected to extraordinary factors and forces which have introduced new expectations for real estate professionals (Roulac, 2002). These factors and forces which have introduced changes in society and real estate industry can be viewed as influential elements of real estate curriculum development. Accreditation bodies; clients; buildings, climate and environmental concerns; demographic factors; economic development; employers; entrepreneurship; finance; globalisation; government and political factors; information technology advances; land; local communities and professionals; publications, research and textbooks; real estate educators; real estate constituents; real estate consumer behaviour, social and cultural factors; real estate cycle; students; and urban form changes and problems are some of the important influential elements of real estate curriculum development which were identified in this investigation. With regard to the magnitude of these influential elements, it has been proven that real estate is a complex asset and multidisciplinary in nature. Therefore, the production of competent graduates who will meet society and industrial requirements can only be achieved by exposing students to several issues and concepts in the curriculum. Apart from the traditional real estate course content, a competent real estate professional also requires exposure among others to the effects of information technology advances; environmental concerns; globalisation; social, cultural, and political factors in the curriculum. Consequently, it is advisable for real estate educators to conduct holistic investigations by considering all relevant factors affecting real estate and education in the processes of curriculum development. The magnitude of influential elements of real estate curriculum development has also revealed that the real estate industry is going through a lot of challenges and change. As a result, it is the responsibility of real estate educators to update the curricula regularly in order to accommodate the new requirements and concerns from the society and industry.

It is recommended in this investigation that research in the related area continue so that more elements influencing real estate curriculum development are discovered and get considered in future education. However, the following questions will constantly be asked through out this investigation:

- What are other influential elements to be considered in real estate curriculum development?
- How can these influential elements be accommodated in the future curriculum?

Next, the curriculum and property surveys were undertaken to establish some of the answers for the important questions raised above.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research method

Information (data) collected for the purpose of critical assessment of postgraduate real estate education in South Africa was divided into two main groups which are: postgraduate real estate curricula and property industry requirements. To obtain the data two main surveys were undertaken: the postgraduate real estate curriculum survey and the property industry survey.

3.2 Postgraduate real estate curriculum survey

Two main methods were used to collect curriculum information. These methods are internet research on postgraduate real estate curricula and use of relevant real estate education publications. In total, 73 Masters Real Estate programmes in the world were identified in the survey. Not all the programmes were selected for assessment purposes in this research. Only 30 programmes, which include 5 from South Africa, were finally selected. Final curriculum selection was restricted to comprehensive Masters Real Estate programmes offered in English and by coursework, whose curriculum details were accessible. Detailed analysis of the selected curricula is covered in Chapter 4 (Curriculum Survey).

3.2.1 Internet research on postgraduate real estate curricula

Internet research was undertaken to identify relevant Masters Real Estate degree curricula in different continents of the world to be compared with the South African curricula. To identify the real estate programmes, many websites for different institutions and universities in the world were searched. In addition to internet research, other relevant Masters Real Estate degree programmes were identified by personal contact using e-mail, direct mail and telephone with the academic experts and their supportive staff at different universities.

3.2.2 Relevant real estate education publications

Most relevant real estate education publications that were used to search postgraduate real estate curricula in the world which were used in this research include: Urban Land Institute Directory of Real Estate Development and Related Education Programs (10th edition); RICS Prospectus for Surveying Education 2004 / 05; the monograph "Real Estate Education throughout the World: Past, Present and Future" edited by Schulte (2002); "Real Estate Education in Europe", a report for the Urban Land Institute by Baum and Lizieri (2002); and university handbooks and study guides.

Justification for the comparison of postgraduate real estate curricula in South Africa with similar curricula internationally was based on the fact that, with few exceptions, no systematic scientific survey was conducted to compare the courses with each other or equivalent courses internationally (Cloete, 2002). Such a comparison was a relevant component of critical assessment of the courses particularly due to the gaining importance of internationalisation of real estate education and transactions in the global context, and the desire of universities offering real estate programmes to meet accreditation requirements of professional bodies more especially the RICS (Black and Rabianski, 1996; Roulac, 2002; and Schulte and Schulte-Daxboek, 2003).

3.3 Property industry survey

The property industry survey was conducted to collect comments from real estate practitioners in the property industry in South Africa on Masters Real Estate topics offered in South Africa and in other parts of the world as part of the process of critical assessment of the programmes. The aim of the survey was to test the curricula and see if they were meeting industrial requirements, and to receive views from professional practitioners in the industry with regard to areas of the curricula that needed further improvement. The objective of the exercise was to update the curricula to meet industrial requirements.

Justification for the survey was based on the fact that most property courses in South Africa were developed by soliciting the opinions of experts in the various fields. However, no proper property industry survey involving real estate practitioners was undertaken to assess curriculum needs of the industry on a more scientific basis (Cloete, 2002). Therefore, the objective of the survey is to partially address that vacuum on postgraduate real estate education research in South Africa.

The aim of Masters Real Estate curricula in South Africa, like other curricula, is to produce effective real estate professionals for the property industry (Black *et al*., 1996). To establish whether the curricula were fulfilling their aim, a survey of real estate practitioners was relevant to obtain their opinions on the curricula.

3.3.1 Questionnaire

The questionnaire used to survey the property industry was designed and developed based on several sources. The first source of similar questions came from related investigations conducted to establish important real estate topics offered around the globe by asking real estate educators and practitioners worldwide what they thought and taught. Surveys by Black and Rabianski in 1998 and 1999 investigated real estate topics in the global context as an attempt to identify real estate body of knowledge. A study by Galuppo and Worzala (2004) which described the process followed by faculty and staff of the University of San Diego's Burnham-Moores Centre for Real Estate to develop a Masters Degree in Real Estate gave insight to the development of the questionnaire. Another study by Callanan and McCarthy (2003) titled 'Property education in New Zealand: Industry requirements and student perceptions', which investigated needs of the industry and students in the process of curriculum review was also helpful in designing the questionnaire. The research conducted here had incorporated views and thoughts from these surveys and used them as models in the process of designing the questionnaire for the study.

The second source of information for the questionnaire came from interviews with real estate practitioners and academicians, which were held at the following conferences and seminar: The 9th African Congress of Shopping Centres at Sandton Convention Centre, Johannesburg in South Africa from 6 to 8 October 2004; One day national seminar hosted by the Northern Branch of South African Institute of Valuers at Kopanong Hotel, Benoni, East of Johannesburg on 11th February 2005; The 37th South African Property Owners Association (SAPOA) International Convention and Property Exhibition at Sun City, South Africa from 18 to 20 May 2005; and The International Real Estate Research Symposium 2006 in Kuala Lumpur, Malaysia from 11 to 13 April 2006. The real estate practitioners and academicians who were interviewed sufficiently represented a broad geographic and practice distribution to reasonably represent the views of the industry on issues and questions to be asked about

Masters Real Estate curricula. The interviewees were purposively selected based on different fields of real estate. The aim of the interviews was to generate some constructs or themes for the questionnaire, which would subsequently be used to gather relevant data for the survey. The conceptual framework, which provided the theoretical base of the study, was developed in part from the interviews.

The last source of questions was from the Masters Real Estate topics which were identified in the curricula in South Africa and other parts of the world. All common topics in South Africa and other parts of the world, which formed a Masters syllabus were sorted and put together in a form of Masters Real Estate model syllabus. At the end of this stage, which was at the end of June 2006, a complete draft questionnaire ready to be tested was produced. The questionnaire comprised of three sets of questions. Part 1: Details of respondent; Part 2: Assessment of Masters Real Estate topics offered in South Africa and other parts of the world; and Part 3: Requirements of the property industry.

Part 1 of the questionnaire comprised of questions asking the respondent to give personal details i.e. highest qualification obtained, current employer/s, current property industry involvement/s, years of experience, and geographic location/s. Part 2 consisted of questions asking the respondent to rank real estate topics in order of their importance using the Lickert scale, and advise approximate time as a percentage to be spent on a subject during the course. Finally, Part 3 of the questionnaire addressed requirements of the property industry by asking the respondents two open-ended questions with a maximum of five suggestions for each question. Here the real estate professionals were asked to indicate new topics needed and any other comments or suggestions to be considered in a Masters Real Estate programme. A copy of the questionnaire which was used in the study is given in Appendix A.

At the beginning of questionnaire design, it was also decided to consult a statistician in the Department of Statistics at the University of Pretoria in South Africa at all stages of questionnaire development up to data analysis to ensure that data was effectively analysed and interpreted using appropriate data analysis techniques for the investigation.

3.3.2 Pilot survey

Before conducting the main survey a pilot survey was undertaken to test the questionnaire. A pilot sample of 20 real estate professionals was identified in the Gauteng and Eastern Cape Provinces. The identified pilot survey professionals represented different fields of real estate and were requested to critically comment on the questionnaire before final distribution. The pilot survey professionals included professionals with interests in property education, property valuation, property management, property development, and property law. For the professionals in Gauteng, the questionnaire was delivered by hand; and for the professionals in the Eastern Cape, the questionnaire was sent and received by fax. Out of the 20 questionnaires which were sent out, 16 were returned, constituting a 80% response rate. The pilot survey was completed at the end of July 2006.

After completing the pilot survey, relevant changes were made to the questionnaire to incorporate comments received from the pilot survey professionals in readiness for the main survey. For validity purposes, real estate professionals who participated and responded in the pilot survey were excluded from the mailing list of the main survey.

3.3.3 Sample populations

The data for the property industry survey was obtained through a questionnaire administered to 748 delegates who attended the 38th SAPOA International Convention and Property Exhibition held at the International Convention Centre in Durban from 17 to 19 May 2006; and 29 first and second year students who enrolled for the Master of Science in Real Estate Degree for year 2006 at the University of Pretoria in South Africa. The delegates for the SAPOA conference included SAPOA members, and their mailing list was obtained from SAPOA Head Office in Sandton, Johannesburg. The total number of delegates and students polled was 777.

Justification for using SAPOA members and delegates in the property survey was that SAPOA is recognised as the main representative body and official voice of the leading and large property investment organisations in South Africa from the private sector for the property industry, with a combined property portfolio in excess of R150 billion. Its members control almost 90% of all commercial and industrial property in South Africa. The association is held in high esteem by relevant sectors of government and is consulted on most issues pertaining to the property industry. Its members include: property owners and

developers; property managers; property investors; banks; insurance companies; pension funds; academics; property consultants; researchers; lawyers; contractors; government; and many other professionals. As it can be noted its members come from different sectors of the property industry. This benefited the investigation in the sense that practitioners from different real estate fields were given the opportunity to comment on topics in Masters Real Estate curriculum and offer suggestions on areas of curriculum development for the curriculum to remain relevant and meet industrial requirements. SAPOA members also come from different geographical regions of South Africa. This gave an added advantage to the study by collecting comments on the curriculum from real estate practitioners based in different parts of South Africa.

MSc Real Estate students at the University of Pretoria were included in the property survey because, just like employers and practitioners, they were in a better position to assist academicians in curriculum improvement and development for at least two reasons (Manning, 2002). First, most MSc students already had substantial work experience. Therefore, they were aware of what the industry was looking for. Second, many students investigate the knowledge and the skills they require in a workplace. As a result, student participation in the survey enriched the data collected by allowing students, who are the products of the curriculum, to offer comments on the curriculum with regard to what they were expecting to learn.

3.3.4 Main survey

Questionnaires were sent to 748 SAPOA delegates by post using a letter of transmittal with a University of Pretoria letter head, signed by the researcher and counter-signed by the Study Supervisor (see Appendix B: Letter of Transmittal). Pre-stamped envelopes were used. The questionnaires were sent out together with enclosed pre-addressed envelopes, which the respondents used to return the answered questionnaires. For the 29 Master of Science in Real Estate students, an appointment was made with the Programme Director for the Master of Science in Real Estate programme at the University of Pretoria to allow access to the students during pre-arranged lecture periods to administer the questionnaire to the students by hand. Out of 777questionnaires which were posted and handed out, a total of 250 questionnaires were returned, constituting 32.18% response rate. The main survey was completed at the end of September 2006.

3.3.5 Questionnaire coding

At the end of September 2006, the majority of questionnaires sent in the main survey were received. During the month of October 2006, the returned questionnaires were coded and assessed to evaluate answers and comments given by respondents.

3.3.6 Data capturing and cleaning

After completing questionnaire coding, data was captured from the questionnaires into the computer in readiness for analysis from 1st to 17th November 2006. Cleaning of data followed after data capturing and it was done from 20th to 21st November 2006. The objective of data cleaning was to correct any mistakes entered on the captured data with the intention of obtaining accurate results.

The data cleaning exercise was followed by data analysis and interpretation, which are covered in Chapter 5 (Property Industry Survey) to assess the relevance of Masters Real Estate curricula in South Africa. The findings and interpretations were employed in the process of developing a model curriculum for the programmes in Chapter 6 (Model Curriculum).

CHAPTER 4

CURRICULUM SURVEY

4.1 Introduction

The curriculum survey was undertaken to identify Masters Real Estate curricula offered in South Africa and in other parts of the world. These curricula were analysed in terms of course content to identify common Masters Real Estate topics which were presumed to be supporting property constituents in the property industry.

In the survey, Masters Real Estate curricula in South Africa were also compared with equivalent courses both locally and internationally. This exercise was a significant component of the critical assessment of postgraduate real estate curricula offered in South Africa for two mains reasons.

First, no systematic scientific survey was conducted to compare the courses with each other or equivalent courses internationally (Cloete, 2002). Further, the increasing tendency of real estate professionals to study or work in different countries, as well as the drive especially by the RICS for international accreditation of qualifications in the field of real estate had necessitated a comparison of the scope and contents of postgraduate real estate curricula offered by different universities in the world (Chikafalimani and Cloete, 2006a). In addition, globalisation of real estate education and transactions had gained importance (Black and Rabianski, 1996; Roulac, 2002; and Schulte and Schulte-Daxboek, 2003). Therefore, assessment of postgraduate real estate curricula in South Africa to ascertain if they were comparable to similar curricula and conveying the knowledge required for property involvements in the global context was necessary. This was particularly important because a part from serving needs of the local industry, the South African programmes regularly attracted students from other African countries since there are relatively few postgraduate real estate courses in Africa (Cloete, 2002; and Chikafalimani and Cloete, 2006a).

Second, curricula analysis and comparison in this investigation will support the global effort of discovering contents of real estate curricula and extending literature on real estate curriculum, and providing insights for their improvement. The documentation of current level

of skills and knowledge being taught in academic real estate was called by Epley (1996). This gap is partially addressed by this survey with emphasis on postgraduate real estate curricula in South Africa which is the focus of the study.

4.2 Selected postgraduate real estate curricula

In total out of 73 Masters Real Estate curricula which were identified in the survey, 30 were selected for comparison, representing 41%. The 30 selected programmes consist of 5 curricula from South Africa, 3 from other African countries, and 22 from other continents. Final curriculum selection was restricted to comprehensive Masters Real Estate programmes offered in English and by coursework in different parts of the world. Lack of access to curriculum details also contributed to some programmes being omitted in the selection and comparison processes. The postgraduate real estate curricula offered in South Africa, other African countries, North America, Europe, Asia, and Pacific-Rim which were selected for purposes of this survey are described next in this section. Detailed individual curriculum description has been limited to selected postgraduate real estate curricula in Africa because the study is emphasising curriculum assessment from the African perspective.

4.2.1 Postgraduate real estate curricula in South Africa

In a study on progress in real estate education in South Africa, Cloete (2002) noted that the University of Pretoria introduced Master of Science in Real Estate in 1990. Cloete (2002) further noted that the University of Witwatersrand offers a Masters in Property Development and Management, while the University of Cape Town has been offering a Masters in Property Studies since 1999 and the University of the Free State introduced a Masters in Property Science in 2002. The Nelson Mandela Metropolitan University (formerly University of Port Elizabeth) started to offer Master of Science in the Built Environment on 24th June 2002 (Chikafalimani and Cloete, 2006a). The details of these curricula are described below (adapted from 2009 study guides of: Department of Construction Economics, University of Pretoria; Department of Construction Economics and Management, University of Cape Town; School of Construction Economics and Management, University of Witwatersrand; Department of Quantity Surveying and Construction Management, University of Free State; and Departments of Construction Management and Quantity Surveying, Nelson Mandela Metropolitan University).

4.2.1.1 MSc (Real Estate) degree programme offered by University of Pretoria

The course is developed and implemented by the Department of Construction Economics which is part of the School for the Built Environment in the Faculty of Engineering, Built Environment and Information Technology. The MSc (Real Estate) degree programme at the University of Pretoria is intended for graduates such as quantity surveyors, construction managers, architects, engineers and other professionals from the built environment who contemplate furthering their academic qualifications in the property industry. Tuition is arranged in block weeks to enable students from centres outside Pretoria to follow the course.

For student admission purposes, a previous five-year Bachelor's or a present Honour's degree in Quantity Surveying or Construction Management or another acceptable four-year degree, as well as appropriate practical experience, deemed sufficient, is required. In order to supplement knowledge of the built environment, it may be required of students who do not possess a degree in Quantity Surveying or Construction Management to pass additional admission course subjects during the first year of study of their MSc degree course. Students may, alternatively, enrol for these only in the year prior to enrolling for MSc.

Table 4.1 contains recommended course subjects for a student to follow in order to meet the completion requirements for the degree. The degree is obtained by following prescribed coursework in property development, property management, property valuation and related subjects; and submitting a treatise. The minimum study period is two years. A sub-minimum of 40 percent for semester and year marks is required for admission to examinations on any subject. A minimum final mark of 50 percent is required for a student to obtain a pass in any subject. 50 percent is also a minimum requirement to pass the treatise.

In order to be considered for the award of the degree, a student should have obtained 170 credits for course subjects and, in addition, have submitted and passed a treatise (60 credits), i.e. a total of 230 credits.

Table 4.1: Masters Real Estate programmes offered in South Africa

University & Degree offered	Core subjects offered	Credits
University of Pretoria:	Property Development (including Property Finance and Marketing).	40

Master of Science in Real Estate	Property Management & Facilities Management. Property Investment. Property Valuation. Construction Contract Law. Financial Management. Research Methodology. Treatise. Total	40 10 40 10 20 10 60 230
University of Witwatersrand: Master of Science in Property Development Management	Property Environment. Property Planning. Property Investment and Development. Law for the Property Economist. Property and Construction Marketing. Property Economics and Valuation. Research Methodology. Elective Subject. Treatise. Total	15 15 15 15 15 15 15 15 60 180
University of Free State: Masters in Property Science	Property Development. Building Economics. Land Evaluation. Land Valuation and Business Plans. Construction and Agricultural Engineering. Construction Contracts, Procedure and Procurement. Environmental Economics. Applied Game Farm Planning. Introduction to Theory of Regional Planning. Introductory Studies in Regional Planning. Urban Planning Practice. Property Valuation and Management. Optional Modules. Research Report. Total	32 16 32 8 16 8 8 16 16 8 8 16 24 32 240
University of Cape Town: Master of Science in Property Studies	Property Development. Urban Land Economics. Property Law. Property Finance. Property Valuation. Property Portfolio Management. Introduction to Research. Research Methodology. Introduction to Applied Statistics. Further Applied Statistics. Research Report. Total	20 20 20 20 20 20 4 6 4 6 40 180

Table 4.1 (continued): Masters Real Estate programmes offered in South Africa

University & Degree offered	**Core subjects offered**	**Credits**
Nelson Mandela Metropolitan	Management Information Systems for Construction and IT Applications. Corporate Strategy.	16 16

University: Master of Science in Built Environment	Accounting and Project Finance. Strategic Asset and Facilities Management. Property Investment and Portfolio Analysis. Building Energy Analysis and Management / Property Valuation. Facilities Operations Management / Property Development Planning and Appraisal. Research Methodology. Elective Subject. Treatise Total	16 16 16 16 16 16 14 60 202

Sources: Real Estate Study Guides Universities of Pretoria, Witwatersrand, Free State, Cape Town, and Nelson Mandela Metropolitan (2009)

4.2.1.2 MSc (Property Studies) degree programme offered by University of Cape Town

The MSc (Property Studies) degree programme at the University of Cape Town is developed and implemented by the Department of Construction Economics and Management in the Faculty of Engineering and the Built Environment. The primary aim of the programme is to produce graduates with the necessary skills to enter the property field at a professional managerial level. Students are exposed to the full spectrum of property-related disciplines and issues, including: urban land economics, property law, property finance, property development, property valuation and property portfolio management. In addressing each of these course subjects, a strong emphasis is placed on the development of decision-making skills and advanced research skills.

Given the multi-disciplinary nature of the property field, the programme is designed to attract students from a variety of undergraduate disciplines and experiential backgrounds who wish to specialise in property. Applicants should hold an honours or a four-year bachelor's degree in a relevant field, obtained from a recognised tertiary institution. Examples of appropriate qualifications include, but are not limited to: construction management, quantity surveying, architecture, engineering, planning, commerce and law. In addition, applicants should have work experience and should preferably be currently employed in the built environment field.

Table 4.1 contains recommended course subjects for a student to follow in order to meet the completion requirements for the degree. The study period for the degree is two years. The degree is obtained by following prescribed coursework and submitting a research report. A student is required to take the six modules plus the research and statistics modules (140 credits). In addition, a student must submit a research report (40 credits). Student academic

progress is assessed by the accumulation of credits obtained in written examinations and marked assignments for each module.

4.2.1.3 MSc (Property Development and Management) degree programme offered by University of Witwatersrand

This curriculum is developed and implemented by the School of Construction Economics and Management in the Faculty of Engineering and the Built Environment. Table 4.1 contains prescribed course subjects for a student to follow in order to meet the completion requirements for the degree. The degree is obtained by completing a total of eight course subjects and submitting a research report. The degree requires one year of full time study or two years of part time study. Courses are offered either over an extended period of study during one term, or in one week blocks with further lectures, seminars and tutorials, or in the evenings. Students doing courses on part time are expected to be on campus full time for the block release courses. For a student to pass, a minimum of 50 percent must be obtained in each subject, and a total of 180 credits must be achieved to meet completion requirements for the degree.

4.2.1.4 Masters in Property Science degree programme offered by University of Free State

Masters in Property Science degree programme at the University of Free State is developed and implemented by the Department of Quantity Surveying and Construction Management in the Faculty of Natural and Agricultural Sciences. A student may be admitted to the programme if he/she is in possession of one of the following qualifications:

- A bachelor's degree in urban and regional planning;
- A bachelor's degree in architecture, civil engineering, land surveying, quantity surveying, construction management, land and property development and management;
- An approved degree with majors in one of the following relevant fields of study: agricultural economics, anthropology, applied mathematics, botany, business management, computer information systems, economics, environmental science, forestry, geology, geography, mathematical statistics, statistics, psychology, sociology, applied mathematics, public administration, law, physics, tourism, sports management, etc.; and

- A bachelor of technology degree in above fields may also be considered for admission.

If a student does not entirely meet the admission requirements, the dean may, in consultation with the head of the department, in meritorious cases, recommend that some concessions be made in respect of the requirements.

A student in possession of one of the above mentioned qualifications may also not automatically be accepted for the programme. Depending on circumstances of the student, the head of department may request a written motivation or personal interview and may require additional modules to be registered.

The degree is presented as a residential or open learning programme. Eight workshops (class and contact sessions) during the two years of the programme are compulsory and are determined by the head of department. Each workshop is for one week. During these workshops, sessions take the form of tutorials, practicals and discussions. Assignments and tests / examinations are also administered. Table 4.1 contains prescribed course subjects for a student to follow in order to meet the completion requirements for the degree.

In order for the degree to be awarded, the student must complete the residential or open learning programme (coursework) and submit a research report. The student must do research on a project selected in consultation with the head of department or on an approved topic.

For a student to pass, a minimum of 50 percent must be obtained in each subject. In addition, the student must achieve 240 credits (of which 32 credits are for the research project) in order to meet completion requirements for the degree.

4.2.1.5 MSc (Built Environment) degree programme offered by Nelson Mandela Metropolitan University

Master of Science in Built Environment degree programme at the Nelson Mandela Metropolitan University is jointly offered by the Departments of Construction Management and Quantity Surveying in the Faculty of Economic and Building Sciences. This degree

programme is designed to advance the careers of professionals in the construction and property industries. Four specialist fields of study are offered and are as follows: property economics and valuation, facilities management, project management, and construction management.

A range of student admission criteria are acceptable to maximise eligibility for admission, and to enhance the shared experiences during instruction, resulting from candidates' diverse occupations. The admission requirements are as follows:

- Bachelor of Science honours degree in Quantity Surveying or Construction Management;
- Bachelor of Architecture degree;
- Four-year minimum bachelors degree in other disciplines;
- Bachelor of Technology degree in Quantity Surveying, Construction Management or Architecture, with a minimum of five years working experience;
- Professional Diploma in Quantity Surveying (RQS or ARICS), Construction Management or Architecture with a minimum of seven years working experience; and
- Any person accepted as a candidate for degree by the University.

Table 4.1 contains a schedule of subjects for the degree programme in order for a student to meet its completion requirements. The programme includes both coursework and a research-based treatise. The duration of study to complete the degree is one year for full time or two years for part time students. The coursework is presented on a four or five block release system. Each block release is for one week. This system has also enabled students that are busy or not residing in Port Elizabeth to be able to attend the course at the university during the blocks.

A minimum of 50 percent is required for a student to pass each subject and the treatise. In order to be considered for the award of the degree, a student should have obtained a minimum of 202 credits comprising of treatise (60 credits) and 8 modules of 16 credits each plus one elective of 14 credits.

4.2.2 Postgraduate real estate curricula in other African countries

Chikafalimani and Cloete (2006a) did a survey on postgraduate real estate education in Africa. In the study three Masters Real Estate curricula offered in other countries of Africa were identified. Obafemi Awolowo University in Nigeria is offering Master of Science in Estate Management. In Kenya, University of Nairobi offers Master of Arts in Valuation and Property Management. Ardhi University (former University College of Lands and Architectural Studies) in Tanzania is offering Master of Science in Real Estate. The details of individual programmes are described next (adapted from 2009 study guides of: Department of Estate Management, Obafemi Awolowo University; Department of Land Development, University of Nairobi; and Ardhi University (former UCLAS).

4.2.2.1 MSc (Estate Management) degree programme offered by Obafemi Awolowo University in Nigeria

The Department of Estate Management at Obafemi Awolowo University (OA) in Nigeria is responsible for offering MSc Degree in Estate Management. The duration taken for a student to complete the degree is a minimum of twelve months. The coursework required is a minimum of 20 course units. In addition each candidate must conduct research and present a thesis which carries a minimum of 4 course units.

To be accepted for this MSc Degree, candidates must have at least Second Class Honours Degree in the following fields: Estate Management, Urban Land Economics and Urban Land Administration. In terms of coursework, students must take the compulsory courses and select electives from the electives list. The main objective of the Department of Estate Management at Obafemi Awolowo University is to provide an academic course in Estate Management which is specifically directed towards providing academic and professional practitioners with a body of more advanced and sophisticated analytical tools which are essential for sound and effective decision making in land use, land development and land management. The programme has been overhauled to reflect current developments in the profession. This has resulted from the growing need by academic and professional practitioners in estate management to strengthen and broaden their theoretical and conceptual base. Table 4.2 shows the course subjects offered in the programme.

Table 4.2: Masters Real Estate programmes offered in other countries of Africa

University & Degree	Core subjects offered	Credits

Ardhi: (former University College of Lands & Architectural Studies): (Master of Science in Real Estate)	Comparative Land Law. Business Management. Property Development and Finance. Land Resources Management. Real Estate Economics. Environmental Management. Advanced Valuation Land Administration Casework Research Methodology. 3 Elective Subjects Dissertation. Total	2 3 3 3 2 2 4 3 3 9 6 40
Nairobi: Master of Arts in Valuation and Property Management	Property Development. Computer Application in Valuation and Property Management. Urban Economics and Management. Land Management. Valuation of Natural Resources. Financial Management in Real Estate. Property Management. Property Portfolio Investment. Environmental Impact Assessment. Property Agency and Marketing. Valuation of Equipment, Furniture and Fittings. Risk Management and Loss Adjustment. Arbitration and Conflict Management in Real Property Professional Practice. Research Methods. Research Project. Total	45 45 45 45 45 45 45 45 45 45 45 45 45 45 45 225 900
Obafemi Awolowo: Master of Science in Estate Management	Advanced Valuation, Feasibility and Viability Appraisals. Management of Landed Property. Decision and Investment Theory Applied to Landed Property. Advanced Quantitative Techniques in Planning. 3 Electives Thesis. Total	3 2 3 3 9 4 24

Sources: Real Estate Study Guides Universities of Ardhi, Nairobi, and Obafemi Awolowo (2009)

4.2.2.2. Master of Arts in Valuation and Property Management degree programme offered by University of Nairobi in Kenya

The Department of Land Development in the Faculty of Architecture, Design and Development at University of Nairobi (UON) in Kenya is responsible for offering Master of Arts in Valuation and Property Management. The programme targets real estate professionals such as valuers, property managers, building surveyors and land administrators. The main objective of the course is to develop proficiency in operational skills of candidates so that they can effectively apply them in making financial and economic decisions in all aspects of property valuation, property development and property management. It is also valuable for decision makers who must judge real estate investment proposals prepared by others.

The following candidates are eligible for admission into the degree of Master of Arts in Valuation and Property Management:

- Holders of a degree of at least Upper Second Class Honours in Land Economics.
- Holders of a degree of at least Upper Second Class Honours in Architecture, Building Economics, Engineering, Commerce, Economics, Social Sciences, Agriculture, Forestry or any other comparable degree in terms of academic status. In addition candidates are required to have at least one year of research, teaching or practical experience in Land Administration, Farm Management, Property Development, Property Management or Valuation.
- Holders of a degree of at least Lower Second Class Honours in any of the degrees specified above with a relevant Postgraduate Diploma or other equivalent qualifications and at least two years of work experience.

The curriculum comprises a two-year programme covering four semesters. In addition, the curriculum consists of lectures, coursework, seminars and project work; written examination papers at the end of each semester of the first year and end of first semester of second year; and a research project to be examined at end of second semester of the second year. The course comprises of 16 compulsory course units. Table 4.2 shows the course subjects offered in the programme.

4.2.2.3 MSc (Real Estate) degree programme offered by Ardhi University (former University College of Lands and Architectural Studies) in Tanzania

Ardhi University in Tanzania is offering a Master of Science Degree in Real Estate. This programme aims at providing advanced training in real estate and its specific objectives are:

- To improve the analytical ability of the programme participants and enable them to work as land administrators, valuers, and estate managers upon graduation.
- To inculcate modern business management skills in the minds of programme participants.
- To equip the participants with contemporary knowledge and skills in development control, waste management, environment related legislation and the influence of environmental pollution on real estate valuation.
- To impart knowledge on innovative financing techniques in property development.

- To enable programme participants to acquire skills that would enable them to conduct valid research on matters related to real estate.

The entry qualification for this programme is at least a second class grade Bachelor's Degree in Land Management and Valuation, Urban and Regional Planning, Building Economics, Architecture, Land Surveying, Environmental Engineering, Geography, Economics, Commerce, Civil Engineering or any other relevant degree; or a relevant Postgraduate Diploma in Valuation or other relevant diploma from a recognised University or institution of higher learning.

Student assessment includes coursework (40 percent) and written examinations (60 percent) giving a total of 100 percent. The programme requires a candidate to obtain a minimum of 34 units (i.e. 25 units of core courses and a minimum of 9 units of electives), before writing a dissertation which has 6 units (i.e. a minimum of 40 units in total) to complete the degree. The minimum duration for a candidate to complete the degree is two years. Table 4.2 shows the course subjects offered in the programme.

4.2.3 Postgraduate real estate curricula in North America

In North America, the USA was offering all Masters Real Estate programmes identified for review in this section. Galuppo and Worzala (2004) who did a study on the important elements of a Masters Degree in Real Estate observed that about a dozen Master of Science in Real Estate programmes are offered in the USA and many of them are focused on finance or development. Very few are multidisciplinary in their approach to the study of real estate. Directory of Real Estate Development and Related Education Programs (10th edition) was a detailed literature source for Masters Real Estate curricula offered in the USA. Seven Master's programmes which are specialising in real estate were selected for comparison in this critical assessment and are given in Table 4.3. Appendix D shows course subjects covered in these programmes.

4.2.4 Postgraduate real estate curricula in Europe

In a report on real estate education in Europe, Baum and Lizieri (2002) identified Universities of Reading (UK); Aberdeen (UK); Amsterdam (Netherlands); and Ulster (Republic of

Northern Ireland) as stronger institutions with European-wide influence, which are offering real estate programmes in English. Directory of Real Estate Development and Related Education Programs (10th edition) and RICS Prospectus for Surveying Education 2004/5 were additional literature sources which were used to identify Masters Real Estate curricula in Europe. In total nine programmes were selected. Seven are offered in UK and one each in Belgium and the Netherlands. Table 4.3 shows selected Masters Real Estate programmes offered in Europe. Course contents for the curricula are contained in Appendix D.

4.2.5 Postgraduate real estate curricula in Asia

In Asia two Masters Real Estate programmes completed by following coursework and offered in English were identified. The National University of Singapore in Singapore is offering a Master of Science in Real Estate. In Hong Kong, University of Hong Kong also offers a Master of Science in Real Estate. Directory of Real Estate Development and Related Education Programs (10th edition) and RICS Prospectus for Surveying Education 2004/5 were useful literature sources for details of these programmes. Table 4.3 includes selected Masters Real Estate degree programmes offered in Asia. Content of course subjects in the programmes are shown in Appendix D.

4.2.6 Postgraduate real estate curricula in the Pacific-Rim

In the Pacific-Rim four Masters Real Estate programmes were selected, two in Australia and two in New Zealand. Directory of Real Estate Development and Related Education Programs (10th edition) and RICS Prospectus for Surveying Education 2004/5 were useful literature sources for details of these programmes. Selected Masters Real Estate degree programmes offered in the Pacific-Rim are also included in Table 4.3. Appendix D exhibits course subjects covered in the programmes.

Table 4.3: Masters Real Estate programmes offered in North America, Europe, Asia and Pacific-Rim

Continent / Country / University	**Degree offered**
North America	
U.S.A	
1. John Hopkins	Master of Science in Real Estate
2. New York	Master of Science in Real Estate
3. Pennsylvania State	Master of Science in Real Estate
4. San Diego	Master of Science in Real Estate

5. George State	Master of Science in Real Estate
6. Texas at Arlington	Master of Science in Real Estate
7. Florida	Master of Science in Real Estate
Europe	
U.K.	
1. Reading	Master of Science in Real Estate
2. Ulster	Master of Science in Real Estate
3. Aberdeen	Master of Science in Property
4. Central England in Birmingham	Master of Science in Real Estate and Management
5. Kingston	Master of Science in Real Estate
6. London South Bank	Master of Science in Estate Management
7. West of England, Bristol	Master of Science in Real Estate and Business Management
Belgium	
8. Antwerp	Master of Real Estate
Netherlands	
9. Amsterdam	Master of Real Estate
Asia	
Singapore	
1. Singapore	Master of Science in Real Estate
China	
2. Hong Kong	Master of Science in Real Estate
Pacific-Rim	
Australia	
1. Curtin	Master of Property
2. Melbourne	Master of Property Studies
New Zealand	
3. Auckland	Master of Property
4. Lincoln	Master of Property Studies

Sources: Directory of Real Estate Programs, Urban Land Institute (2005) and RICS Prospectus of Surveying Education (2005), and university websites

4.3 Results and analysis

4.3.1 Comparison of Masters Real Estate curricula in South Africa

Tables 4.4, 4.5, 4.6 and 4.7 show the analysis and comparison of the five postgraduate real estate curricula offered in South Africa. The results indicate that Masters Real Estate programmes in South Africa are diverse and exhibit differences as well as similarities. The differences and similarities shown by the curricula are analysed in detail next in this section.

4.3.1.1 Curriculum differences

a. Names of real estate curricula

Table 4.4 contains curriculum details of the programmes. It is noted that all five universities offering Masters Real Estate curricula in South Africa were using different names to identify the programmes. University of Pretoria (UP) named its programme Master of Science in Real Estate. University of Cape Town (UCT) called it Master of Science in Property Studies while University of Free State (UFS) had named its degree as Masters in Property Science. At Nelson Mandela Metropolitan University (NMMU) it was named Master of Science in Built Environment. University of Witwatersrand (UW) identified theirs as Master of Science in Property Development and Management. This represents 100% disagreement with regard to a preferred name to be used for the identification of Masters Real Estate curriculum in South Africa, revealing that at the moment there was no agreement on a unifying name to represent the curriculum among the institutions. The observation supports the claim made that the academic field of real estate is experiencing substantial disagreements on a number of issues.

Academic experts from the universities offering the courses were asked to give factors which were considered in the processes of naming real estate programmes. Factors considered included: educational needs of industry and students; nature of course content (curriculum emphasis); curriculum names of peer institutions; marketability of the courses; requirements of professional bodies; requirements of local professionals; local community and society concerns; and preferences of academic staff and university administrations. Another reason mentioned which was contributing to the choice of names was the history of educational influence. Departments and universities with strong British influence tended to use British names such as valuation, estate management, property, and built environment in their curricula.

Table 4.4: Details of Masters Real Estate programmes in South Africa

University & Dept / School	Name of degree	Admission requirements	Duration	Delivery	Total credits
Pretoria (Construction Economics)	MSRE	.Hons, 4 or 5 yr relevant bachelors degree .Work experience	2 yrs & treatise	8 block weeks	230
Witwatersrand	MSPDM	.Relevant good	1 yr full time,	1 week block	180

(Construction Economics & Management)		bachelors degree .Work experience	2yrs part time & treatise	release	
Cape Town (Construction Economics & Management)	MSPS	.Hons or 4 yr relevant bachelors degree .Work experience	2 yrs & treatise	Block system	180
Free State (Quantity Surveying & Construction Management)	MPS	.Relevant good bachelors degree	2 yrs & treatise	8 workshop weeks	240
Nelson Mandela Metropolitan (Construction Management & Quantity Surveying)	MSBE	.Relevant good bachelors degree .Work experience	1 yr full time, 2 yrs part time & treatise	4 or 5 block weeks	202
Key: MSRE: Master of Science in Real Estate MSPDM: Master of Science in Property Development and Management MSPS: Master of Science in Property Studies MPS: Masters in Property Science MSBE: Master of Science in Built Environment					

Sources: Real Estate Study Guides Universities of Pretoria, Witwatersrand, Free State, Cape Town, and Nelson Mandela Metropolitan (2009)

b. Diversity of real estate topics

Table 4.5 contains topics offered in the five Masters Real Estate curricula in South Africa. The results show that the curricula were diverse and consisted of different course subjects, although there were few common elements in some course offerings required in the curricula. The curricula were also structured differently.

To demonstrate the diversity of topics in the curricula, the topics were sorted in Table 4.6 by university. Results show that in total 27 topics including treatise are offered in Masters Real Estate curricula in South Africa. Table 4.6 clearly illustrates topic diversity by showing

universities offering a topic and those not offering a particular topic. In Table 4.7 it is shown that 24 out of 27 topics were not offered by all the five universities in South Africa, representing 89% disagreement on course offerings. These topics include: Applied Game Farm Planning; Accounting and Project Finance; Building Energy Analysis and Management; Construction and Agricultural Engineering; Corporate Strategy; Environmental Economics; and Financial Management. Surprisingly, even other topics expected in real estate curricula were also not offered by all the five universities. For example: Facilities Management, Property Investment, Property Law, Property Management, Property Economics, Property Marketing, and Property Finance. The difference in composition of topics in the curricula could partly be due to different real estate educational needs of the local real estate industries and communities the universities intended to serve. For example, the inclusion of course subjects like Applied Game Farm Planning, and Construction and Agricultural Engineering by UFS could mean that the local industry and community being served considered agriculture, construction and game as important in their real estate involvements. It is important to note that the variation in topics offered in the curricula could equally create differences in the quality of educational products graduating from the universities. However, the difference in composition and diversity of real estate topics in the curricula in South Africa agrees with the observation noted in other similar studies that there is yet no general consensus on the body of knowledge with regard to the area of teaching and research in real estate (Epley, 1996; and Black and Rabianski, 2003).

Table 4.5: Percentages of course subjects offered in Masters Real Estate curricula in South Africa

University & Degree offered	Core subjects offered	Credits allocated	% of subject in curriculum
Pretoria: Master of Science in Real Estate	Property Development (including Property Finance, Property Law, and Property Marketing).	40	17.4
	Property Management/Facilities Management.	40	17.4
	Property Investment.	10	4.3
	Property Valuation.	40	17.4
	Construction Contract Law.	10	4.3
	Financial Management.	20	8.7
	Research Methodology.	10	4.3
	Treatise.	60	26.1
	Total	230	100

Witwatersrand: Master of Science in Property Development & Management	Property Environment.	15	8.3
	Property Planning.	15	8.3
	Property Investment and Development.	15	8.3
	Law for the Property Economist.	15	8.3
	Property and Construction Marketing.	15	8.3
	Property Economics and Valuation.	15	8.3
	Research Methodology.	15	8.3
	Elective Subject.	15	8.3
	Treatise.	60	33.3
	Total	180	100
Free State: Masters in Property Science	Property Development.	32	13.3
	Building Economics.	16	6.7
	Land Evaluation.	32	13.3
	Land Valuation and Business Plans.	8	3.3
	Construction and Agricultural Engineering.	16	6.7
	Construction Contracts, Procedure and Procurement.	8	3.3
	Environmental Economics.	8	3.3
	Applied Game Farm Planning.	16	6.7
	Introduction to Theory of Regional Planning.	16	6.7
	Introductory Studies in Regional Planning.	8	3.3
	Urban Planning Practice.	8	3.3
	Property Valuation and Management.	16	6.7
	Optional Modules.	24	10
	Treatise.	32	13.3
	Total	240	100
Cape Town: Master of Science in Property Studies	Property Development.	20	11.1
	Urban Land Economics.	20	11.1
	Property Law.	20	11.1
	Property Finance.	20	11.1
	Property Valuation.	20	11.1
	Property Portfolio Management.	20	11.1
	Introduction to Research.	4	2.2
	Research Methodology.	6	3.3
	Introduction to Applied Statistics.	4	2.2
	Further Applied Statistics.	6	3.3
	Treatise.	40	22.2
	Total	180	100

Table 4.5 (continued): Percentages of course subjects offered in Masters Real Estate curricula in South Africa

University & Degree offered	**Core subjects offered**	**Credits allocated**	**% of subject in curriculum**
Nelson Mandela Metropolitan: Master of Science in Built Environment	Management Information Systems for Construction and IT Applications.	16	7.9
	Corporate Strategy.	16	7.9
	Accounting and Project Finance.	16	7.9
	Strategic Asset and Facilities Management.	16	7.9
	Property Investment and Portfolio Analysis.	16	7.9
	Building Energy Analysis and Management / Property Valuation.	16	7.9
	Facilities Operations Management / Property Development Planning and Appraisal.	16	7.9
	Research Methodology.	16	7.9
	Elective Subject.	14	4.9

	Treatise Total	60 202	29.7 100

Sources: Real Estate Study Guides Universities of Pretoria, Witwatersrand, Free State, Cape Town, and Nelson Mandela Metropolitan (2009)

c. Percentages of course subjects

The other difference noted in the curricula was the difference in credit hours allocated to common course subjects. This difference was shown in Table 4.5 in the form of subject percentages of the course content. For example UP, UW, UFS, UCT and NMMU allocated 17.4%, 4.2%, 3.4%, 11.1% and 7.9% of its course credits, respectively to Property Valuation in their different curricula. Figure 4.1 illustrates the variations of credit hours allocated to some common course subjects expressed as percentages of course content. The differences in percentages of credit hours allocated by the universities to common subjects in the curricula reflected differences in importance of common real estate topics relative to needs of targeted local real estate industries and communities.

These figures could also be interpreted differently. For a course subject like Treatise (Research Report), UW allocated to it more time (33.3%) than any of the five universities in its curriculum. This gives an impression that UW placed more emphasis on research in its approach to postgraduate real estate education. However, it should be noted that the relative greater credit allocation to the treatise by UW resulted in less credit hours being allocated to other course subjects in the curriculum.

Figure 4.1: Comparison of percentages of some common course subjects offered in Masters Real Estate curricula in South Africa

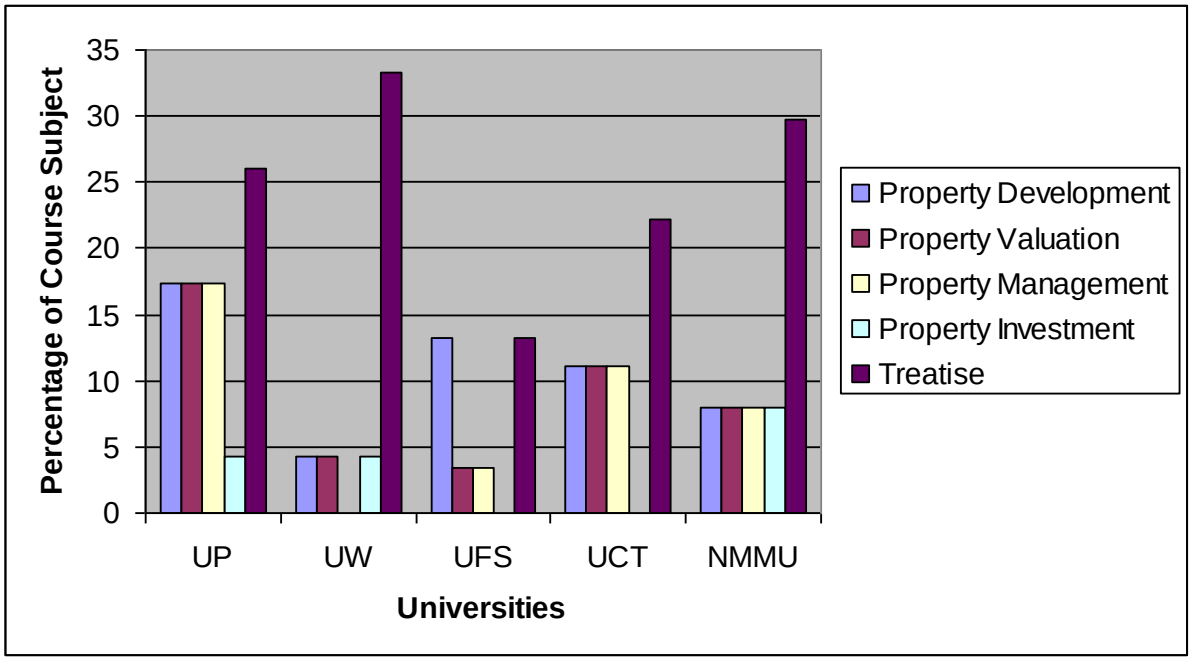
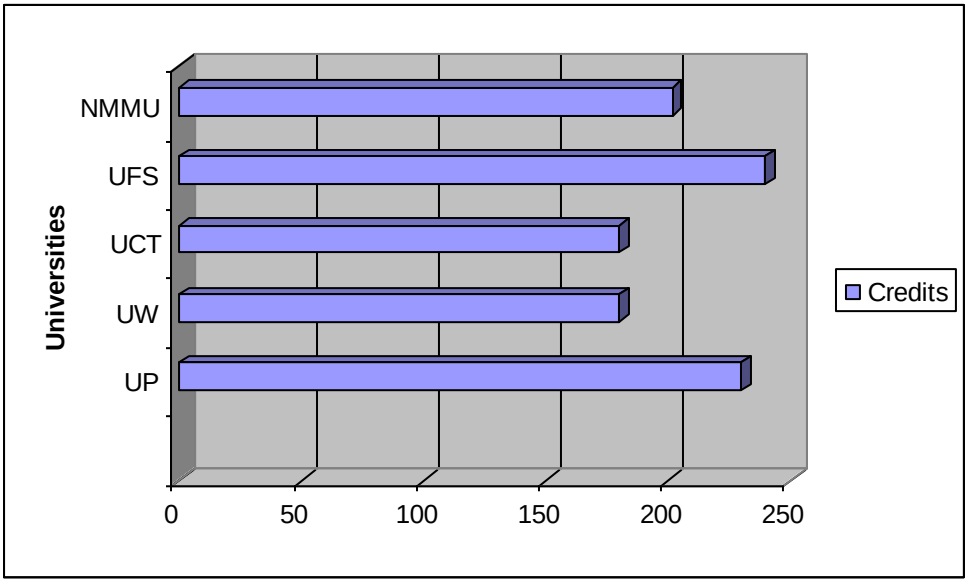


Figure 4.2: Comparison of total credits allocated to Masters Real Estate curricula offered in South Africa



d. Course credit allocation systems

Table 4.5 and Figure 4.2 show different credit allocation systems used by the five universities for their curricula. It is noted that UP, UW, UCT, UFS and NMMU allocated 230, 180, 180, 240, and 202 credits, respectively to their programmes. The main reason for this difference could be different credit allocation systems approved by different university administrations for different educational programmes they offered, including Masters Real Estate programmes. Lack of uniformity in credit allocation systems followed by the different universities caused a major problem, making comparisons of the curricula difficult.

4.3.1.2 Curriculum similarities

a. Common real estate topics

When the five curricula were analysed it was noted that they possessed some common topics expected in a real estate curriculum. In Table 4.7 it is shown that Property Development, Property Valuation, and Treatise were offered by all the five universities. This indicates that these three subjects were the most common topics offered in Masters Real Estate in South Africa. Research Methodology came second by being offered by four universities. Third on the list of common subjects are Property Investment, Property Law, Property Management, and Property Economics for being offered by three out of the five universities. This proves that despite the disagreements in course subjects, there were some agreements on course offerings in the study of real estate in South Africa. The results agree with Epley (1996) and Black and Rabianski (2003) who argued that common elements in course offerings were noticeable in most real estate curricula despite the disagreements.

Table 4.6: Topics offered in Masters Real Estate curricula in South Africa by university

		University offering						
	Core subjects offered	**UFS**	**UCT**	**UP**	**NMMU**	**UW**	**Total**	**Comment**
1	Applied Game Farm Planning.	1	0	0	0	0	1	

2	Accounting & Project Finance.	0	0	0	1	0	1	
3	Building Economics.	1	0	1	0	0	2	At UP part of PD
4	Building Energy Analysis and Management.	0	0	0	1	0	1	
5	Construction Contract Law / Construction Contracts, Procedure & Procurement	1	0	1	0	0	2	
6	Construction and Agricultural Engineering.	1	0	0	0	0	1	
7	Corporate Strategy.	0	0	0	1	0	1	
8	Environmental Economics.	1	0	0	0	0	1	
9	Financial Management.	0	0	1	0	0	1	
10	Further Applied Statistics Applied / Introduction to Applied Statistics	0	1	0	0	0	1	
11	Facilities Management / Facilities Operations Management / Strategic Asset & Facilities Management	0	0	1	1	0	2	
12	Introduction to Theory of Regional Planning / Introductory Studies in Regional Planning	1	0	0	0	0	1	
13	Introduction to Research / Research Methodology	0	1	1	1	1	4	
14	Land Evaluation	1	0	0	0	0	1	
15	Land Valuation and Business Plans	1	0	0	0	0	1	
16	Management Information Systems for Construction & IT Applications	0	0	0	1	0	1	
17	Property & Construction Marketing	0	0	1	0	1	2	At UP part of PD
18	Property Development / Property Development Planning & Appraisal	1	1	1	1	1	5	
19	Property Economics / Urban Land Economics	0	1	1	0	1	3	At UP part of PD
20	Property Environment	0	0	0	0	1	1	
21	Property Finance	0	1	1	0	0	2	At UP part of PD
22	Property Investment / Property Investment & Portfolio Analysis	0	0	1	1	1	3	
23	Property Law / Law for the Property Economist	0	1	1	0	1	3	At UP part of PD
24	Property Management / Property Portfolio Management	1	1	1	0	0	3	
25	Property Planning / Urban Planning Practice	1	0	0	0	1	2	
26	Property Valuation	1	1	1	1	1	5	
27	Treatise	1	1	1	1	1	5	

Key: UP: University of Pretoria. UFS: University of Free State. UCT: University of Cape Town.
UW: University of Witwatersrand NMMU: Nelson Mandela Metropolitan University.
PD: Property Development

Table 4.7: Ranking of topics offered in Masters Real Estate curricula in South Africa by university frequency

Rank	Core subjects offered	No. of institutions Offering topic
1	Property Development / Property Development Planning & Appraisal	5

	Property Valuation	5
	Treatise	5
2	Introduction to Research / Research Methodology	4
3	Property Investment / Property Investment & Portfolio Analysis	3
	Property Law / Law for the Property Economist	3
	Property Management / Property Portfolio Management	3
	Property Economics / Urban Land Economics	3
4	Building Economics.	2
	Construction Contract Law / Construction Contracts, Procedure & Procurement	2
	Facilities Management / Facilities Operations Management / Strategic Asset & Facilities Management	2
	Property & Construction Marketing	2
	Property Finance	2
	Property Planning / Urban Planning Practice	2
5	Applied Game Farm Planning.	1
	Accounting & Project Finance.	1
	Building Energy Analysis and Management.	1
	Construction and Agricultural Engineering.	1
	Corporate Strategy.	1
	Environmental Economics.	1
	Financial Management.	1
	Further Applied Statistics Applied / Introduction to Applied Statistics	1
	Introduction to Theory of Regional Planning / Introductory Studies in Regional Planning	1
	Land Evaluation	1
	Land Valuation and Business Plans	1
	Management Information Systems for Construction & IT Applications	1
	Property Environment	1

b. Location of real estate curricula

Curricula details in Table 4.4 indicate that all the five Masters Real Estate curricula offered in South Africa were part of the Built Environment programmes and were housed outside the business schools, representing 100% affiliation with the built environment programmes. University departments and schools housing the curricula were: UP: Department of Construction Economics; UW: School of Construction Economics and Management; UFS: Department of Quantity Surveying and Construction Management; UCT: Department of Construction Economics and Management; and NMMU: Construction Management and Quantity Surveying. This arrangement was similar to most programmes in the United Kingdom, Australia, New Zealand and other British Commonwealth countries where broader and unrestricted real estate programmes comprising of both physical and financial aspects of real estate were offered (Black and Rabianski, 2003; and Black, Brown, Diaz, Gibler and Grissom; 2003).

c. Student admission requirements

With regard to admission of students for the courses, the five universities offering the Masters Real Estate curricula in South Africa applied similar requirements for admission even though they disagreed in other areas. The similarity is that all the five universities required applicants to hold Honour's, 4 or 5 year Bachelor's degrees in built environment related disciplines, for example construction management, quantity surveying, project management, civil engineering, architecture and other relevant disciplines to register for the courses. In addition, they required applicants to possess relevant built environment work experience, except for the UFS where this was not a priority (see Table 4.4).

A noteworthy difference with regard to student admission is the diversity of qualifications accepted as pre-requisites. Some universities even considered qualifications unfamiliar with real estate (see Section 4.2.1). For example the UFS considers applicants with Bachelors degrees in agricultural economics, anthropology, applied mathematics, botany, business management, computer information systems, economics, environmental science, forestry, geology, geography, mathematical statistics, psychology, public administration, sociology, statistics, applied mathematics, law, physics, tourism, and sports management. This observation has two implications. Firstly, this proved that real estate is a multidisciplinary field which has links with several other disciplines. This concurs with Roulac (2002) who commented that the challenge facing real estate discipline today was to determine disciplines which were part of real estate and those which were not. Secondly, this indicated that Masters Real Estate degrees in South Africa are used by professionals in other disciplines as a conversational route to become qualified real estate professionals.

d. Duration and delivery of courses

It is noted in Table 4.4 that a minimum of two years was required for students to complete the courses, expect at UW and NMMU where full time students could complete the courses in one year. In addition to completing coursework, the students were required to submit a treatise, which was compulsory to be awarded the degrees. Delivery of the courses was arranged in block weeks to enable students who were working and from centres outside the universities to follow the courses (see Table 4.4).

4.3.2 Comparison of Masters Real Estate curricula in South Africa and other African countries

Tables 4.8, 4.9, 4.10 and 4.11 contain the results and analysis of three Masters Real Estate curricula, which were identified in other African countries. When these curricula were analysed and compared to the curricula in South Africa, curriculum similarities and differences noted in the analysis of curricula in South Africa merged. These issues are discussed next in this section.

a. Names of real estate curricula

Table 4.8 shows names given to curricula in other African countries. Just like in South Africa, universities from other parts of Africa gave different names to Masters Real Estate curricula they were offering. Obafemi Awolowo University (OA) in Nigeria named its programme Master of Science in Estate Management (MSEM). In Kenya, University of Nairobi (UON) identified its degree as Master of Arts in Valuation and Property Management (MAVPM). Ardhi University (AU) in Tanzania named its degree Master of Science in Real Estate (MSRE). When the names of curricula offered in other African countries were compared to the curricula names in South Africa there were differences, except for UP and AU who named their degrees as MSRE. Factors considered in the selection of curriculum names by universities in other African countries were similar to factors identified in South Africa. These included: educational needs of industry and students; nature of course content (curriculum emphasis); marketability of the courses; requirements of professional bodies; requirements of local professionals; local community and society concerns; preferences of academic staff and university administrations; and historical educational influence.

Table 4.8: Details of Masters Real Estate programmes offered in other countries of Africa

University, Country & Dept / College	Name of degree	Admission requirements	Duration	Delivery	Total credits
Obafemi Awolowo, Nigeria (Estate Management)	MSEM	.At least relevant second class honours degree .Work experience	12 months & treatise	1 week block release	24 course units
Nairobi, Kenya	MAVPM	.At least relevant	2 yrs & treatise	Full time	900 hours

(Land Development)		second class honours degree .Work experience			
Ardhi, Tanzania (College of Lands and Architectural Studies)	MSRE	.At least second class relevant good bachelors degree	2 yrs & treatise	Full time & Part time	40
Key: MPLE: Master of Philosophy in Land Management MSEM: Master of Science in Estate Management MAVPM: Master of Arts in Valuation and Property Management MSRE: Master of Science in Real Estate					

Sources: Real Estate Study Guides Universities of Ardhi, Nairobi, and Obafemi Awolowo (2009)

b. Diversity of real estate topics

In Table 4.9 it is shown that real estate topics offered in the three Masters Real Estate curricula exhibited differences, although there were a few similarities. To illustrate the diversity of topics offered in the curricula of other African countries, the topics were sorted in Table 4.10 by university. In total 22 core real estate topics were offered in other African countries. The Table reveals topic diversity by showing universities offering a topic and those not offering a particular topic. In Table 4.11 it is shown that 20 out of 22 topics were not offered by all the three universities, which represents 91% disagreement on course offerings. These topics include: Arbitration and Conflict Management in Real Property; Advanced Quantitative Techniques in Planning; Business Management; Risk Management and Loss Adjustment; and Valuation of Equipment, Furniture and Fittings. Some topics normally expected in a real estate curriculum were also not presented by all the three universities. For example: Property Development, Property Investment, Property Management, Property Finance, and Property Marketing. The variation of real estate topics in the curricula could reflect differences in the educational needs of local industries and communities the universities intended to serve. Figure 4.3 shows differences of some common course subjects offered in the curricula in other African countries based on course subject percentages in the curricula.

When topics offered in other African countries were compared to topics offered in the curricula in South Africa, it was noted again that there were differences, even though similarities were observed. Table 4.12 shows that 11 out of 22 topics offered in other African countries were not offered in South Africa, representing 50% disagreement on course

offerings. Some of these topics include: Valuation of Natural Resources, and Land Management. South Africa is more urbanised and developed than the other African countries. Real estate professionals in other African countries are likely to encounter more rural real estate issues than real estate professionals in South Africa because of urbanisation and economic development differences. This could have influenced differences in topic selection by considering issues related to rural land use in the curricula in other African countries. The diversity of real estate topics in other African countries and their differences with topics in South Africa further supported the claim made by Epley (1996); and Black and Rabianski (2003) that there was yet no general consensus on the body of knowledge with regard to the area of teaching and research in real estate.

c. Common real estate topics

Despite the differences in real estate topics offered in the three curricula in other African countries, few common topics were noticed. Table 4.11 indicates that Property Valuation and Treatise was offered by all the three universities. Two out of the three universities also offered: Environmental Management / Environmental Impact Assessment; Land Resources Management / Land Management; Property Development; Property Investment; Property Management; and Research Methodology.

When the curricula offered in other African countries were compared with curricula offered in South Africa, it was noted that they agreed on some common topics which were expected in a real estate curriculum. Results in Table 4.12 show that 11 out of 22 topics offered in other African countries were also offered in South Africa, which represents 50% agreement on course offerings. These course subjects included: Property Development, Property Management, Property Valuation, Property Investment, Property Finance, Property Marketing, Property Economics, Financial Management, and Research Methodology. In addition, students were required to complete treatise in order to obtain the degrees in all the programmes. This observation supports the remarks made by Epley (1996) and Black and Rabianski (2003) that common elements were noticeable in most real estate curricula despite the disagreements.

d. Percentages of course subjects

Tables 4.5 and 4.9 compare the differences in percentages of course subject credits in the curricula offered in South Africa and other African countries. The differences in percentages of credits allocated to common real estate topics in the different curricula in Africa could indicate the relative importance attached by real estate educators to the subjects with regard to real estate needs of national and local industries in their different countries. For example, UP in South Africa allocated 17.4% of total credit hours to Property Development while AU in Tanzania allocated 7.5% to the same subject in its curriculum. This difference between the curricula from these countries could indicate that property development as a real estate activity was a major activity in the real estate industry served by UP than the AU. In this context, the differences in percentages allocated to common real estate topics in different countries could signal differences in sizes and needs of real estate industries. Factors responsible for differences in sizes of real estate industries and real estate needs in different countries include: differences in demographic factors, credit availability, income levels, level of economic development, land issues, legal systems, culture, and political influences.

e. Course credit allocation systems

Tables 4.5 and 4.9 and Figures 4.2 and 4.4 exhibits and illustrate different credit allocation systems used by the eight universities in Africa for the curricula. The results show that in Africa different credit allocation systems were used for the Masters Real Estate curricula. Again, lack of uniformity in credit allocation systems used by the different universities in Africa created a major problem when trying to compare and analyse the different curricula.

Table 4.9: Percentages of course subjects offered in Masters Real Estate curricula in other countries of Africa

University & Degree	Core subjects offered	Credits allocated	% of subject in course
Ardhi: (former University College of Lands & Architectural Studies): (Master of Science in Real Estate)	Comparative Land Law.	2	5
	Business Management.	3	7.5
	Property Development and Finance.	3	7.5
	Land Resources Management.	3	7.5
	Real Estate Economics.	2	5
	Environmental Management.	2	5
	Advanced Valuation.	4	10
	Land Administration Casework.	3	7.5
	Research Methodology.	3	7.5
	3 Elective Subjects.	9	22.5
	Treatise.	6	15

	Total	40	100
Nairobi: Master of Arts in Valuation and Property Management	Property Development.	45	5
	Computer Application in Valuation and Property Mgt.	45	5
	Urban Economics and Management.	45	5
	Land Management.	45	5
	Valuation of Natural Resources.	45	5
	Financial Management in Real Estate.	45	5
	Property Management.	45	5
	Property Portfolio Investment.	45	5
	Environmental Impact Assessment.	45	5
	Property Agency and Marketing.	45	5
	Valuation of Equipment, Furniture and Fittings.	45	5
	Risk Management and Loss Adjustment.	45	5
	Arbitration and Conflict Management in Real Property.	45	5
	Professional Practice.	45	5
	Research Methods.	45	5
	Treatise.	225	25
	Total	900	100
Obafemi Awolowo: Master of Science in Estate Management	Advanced Valuation, Feasibility and Viability Appraisals.	3	12.5
	Management of Landed Property.	2	8.3
	Decision and Investment Theory Applied to Landed Property.	3	12.5
	Advanced Quantitative Techniques in Planning.	3	12.5
	3 Electives.	9	37.5
	Treatise.	4	16.7
	Total	24	100

Sources: Real Estate Study Guides Universities of Ardhi, Nairobi, and Obafemi Awolowo (2009)

Figure 4.3: Comparison of percentages of some common course subjects offered in Masters Real Estate curricula in other African countries

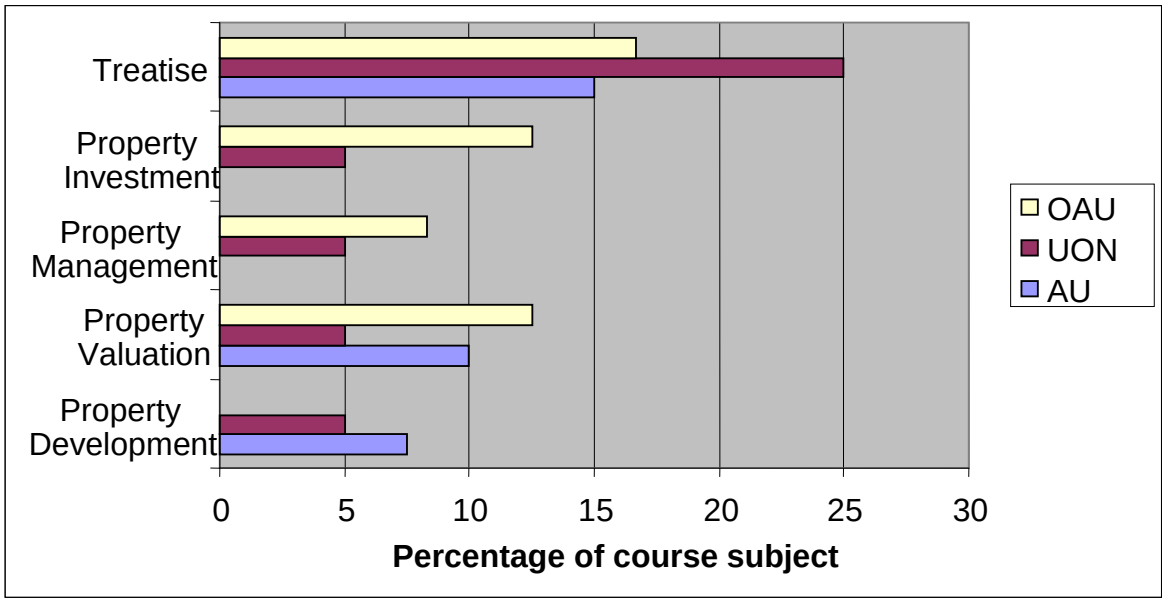
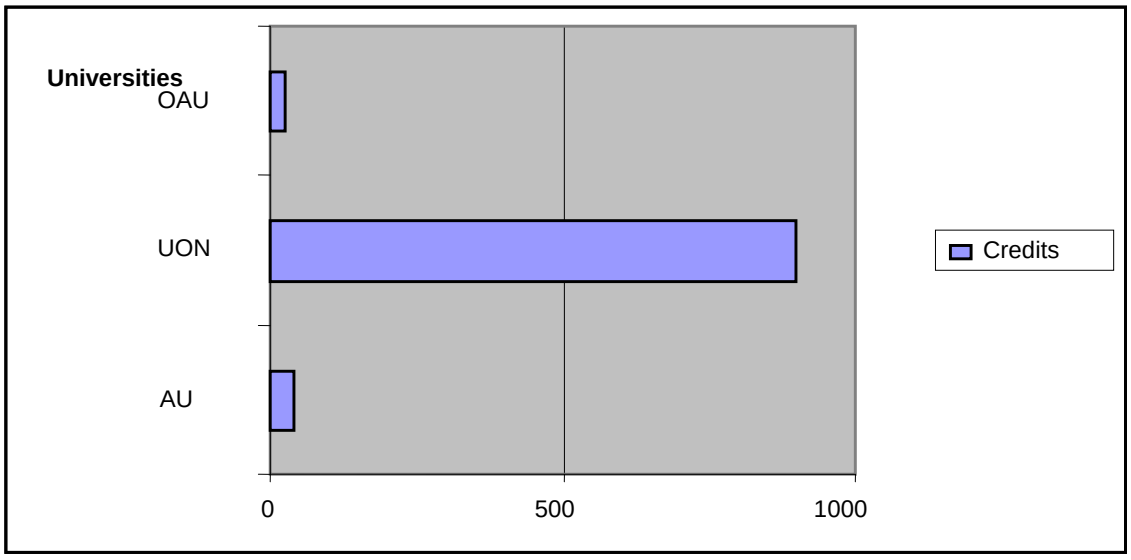


Figure 4.4 Comparison of total credits allocated to Masters Real Estate curricula offered in other African countries



f. Location of real estate curricula

Table 4.8 shows the college and departments housing Masters Real Estate curricula in other African countries. These departments and college are: Department of Estate Management at OA in Nigeria; Department of Land Development at UON in Kenya; and AU in Tanzania. Similar to South Africa, Masters Real Estate programmes in other African countries were housed outside the business schools and were part of the Built Environment programmes.

g. Student admission requirements

Table 4.8 shows student admission requirements for Masters Real Estate programmes offered in other African countries. Similar to universities in South Africa, the universities in other African countries wanted applicants with relevant good Bachelor's degrees in built environment related disciplines. Except for AU, the other two universities also required the applicants to have some relevant work experience in a relevant profession. Again, just like with universities in South Africa, students with qualifications from other disciplines outside real estate were also considered for admission into real estate programmes in the other African countries.

h. Duration and delivery of courses

Table 4.8 shows curriculum details, including duration and delivery methods for Masters Real Estate curricula in other African countries. Duration to complete degrees in other African countries was similar to programmes in South Africa. This ranged from one year to two years. Two of the universities (UON and AU) required students a minimum of two years to complete the degrees, except for OA which required a minimum of twelve months. UON and AU offered their programmes on full time basis while OA used the block release system to implement their programme. In South Africa similar course delivery methods existed depending on circumstances.

Table 4.10: Topics offered in Masters Real Estate curricula in other countries of Africa by university

		University offering				
	Core subjects offered	**UON**	**OA**	**AU**	**Total**	**Comment**

1	Advanced Valuation / Advanced Valuation, Feasibility & Viability Appraisals	1	1	1	3	At UON part of PD
2	Arbitration & Conflict Management in Real Property	1	0	0	1	
3	Advanced Quantitative Techniques in Planning	0	1	0	1	
4	Business Management	0	0	1	1	
5	Comparative Land Law	0	0	1	1	
6	Computer Application in Valuation & Property Management	1	0	0	1	
7	Environmental Management / Environment Impact Assessment	1	0	1	2	
8	Financial Management in Real Estate	1	0	0	1	
9	Land Resources Management / Land Administration casework / Land Management	1	0	1	2	
10	Property Development	1	0	1	2	
11	Property Finance	0	0	1	1	
12	Property Portfolio Investment / Decision & Investment Theory Applied to Landed Property	1	1	0	2	
13	Property Agency & Marketing	1	0	0	1	
14	Property Management / Management of Landed Property	1	1	0	2	
15	Professional Practice	1	0	0	1	
16	Risk Management & Loss Adjustment	1	0	0	1	
17	Real Estate Economics	0	0	1	1	
18	Research Methodology / Research Methods	1	0	1	2	
19	Treatise	1	1	1	3	
20	Urban Economics & Management	1	0	0	1	
21	Valuation of Natural Resources	1	0	0	1	
22	Valuation of Equipment, Furniture & Fittings	1	0	0	1	
Key: UON: University of Nairobi. OA: Obafemi Awolowo University AU: Ardhi University. PD: Property Development						

Table 4.11: Ranking of topics offered in Masters Real Estate curricula in other countries of Africa by university frequency

Rank	Core subjects offered	No. of institutions offering topic
1	Advanced Valuation / Advanced Valuation, Feasibility & Viability Appraisals	3
	Treatise	3
2	Environmental Management / Environment Impact Assessment	2

	Land Resources Management / Land Administration casework / Land Management	2
	Property Development	2
	Property Portfolio Investment / Decision & Investment Theory Applied to Landed Property	2
	Property Management / Management of Landed Property	2
	Research Methodology / Research Methods	2
3	Arbitration & Conflict Management in Real Property	1
	Advanced Quantitative Techniques in Planning	1
	Business Management	1
	Comparative Land Law	1
	Computer Application in Valuation & Property Management	1
	Financial Management in Real Estate	1
	Property Finance	1
	Property Agency & Marketing	1
	Professional Practice	1
	Risk Management & Loss Adjustment	1
	Real Estate Economics	1
	Urban Economics & Management	1
	Valuation of Natural Resources	1
	Valuation of Equipment, Furniture & Fittings	1

Table 4.12: Comparison of Masters Real Estate topics offered in South Africa and other African countries

	Core Masters Real Estate topics offered in other African countries	**Topics offered in South Africa**	**Comments**
1	Advanced Valuation / Advanced Valuation, Feasibility & Viability Appraisals	1	
2	Arbitration & Conflict Management in Real Property	0	
3	Advanced Quantitative Techniques in Planning	0	
4	Business Management	0	
5	Comparative Land Law	0	
6	Computer Application in Valuation & Property Management	0	Subtopic in SA
7	Environmental Management / Environment Impact Assessment	0	Subtopic or elective in SA
8	Financial Management in Real Estate	1	
9	Land Resources Management / Land Administration casework / Land Management	0	
10	Property Development	1	
11	Property Finance	1	
12	Property Portfolio Investment / Decision & Investment Theory Applied to Landed Property	1	
13	Property Agency & Marketing	1	
14	Property Management / Management of Landed Property	1	
15	Professional Practice	0	Elective in SA
16	Risk Management & Loss Adjustment	0	Subtopic in SA
17	Real Estate Economics	1	
18	Research Methodology / Research Methods	1	
19	Treatise	1	
20	Urban Economics & Management	1	
21	Valuation of Natural Resources	0	
22	Valuation of Equipment, Furniture & Fittings	0	
	Total common topics	11	

4.3.3 Comparison of Masters Real Estate curricula in South Africa and other continents

Representative Masters Real Estate curricula selected from other continents (i.e. Europe, North America, Asia, and the Pacific-Rim) to be compared with curricula in South Africa and

their course contents are given in Table 4.3 and Appendix D, respectively. Key issues which were identified in their curricula comparison are discussed in this section.

a. Names of real estate curricula

In Tables 4.1, 4.3 and Appendix E names given to real estate curricula and topics in South Africa and other continents are shown. When the names "real estate" and "property" are compared, it is noted that in totality "real estate" was more popular in USA than in South Africa, UK and other British Commonwealth countries to describe real estate programmes and topics. This observation agrees with Baum and Lizieri (2002) who noted that "property" is more common than "real estate" in UK and other British Commonwealth countries like Australia and New Zealand. However, "real estate" is becoming more prevalent in education worldwide than "property" (Baum and Lizieri, 2002). This is proven by gaining popularity of the name "real estate" in other countries like Belgium, Netherlands, Singapore, Hong Kong, and even in the UK curricula.

b. Diversity of real estate topics

Masters Real Estate curricula offered in other continents (i.e. North America, Europe, Asia, and the Pacific-Rim) exhibited differences, even though they had some common course offerings. To show the diversity of topics offered in these continents, topics were sorted by university in a relevant region or country in Tables 4.14, 4.17, 4.20, 4.23, and 4.26. The Tables show that 29, 28, 9, 17, and 19 core real estate topics were offered in USA; UK; Belgium and Netherlands; Singapore and Hong Kong; and the Pacific-Rim by the selected universities. The diversity of topics in the curricula offered in these countries is illustrated in the Tables by showing universities offering a topic and those not offering a specific topic.

In Table 4.15 results indicate that 28 out of 29 topics were not offered by all the seven universities selected in USA. This represents 96.6% disagreement on real estate topic offerings in the USA. The topics which were not offered by all universities include: Advanced Finance and Managerial Decision Making; Capital Markets; Design Issues; Economics; Land Use Controls; and Real Estate Construction Technology. Surprisingly, even other topics normally expected in a real estate curriculum were not offered by all the seven

universities. These topics include: Real Estate Investment; Real Estate Law; Real Estate Development; and Real Estate Valuation / Appraisal.

Results in Table 4.18 reveal that in UK, 26 out of 28 topics were not presented by all the seven universities selected, representing 92.9% disagreement on topic offerings. Examples of topics which were not offered by all universities in UK were: Building Technology; Construction Project Management; and Corporate Strategy in Real Estate. In UK it was also observed that other topics expected in a real estate curriculum were not offered by all the seven universities. These topics include: Property Investment; Property Management; Property Finance; Property Economics; Property Development; and Property Marketing.

In other European countries (i.e. Belgium and Netherlands), diversity of real estate topics was equally noted. Table 4.21 reveals that 5 out of 9 core topics were not offered by both Universities of Antwerp and Amsterdam, representing 55.6%. Topics not offered by the two universities include: Development Process; Portfolio Analysis; Real Estate Economics; and Real Estate Technology.

Real estate topics offered by two universities selected in Asia also differed. Table 4.24 indicates that 15 out of 17 core topics were not offered by both National University of Singapore and University of Hong Kong. This variation represents 88.2% disagreement on topic offerings. Examples of topics not offered by the two universities were: Capital Markets; Corporate Real Estate; International Real Estate; Law for Real Estate and Construction Industry; Real Estate Management; and Real Estate Development.

When topics offered by universities in the other continents were compared to topics offered in South Africa, it was equally observed that there were differences in the topics. Results in Table 4.16 show that 19 out of 29 topics offered in USA were not presented in South Africa. Some of these topics included: Advanced Finance and Managerial Decision Making; and International Real Estate. In UK, 14 out of 28 topics were not offered in South Africa (see Table 4.19). Table 4.22, shows that 4 out of 9 topics offered in Belgium and Netherlands were not offered in South Africa. Furthermore, 9 out of 17 topics in Singapore and Hong Kong were not presented in South Africa (see Table 4.25). Finally, Table 4.28 shows that in Australia and New Zealand, 7 out of 19 topics were not offered in South Africa. However, in Tables 4.16, 4.19, 4.22, 4.25 and 4.28 it is revealed that closer scrutiny of some topics offered

in other continents but not in South Africa were presented as sub-topics in some curricula in South Africa. This issue complicates curriculum analysis and necessitates continued research in the area to thoroughly understand content of real estate curricula offered in the world. The diversity of real estate topics offered in other continents and their differences with topics in South Africa confirms the claim made by Black and Rabianski (2003) that there was yet no general consensus on real estate body of knowledge even from the global perspective.

c. Common real estate topics

Although there were differences in real estate topics offered in other continents and South Africa, some common course offerings exist. Results in Table 4.15 revealed that in the USA, Real Estate Finance and Real Estate Investment were the most common topics for being offered by seven and six universities, respectively. These statistics agreed with Schulte and Schulte-Daxboek (2003); and Galuppo and Worzala (2004), who commented that real estate education in USA was more focused towards "finance and investment". Real Estate Law and Real Estate Development came third for being offered by five universities. Table 4.18 indicates that Property Valuation and Property Law were most common topics in UK for being offered by all the seven universities. Second common topic in UK was Real Estate Investment for being presented at six universities. Property Management; Property Finance; and Property Research came third for being offered by five of the selected universities. In Belgium and Netherlands the most common topics were Real Estate Markets; Real Estate Management; Real Estate Valuation; and Real Estate Investment for being offered by both Universities of Antwerp and Amsterdam (see Table 4.21). Table 4.24 shows that Real Estate Investment and Real Estate Economics were the most common topics in Singapore and Hong Kong. Finally, in Table 4.27 it is noted that in Australia and New Zealand, Property Management and Property Development were the most common topics for being offered by four universities. Property Marketing; Property Valuation; and Property Investment came second for being presented by three of the four universities selected in these countries.

When real estate topics offered in South Africa were compared with topics offered in the other continents, it was also observed that they agreed on several topics in the curricula. In Table 4.16 it is noted that 10 out of 29 topics offered in USA were offered in South Africa. Table 4.19 shows that 14 out 28 topics offered in UK were offered in South Africa. In Belgium and Netherlands, 5 out of 9 topics were offered in South Africa (see Table 4.22). Table 4.25 indicates that 8 out of 17 topics offered in Singapore and Hong Kong were offered

in South Africa. 12 topics out of 19 in Australia and New Zealand were also offered in South Africa (see Table 4.28). These statistics have proven that postgraduate real estate curricula in South Africa were comparable internationally in terms of some common topics expected in a real estate curriculum. The observation further agrees with the study by Black and Rabianski (2003) that despite the disagreements in real estate course offerings there were some common real estate topics in the world.

d. Location of real estate curricula

In Table 4.13 colleges, faculties, schools, and departments housing Masters Real Estate curricula offered in the other continents are given. In USA, the selected seven Masters Real Estate programmes were housed in the Business Schools, where real estate courses were taught together with finance programmes. In UK, Singapore, Hong Kong, Australia, and New Zealand, and South Africa most of the curricula were housed together with other Built Environment programmes. The results on the location of real estate curricula concur with the observations made by Lahey and Webb (1987); and Black and Rabinski (2003).

e. Course credit allocation systems

Credit hours allocated to Masters Real Estate curricula offered in the other continents are shown in Table 4.13. The results indicate that just like in South Africa, universities offering the courses in the other continents followed different credit allocation systems for the courses. As noted earlier, lack of uniformity in credit allocation systems created a major problem when attempting to compare and analyse the different curricula.

f. Duration and delivery of courses

Table 4.13 shows that the duration for students to complete Masters in Real Estate programmes at the universities in other continents ranged from one year to two and half years. This was comparable to duration taken by students in South Africa depending on whether student course participation is on full time or part time basis. Table 4.13 also shows that popular methods for the delivery of curricula in the other continents were full time and part time arrangements. Part time arrangement was comparable to the block release system

which was popular in South Africa in that it allowed students who were employed to easily attend the courses.

g. Student admission requirements

It is noted in Table 4.13 that universities offering Masters Real Estate programmes in North America, Europe, Asia and the Pacific-Rim required applicants to hold a relevant good first degree to be accepted for entry into the programmes. In addition, some universities in these continents required applicants to have relevant work experience in order to be admitted. These student admission requirements were similar to requirements in South Africa.

Table 4.13: Details of selected Masters Real Estate programmes in North America, Europe, Asia, and the Pacific-Rim

University & School, College or Dept	Name of degree	Admission requirements	Duration	Credits	Comments
North America					
USA					
John Hopkins (School of Business)	MSRE	Relevant good first degree	1 yr full-time	40	
New York (School of Continuing &	MSRE	Relevant good first degree	1.5 yrs full-time, 2.5 yrs	42	

Professional Studies)			part-time		
Pennsylvania State (College of Business)	MSRE	Relevant good first degree	2 yrs full-time		
San Diego (School of Business Administration)	MSRE	Relevant good first degree	1 yr	32	
George State (College of Business)	MSRE	Relevant good first degree	1.5 yrs full-time	36	RICS accredited
Texas at Arlington (Dept of Finance & Real Estate)	MSRE	Relevant good first degree	1 yr full-time	36	
Florida (College of Business Administration)	MSRE	Relevant good first degree	1 yr full-time	34	
Europe					
UK					
Reading (School of Construction Management & Engineering)	MSRE	Relevant good first degree & work experience	1 yr full-time	180	RICS accredited
Ulster (School of the Built Environment)	MSRE	Relevant good first degree	1 yr full-time	300	RICS accredited
Aberdeen (Business School)	MSP	Relevant good first degree	1 yr full-time	190	RICS accredited
Central England in Birmingham (Faculty of the Built Environment)	MSREM	Relevant good first degree	1 yr full-time, 2 yrs part-time	180	RICS accredited
Kingston (School of Surveying)	MSRE	Relevant good first degree & work experience	2 yrs part-time	12 modules	RICS accredited
London South Bank (Faculty of Engineering, Science & Built Environment)	MSEM	Relevant good first degree & work experience	1 yr full-time, 2 yrs part-time		RICS accredited
West of England, Bristol (Faculty of the Built Environment)	MSREM	Relevant good first degree & work experience	1 yr full-time, 2 yrs part-time	8 modules	
Netherlands					
Amsterdam (School of Real Estate)	MRE	Relevant good first degree & work experience	2 yrs part-time		RICS accredited
Belgium					
Antwerp (Management School)	MRE	Relevant good first degree & work experience	2 yrs part-time	300 hrs	

Table 4.13 (continued): Details of selected Masters Real Estate curricula in North America, Europe, Asia, and the Pacific-Rim

University & School, College or Dept	**Name of degree**	**Admission requirements**	**Duration**	**Credits**	**Comments**
Asia					
Singapore					
National University of Singapore (Dept of Real Estate)	MSRE	Relevant good first degree	1 yr full-time, 1.5 yrs part-time	40	RICS accredited
Hong Kong					
Hong Kong	MSRE	Relevant good	1 yr full-	9	

(Dept of Real Estate & Construction)		first degree	time, 2 yrs part-time	modules	
Pacific-Rim					
Australia					
Curtin (Business School)	MP	Relevant good first degree & work experience	1.5 yrs full-time	100	
Melbourne (Faculty of Architecture, Building & Planning)	MP	Relevant good first degree & work experience	1 yr full-time, 2 yrs part-time	100	
New Zealand					
Auckland (Business School)	MP	Relevant good first degree	2 yrs full-time, 4 yrs part-time	28 points	
Lincoln (Applied Management & Computing Division)	MPS	Relevant good first degree	1 yr full-time	1000 hrs	

Sources: Directory of Real Estate Programs, Urban Land Institute (2005) and RICS Prospectus of Surveying Education (2005), and university websites

Table 4.14: Topics offered in Masters Real Estate curricula in the USA by university

		University offering							**Total**
	Core subjects offered	**JH**	**NY**	**SD**	**PS**	**GS**	**TA**	**F**	
1	Advanced Finance and Managerial Decision Making	0	1	0	0	0	0	0	1
2	Accounting / Managerial Accounting for Developers and Investors	1	0	1	0	0	0	0	2
3	Capital Markets	1	0	0	0	0	0	0	1
4	Design Issues	1	0	0	0	0	0	0	1
5	Economics	0	0	1	0	0	0	0	1
6	GIS / Location Analysis	0	0	0	0	0	0	1	1
7	International Real Estate	0	1	0	1	0	0	0	2

8	Introduction to Real Estate	0	0	0	0	0	0	1	1
9	Land Use Controls	0	0	0	0	1	0	0	1
10	Micro Computer Applications	0	0	0	0	1	0	0	1
11	Management	0	0	1	0	0	0	0	1
12	Public Equity & Debt Markets	0	1	0	0	0	0	0	1
13	Principles of Real Estate	0	0	1	0	0	0	0	1
14	Planning	0	0	1	0	0	0	0	1
15	Quantitative Analysis	0	0	0	0	0	0	1	1
16	Real Estate Enterprise	1	0	0	0	0	0	0	1
17	Real Estate Construction Technology	1	0	0	0	0	0	0	1
18	Real Estate Finance / Primary Mortgage Markets & Institutions / Secondary Mortgage Markets & Institutions	1	1	1	1	1	1	1	7
19	Real Estate Law / Regulation of Real Estate / Legal Issues in Real Estate / Law of Real Estate Transactions	1	0	1	1	1	0	1	5
20	Real Estate Analysis	0	1	0	0	0	0	1	2
21	Real Estate Investment / Investment Property Analysis / Investment Analysis	0	1	1	1	1	1	1	6
22	Real Estate Valuation / Valuation & Analysis / Appraisal	0	1	1	1	1	0	0	4
23	Real Estate & Portfolio Management / Asset Management	0	1	0	1	0	0	0	2
24	Real Estate Market Analysis / Real Estate Market and Transaction Analysis / Market Analysis & Site Selection / Demand Analysis for a Specific Property & Location / Land Market Analysis	1	0	1	0	1	1	1	5
25	Real Estate Development / Analysis Techniques in Real Estate Development	1	1	0	0	1	1	1	5
26	Real Estate portfolios & Securities	0	0	0	0	0	0	1	1
27	Statistics	0	0	1	0	0	0	0	1
28	Urban Analysis	1	0	0	0	0	0	0	1
29	Urban Land Economics	0	0	0	0	1	0	0	1
Key: JH: Johns Hopkins University. NY: New York University. SD: University of San Diego. PS: Pennsylvania State University. GS: George State University. F: University of Florida TA: University of Texas at Arlington									

Table 4.15: Ranking of topics offered in Masters Real Estate curricula in the USA by university frequency

Rank	Core subjects offered	No. of institutions offering topic
1	Real Estate Finance / Primary Mortgage Markets & Institutions / Secondary Mortgage Markets & Institutions	7
2	Real Estate Investment / Investment Property Analysis / Investment Analysis	6
3	Real Estate Law / Regulation of Real Estate / Legal Issues in Real Estate / Law of Real Estate Transactions	5
	Real Estate Market Analysis / Real Estate Market & Transaction Analysis / Market Analysis & Site Selection / Demand Analysis for a Specific Property Location / Land Market Analysis	5
	Real Estate Development / Analysis Techniques in Real Estate Development	5

4	Real Estate Valuation / Valuation & Analysis / Appraisal	4
5	Real Estate Analysis	2
	Accounting / Managerial Accounting for Developers and Investors	2
	International Real Estate	2
	Real Estate & Portfolio Management / Asset Management	2
6	Advanced Finance and Managerial Decision Making	1
	Capital Markets	1
	Design Issues	1
	Economics	1
	GIS / Location Analysis	1
	Introduction to Real Estate	1
	Land Use Controls	1
	Micro Computer Applications	1
	Management	1
	Public Equity & Debt Markets	1
	Principles of Real Estate	1
	Planning	1
	Quantitative Analysis	1
	Real Estate Enterprise	1
	Real Estate Construction Technology	1
	Real Estate portfolios & Securities	1
	Statistics	1
	Urban Analysis	1
	Urban Land Economics	1

Table 4.16: Comparison of Masters Real Estate topics offered in South Africa and USA

	Core Masters Real Estate topics offered in USA	**Topics offered in South Africa**	**Comments**
1	Advanced Finance and Managerial Decision Making	0	
2	Accounting / Managerial Accounting for Developers& Investors	1	
3	Capital Markets	0	Subtopic in SA
4	Design Issues	0	Subtopic in SA
5	Economics	0	
6	GIS / Location Analysis	0	Subtopic in SA

7	International Real Estate	0	
8	Introduction to Real Estate	0	
9	Land Use Controls	0	Subtopic in SA
10	Micro Computer Applications	0	Subtopic or elective in SA
11	Management	0	
12	Public Equity & Debt Markets	0	
13	Principles of Real Estate	0	
14	Planning	0	
15	Quantitative Analysis	0	
16	Real Estate Enterprise	0	
17	Real Estate Construction Technology	0	Subtopic or elective in SA
18	Real Estate Finance / Primary Mortgage Markets & Institutions / Secondary Mortgage Markets & Institutions	1	
19	Real Estate Law / Regulation of Real Estate / Legal Issues in Real Estate / Law of Real Estate Transactions	1	
20	Real Estate Analysis	0	
21	Real Estate Investment / Investment Property Analysis / Investment Analysis	1	
22	Real Estate Valuation / Valuation & Analysis / Appraisal	1	
23	Real Estate & Portfolio Management / Asset Management	1	
24	Real Estate Market Analysis / Real Estate Market & Transaction Analysis / Market Analysis & Site Selection / Demand Analysis for a Specific Property & Location / Land Market Analysis	1	
25	Real Estate Development / Analysis Techniques in Real Estate Development	1	
26	Real Estate Portfolios & Securities	0	Subtopic in SA
27	Statistics	1	
28	Urban Analysis	0	
29	Urban Land Economics	1	
	Total common topics	10	

Table 4.17: Topics offered in Masters Real Estate curricula in the UK by university

		University offering							**Total**
	Core subjects offered	**UR**	**UU**	**UA**	**CE**	**K**	**LSB**	**WE**	
1	Business Management & Finance	0	1	0	0	0	0	0	1
2	Building Technology	0	0	1	0	0	0	0	1
3	Capital Project Analysis & Investment	1	0	0	0	0	0	0	1
4	Construction Project Management	0	1	0	0	0	0	0	1
5	Corporate Real Estate	0	0	1	0	0	0	0	1
6	Construction	0	0	0	1	0	1	0	2
7	Corporate Management	0	0	0	0	0	1	0	1
8	Corporate Strategy in Real Estate	0	0	0	0	1	0	0	1
9	European Real Estate Practice	0	0	0	0	1	0	0	1
10	Facilities Management	0	0	0	0	1	0	0	1
11	International Real Estate Markets / International	1	1	1	0	0	0	0	3

	Property / Global Real Estate Market Analysis								
12	Organisational Analysis & Change	0	0	0	0	0	0	1	1
13	Property Valuation / Valuation Principles / Advanced Valuation / Real Estate Appraisal & Valuation / Statutory Valuations	1	1	1	1	1	1	1	7
14	Property Management / Maintenance Management / Asset Management / Real Estate Portfolio & Risk Management / Corporate Asset Management	1	1	0	1	1	0	1	5
15	Property Finance / Real Estate Finance & Funding / Real Estate Corporate Finance & Funding / Finance for Managers	1	1	0	0	1	1	1	5
16	Property Development / Real Estate Development Appraisal	1	0	0	0	1	1	1	4
17	Property Law / Property Law & Institutions / Law for Property Professionals / Landlord & Tenant Law	1	1	1	1	1	1	1	7
18	Property Investment / Property Use & Investment / Property Investment Appraisal	1	0	1	1	1	1	1	6
19	Property Marketing / Marketing & Practice Development	0	0	0	1	0	1	0	2
20	Property Economics / Land Economics	1	0	1	0	0	1	1	4
21	Property Planning / Planning Practice	0	1	0	1	0	1	1	4
22	Property Research / Research Design Methods / Research / Research for Policy & Practice	0	1	1	0	1	1	1	5
23	Professional Practice	0	0	0	0	0	1	0	1
24	Real Estate Environment	1	0	0	0	0	0	0	1
25	Real Estate Portfolio Analysis	1	0	0	0	0	0	0	1
26	Real Estate Securitisation & Regulatory Environment	0	0	0	0	1	0	0	1
27	Regeneration	0	0	0	0	1	0	0	1
28	Strategic Management	0	0	0	1	0	0	0	1

Key: UR: University of Reading. UU: University of Ulster. UA: University of Aberdeen.
CE: University of England in Birmingham. K: University of Kingston.
LSB: University of London South Bank. WE: University of West England, Bristol.

Table 4.18: Ranking of topics offered in Masters Real Estate curricula in the UK by university frequency

Rank	Core subjects offered	No. of institutions offering topic
1	Property Valuation / Valuation Principles / Advanced Valuation / Real Estate Appraisal & Valuation / Statutory Valuations	7
	Property Law / Property Law & Institutions / Law for Property Professionals / Landlord & Tenant Law	7
2	Property Investment / Property Use & Investment / Property Investment Appraisal	6
3	Property Management / Maintenance Management / Asset Management / Real Estate Portfolio & Risk Management / Corporate Asset Management	5
	Property Finance / Real Estate Finance & Funding / Real Estate Corporate Finance & Funding / Finance for Managers	5
	Property Research / Research Design Methods / Research for Policy & Practice	5

4	Property Economics / Land Economics	4
	Property Planning / Planning Practice	4
	Property Development / Real Estate Development Appraisal	4
5	International Real Estate Markets / International Property / Global Real Estate Market Analysis	3
6	Construction	2
	Property Marketing / Marketing & Practice Development	2
7	Business Management & Finance	1
	Building Technology	1
	Capital Project Analysis & Investment	1
	Construction Project Management	1
	Corporate Real Estate	1
	Corporate Management	1
	Corporate Strategy in Real Estate	1
	European Real Estate Practice	1
	Facilities Management	1
	Organisational Analysis & Change	1
	Professional Practice	1
	Real Estate Environment	1
	Real Estate Portfolio Analysis	1
	Real Estate Securitisation & Regulatory Environment	1
	Regeneration	1
	Strategic Management	1

Table 4.19: Comparison of Masters Real Estate topics offered in South Africa and UK

	Core Masters Real Estate topics offered in UK	**Topics offered in South Africa**	**Comments**
1	Business Management & Finance	0	
2	Building Technology	0	Subtopic or elective in SA
3	Capital Project Analysis & Investment	0	Subtopic or elective in SA
4	Construction Project Management	0	Subtopic or elective in SA
5	Corporate Real Estate	0	Subtopic in SA
6	Construction	1	

7	Corporate Management	0	
8	Corporate Strategy in Real Estate	1	
9	European Real Estate Practice	0	
10	Facilities Management	1	
11	International Real Estate Markets / International Property / Global Real Estate Market Analysis	0	
12	Organisational Analysis & Change	0	
13	Property Valuation / Valuation Principles / Advanced Valuation / Real Estate Appraisal & Valuation / Statutory Valuations	1	
14	Property Management / Maintenance Management / Asset Management / Real Estate Portfolio & Risk Management / Corporate Asset Management	1	
15	Property Finance / Real Estate Finance & Funding / Real Estate Corporate Finance & Funding / Finance for Managers	1	
16	Property Development / Real Estate Development Appraisal	1	
17	Property Law / Property Law & Institutions / Law for Property Professionals / Landlord & Tenant Law	1	
18	Property Investment / Property Use & Investment / Property Investment Appraisal	1	
19	Property Marketing / Marketing & Practice Development	1	
20	Property Economics / Land Economics	1	
21	Property Planning / Planning Practice	1	
22	Property Research / Research Design Methods / Research / Research for Policy & Practice	1	
23	Professional Practice	0	Subtopic or elective in SA
24	Real Estate Environment	1	
25	Real Estate Portfolio Analysis	0	Subtopic in SA
26	Real Estate Securitisation & Regulatory Environment	0	Subtopic in SA
27	Regeneration	0	
28	Strategic Management	0	
	Total common topics	14	

Table 4.20: Topics offered in Masters Real Estate curricula in Belgium and Netherlands by university

		University offering		**Total**
	Core subjects offered	**Antwerp**	**Amsterdam**	
1	Development Process	0	1	1
2	Portfolio Analysis	0	1	1
3	Real Estate Contracts	1	0	1
4	Real Estate Economics	1	0	1
5	Real Estate Markets / Market Analysis	1	1	2
6	Real Estate Management / Real Estate Portfolio Management	1	1	2
7	Real Estate Technology	1	0	1
8	Real Estate Valuation	1	1	2

9	Real Estate Investment / Investment Analysis	1	1	2

Table 4.21: Ranking of topics offered in Masters Real Estate curricula in Belgium and Netherlands by university frequency

Rank	Core subjects offered	No. of institutions offering topic
1	Real Estate Markets / Market Analysis	2
	Real Estate Management / Real Estate Portfolio Management	2
	Real Estate Valuation	2
	Real Estate Investment / Investment Analysis	2
2	Development Process	1
	Portfolio Analysis	1
	Real Estate Contracts	1
	Real Estate Economics	1
	Real Estate Technology	1

Table 4.22: Comparison of Masters Real Estate topics offered in South Africa, Belgium, and Netherlands

	Core Masters Real Estate topics offered in Belgium and Netherlands	Topics offered in South Africa	Comments
1	Development Process	0	Subtopic in SA
2	Portfolio Analysis	0	
3	Real Estate Contracts	0	Subtopic in SA
4	Real Estate Economics	1	
5	Real Estate Markets / Market Analysis	1	
6	Real Estate Management / Real Estate Portfolio Management	1	
7	Real Estate Technology	0	
8	Real Estate Valuation	1	
9	Real Estate Investment / Investment Analysis	1	
	Total common topics	5	

Table 4.23: Topics offered in Masters Real Estate curricula in Singapore and Hong Kong by university

		University offering		Total
	Core subjects offered	Singapore	Hong Kong	
1	Capital Markets	0	1	1
2	Corporate Real Estate	1	0	1
3	Economics for Professionals	0	1	1
4	International Real Estate	1	0	1
5	Law for Real Estate & Construction Industry	0	1	1
6	Legal & Institutional Framework	1	0	1
7	Land Economics	0	1	1
8	Management Theory & Construction Projects	0	1	1
9	Real Estate Investment	1	1	2

10	Real Estate Portfolio Analysis	1	0	1
11	Real Estate Finance	0	1	1
12	Real Estate Economics	1	1	2
13	Real Estate Marketing & Negotiation	1	0	1
14	Real Estate Management	0	1	1
15	Real Estate Development	1	0	1
16	Planning	1	0	1
17	Valuation	1	0	1

Table 4.24: Ranking of topics offered in Masters Real Estate curricula in Singapore and Hong Kong by university frequency

Rank	Core subjects offered	No. of institutions offering topic
1	Real Estate Investment	2
	Real Estate Economics	2
2	Capital Markets	1
	Corporate Real Estate	1
	Economics for Professionals	1
	International Real Estate	1
	Law for Real Estate & Construction Industry	1
	Legal & Institutional Framework	1
	Land Economics	1
	Management Theory & Construction Projects	1
	Real Estate Portfolio Analysis	1
	Real Estate Finance	1
	Real Estate Marketing & Negotiation	1
	Real Estate Management	1
	Real Estate Development	1
	Planning	1
	Valuation	1

Table 4.25: Comparison of Masters Real Estate topics offered in South Africa, Singapore, and Hong Kong

	Core Masters Real Estate topics offered in Singapore and Hong Kong	Topics offered in South Africa	Comments
1	Capital Markets	0	Subtopic in SA
2	Corporate Real Estate	0	Subtopic in SA
3	Economics for Professionals	0	
4	International Real Estate	0	
5	Law for Real Estate & Construction Industry	1	
6	Legal & Institutional Framework	0	Subtopic in SA
7	Land Economics	0	
8	Management Theory & Construction Projects	0	Subtopic in SA
9	Real Estate Investment	1	
10	Real Estate Portfolio Analysis	0	Subtopic in SA
11	Real Estate Finance	1	
12	Real Estate Economics	1	
13	Real Estate Marketing & Negotiation	1	
14	Real Estate Management	1	

15	Real Estate Development	1	
16	Planning	0	
17	Valuation	1	
	Total common topics	8	

Table 4.26: Topics offered in Masters Real Estate curricula in the Pacific-Rim by university

		University offering				
	Core subjects offered	**CUT**	**UM**	**UA**	**LU**	**Total**
1	Building Economics	0	0	1	0	1
2	Building Services & Operations	0	1	0	0	1
3	Business Valuation	1	0	0	0	1
4	Construction & Building Costs	1	0	0	0	1
5	Corporate Real Estate	0	1	0	0	1
6	Facilities Management	0	1	1	0	2
7	Financial Management	0	0	0	1	1
8	Income Property Analysis	1	0	0	0	1
9	Land Law	1	0	0	0	1
10	Property Management / Asset Management / Property Asset Management	1	1	1	1	4
11	Property Economics	1	0	1	0	2
12	Property Finance	1	0	1	0	2
13	Property Development	1	1	1	1	4
14	Property Marketing / Property Market Analysis	1	0	1	1	3
15	Property Valuation / Property Valuation & Analysis / Valuation Methodology / Statutory Valuation / Valuation Practice	1	1	1	0	3
16	Property Investment / Property Investment & Portfolio Analysis	0	1	1	1	3
17	Property Securitisation	0	1	0	0	1
18	Property Planning	1	0	0	0	1
19	Plant & Machinery Valuation	0	0	1	0	1
Key: CUT: Curtin University of Technology (Australia). UM: University of Melbourne (Australia). UA: University of Auckland (New Zealand). LU: Lincoln University (New Zealand)						

Table 4.27: Ranking of topics offered in Masters Real Estate curricula in the Pacific-Rim by university frequency

Rank	**Core subjects offered**	**No. of institutions offering topic**
1	Property Management / Asset Management / Property Asset Management	4
	Property Development	4
2	Property Marketing / Property Market Analysis	3
	Property Valuation / Property Valuation & Analysis / Valuation Methodology / Statutory Valuation / Valuation Practice	3
	Property Investment / Property Investment & Portfolio Analysis	3
3	Facilities Management	2
	Property Economics	2
	Property Finance	2
4	Building Economics	1
	Building Services & Operations	1
	Business Valuation	1
	Construction & Building Costs	1
	Corporate Real Estate	1
	Financial Management	1

	Income Property Analysis	1
	Land Law	1
	Property Securitisation	1
	Property Planning	1
	Plant & Machinery Valuation	1

Table 4.28: Comparison of Masters Real Estate topics offered in South Africa and the Pacific-Rim

	Core Masters Real Estate topics offered in the Pacific-Rim	**Topics offered in South Africa**	**Comments**
1	Building Economics	1	
2	Building Services & Operations	0	Subtopic in SA
3	Business Valuation	0	
4	Construction & Building Costs	1	
5	Corporate Real Estate	0	Subtopic in SA
6	Facilities Management	1	
7	Financial Management	1	
8	Income Property Analysis	0	Subtopic in SA
9	Land Law	0	Subtopic in SA
10	Property Management / Asset Management / Property Asset Management	1	
11	Property Economics	1	
12	Property Finance	1	
13	Property Development	1	
14	Property Marketing / Property Market Analysis	1	
15	Property Valuation / Property Valuation & Analysis / Valuation Methodology / Statutory Valuation / Valuation Practice	1	
16	Property Investment / Property Investment & Portfolio Analysis	1	
17	Property Securitisation	0	Subtopic in SA
18	Property Planning	1	
19	Plant & Machinery Valuation	0	
	Total common topics	12	

4.4 Conclusions of the curriculum survey

In this chapter Masters Real Estate curricula offered in South Africa and other parts of the world have thoroughly been compared and assessed. Based on the findings of the survey the following main conclusions are drawn:

a. Number of Masters Real Estate curricula

This curriculum survey has shown that in contrast to the USA and UK, relatively few formal postgraduate real estate programmes were offered in South Africa. Only five Masters Real Estate curricula were identified in South Africa as compared to fourteen which were selected in the USA and UK. However, it was observed in the survey that South Africa offered more

Masters Real Estate programmes than other African countries. Only three comprehensive real estate programmes offered by coursework were selected in other African countries. The main contributing factor to differences in numbers of real estate curricula offered in different countries could be differences in levels of economic development and sizes of real estate industries. Countries with smaller real estate industries and who were less developed economically tended to have fewer real estate programmes.

b. Names of real estate curricula and topics

In the survey, it was observed that in South Africa and other parts of the world different names are used to identify real estate curricula and topics. Some of the factors considered by educators and universities in the selection of names for curricula and topics were: educational needs of industry and students; nature of course content (curriculum emphasis); marketability of the courses; requirements of professional bodies; requirements of local professionals; local community and society concerns; preferences of academic staff and university administrations; and historical educational influence. The term "real estate" was more common name for Master's degrees in the USA. In UK and other British Commonwealth countries including South Africa, "property" was more common. However, it was noted in the survey that in general the name "real estate" was becoming more prevalent in education even in UK. Additionally, in USA the term "program" is used to denote a complete degree and "course" is used to denote a specific topic within that degree while in UK (and also in South Africa), "course" typically refers to the whole degree and the subdivisions of that course might be "subjects", "units" or "modules" (Baum and Lizieri, 2002).

c. Real estate education approaches

Based on curricula analysis and comparison done, the observation made by Schulte and Schulte-Daxboek (2003) that real estate education in the world was following different approaches was confirmed. By comparison, postgraduate real estate programmes in South Africa were following the "interdisciplinary" and "surveying" approaches to the study of real estate which was practised in Continental Europe and UK (and other countries of the British Commonwealth) in contrast to USA where "investment and finance" approach dominated. Similar to most programmes offered in UK and in other countries, Masters Real Estate programmes offered by Universities of Cape Town and Pretoria in South Africa were

accredited by the RICS confirming meeting of the requirements of the surveying approach to property education by these programmes. These similarities have proven that despite disagreements in course offerings, Masters Real Estate curricula in South Africa were comparable both locally and internationally.

d. Location of real estate courses

In the study it was observed that Masters Real Estate curricula in South Africa like most curricula in other African countries, UK, Australia, New Zealand and other British Commonwealth countries were housed outside business schools and focused on the built environment, a broader programme which included both physical and financial concepts. In the study it was confirmed that in the USA curricula were primarily housed in business schools where real estate courses were taught together with "finance and investment" courses.

e. Credit hours

Credit hours for the different Masters Real Estate programmes were investigated. Credit hours indicated the total hours for a degree to be completed by a student. In the survey it was discovered that different universities in the world were using different credit allocation systems, which made curricula analysis and comparisons difficult. The differences in credit hours allocated to the courses reflected differences in university administration systems and real estate industry needs.

f. Real estate topics

Curricula analysis revealed that postgraduate real estate curricula in South Africa were diverse, even though they possessed common elements in their course offerings. When compared with real estate curricula in other African countries and other continents, it was noted that despite the disagreements on real estate topics, curricula in South Africa possessed a large number of common elements offered in curricula in other parts of the world. The common course offerings noted were: property valuation, property management, property development, property economics, property finance, property investment, property marketing, and property law. Further scrutiny of the curricula showed that similar to curricula

in other African countries and continents, curriculum designers in South Africa considered four main components of a real estate curriculum: legal and public policy; financial; physical and development; and market subjects (Black *et al*., 1996).

As part of the research cycle for this investigation, curriculum survey assisted in identifying relevant and common Masters Real Estate topics offered in South Africa and other parts of the world which were incorporated in the questionnaire for property industry survey in South Africa (see Part 2 of the questionnaire: Appendix A). These topics are: Building Economics, Building Technology, Construction Contract Law, Corporate Strategy, Environmental Economics and Management, Financial Management, Information Technology, International Real Estate, Property Development, Property Economics, Property Finance, Property Investment, Property Management / Facilities Management, Property Marketing, Property Law, Property Valuation, Property Tax, and Research. A noteworthy observation in the curricula analysis was that International Real Estate as a topic did not appear in any curriculum in South Africa. However, due to the growing importance of real estate education and transactions in the global context the topic was incorporated in the questionnaire for assessment to determine what real estate professionals in South Africa thought about the topic.

To test if real estate topics identified in this curriculum survey were important to real estate professionals in South Africa, it was appropriate to proceed with the property industry survey. This was achieved in the next Chapter.

CHAPTER 5

PROPERTY INDUSTRY SURVEY

5.1 Introduction

The purpose of the survey was to collect comments from real estate professionals in the industry on Masters Real Estate topics offered in South Africa and other parts of the world which would support the process of assessing and improving Masters Real Estate curricula in South Africa. Justification for the survey was based on the fact that practitioners in the industry had an important role to play in the process of real estate curriculum development and improvement (Galuppo and Worzala, 2004). In addition, postgraduate real estate curricula in South Africa were developed without conducting a more scientific property industry survey to determine real estate curriculum requirements (Cloete, 2002). To ascertain whether the curricula were fulfilling the objective they were intended to meet, the property industry survey was relevant.

In this chapter the survey approach is highlighted. Data collected from the property industry survey is analysed. The tabulated results from the questionnaire are provided and described. The two main hypotheses for the study are also tested using the data collected to determine the reliability of the findings.

5.2 Survey approach

To collect information from the property industry on Masters Real Estate curricula, a questionnaire was administered. Through the questionnaire real estate professionals were asked to: (a) rank common Masters Real Estate topics offered in South Africa and other parts of the world, which were identified through the curriculum survey in their order of importance using the Lickert scale; (b) advise approximate time as a percentage to be spent on a subject or topic during the course; and (c) finally, using two open-ended questions to suggest a maximum of five topics and other comments to be considered in a Masters Real Estate programme (see Appendix A: The questionnaire). The questionnaire was sent to 777 real estate professionals. 748 of these were delegates who attended the 38th SAPOA International Convention and Property Exhibition held at the International Convention Centre

in Durban from 17 to 19 May 2006; and 29 were first and second year students who enrolled for the Master of Science in Real Estate Degree for year 2006 at the University of Pretoria in South Africa. Out of 777questionnaires which were sent out, a total of 250 questionnaires were returned, representing 32.18% response rate. Thereafter, data was captured from the questionnaires into a computer and analysed in readiness for the interpretation of the results of the study. Five questionnaires were returned by the post because the postal addresses of the respondents had changed, and two questionnaires were received after completing data analysis, as a result they were not included in the analysis.

The SAPOA members and delegates were used in the property industry survey because SAPOA was the main representative body and official voice of leading property owners and investors in South Africa from the private sector for the property industry. SAPOA members also comprised of real estate professionals from different real estate fields and geographical areas in South Africa. This was of great benefit to the survey because it minimised biases. MSc Real Estate students studying at the University of Pretoria were included in the property industry survey because most of them were working and knew what was expected at the workplace.

5.3 General survey procedure

5.3.1 Response data

The response data from the property industry survey was classified into the following five main categories:

a. Details of respondent

The real estate professionals were assisted to answer this question by ticking pre-arranged questions in connection with their qualifications, current employers, current property involvements, years of experience, and geographical locations they were based.

b. Assessment of Masters Real Estate topics according to their importance

To assist the real estate professionals assess and rank the topics in an order of importance, the Lickert Scale was used where 1 was equivalent to Not Important, 2 was equivalent to Important, and 3 was equivalent to Very Important.

c. Time to be spent on a Masters Real Estate topic during the course

To answer this question the real estate professionals were asked to indicate approximate percentage of time to be spent on each subject during the course. When the percentages of time allocated to all the subjects in the course were added, the total was expected to be 100 percent.

d. Topics to be included in a Masters Real Estate syllabus

This was an open-ended question where real estate professionals were asked to list a maximum of five topics they wished to be included in a Masters Real Estate curriculum.

e. Other comments to be considered in a Masters Real Estate syllabus

This too was an open-ended question where real estate professionals were asked to give a maximum of five comments to be considered in a Masters Real Estate curriculum.

5.3.2 Treatment of the data

a. Types of questions posited to data

Two types of questions were posited in the survey to guide data treatment. The first type of question was given to all real estate professionals to determine the overall response to a series of questions. The second type of question was given to different categories of real estate professionals to determine differences in responses to the questions.

When responses from different populations were ranked and compared, all data followed non-normal distribution. In this case the data was either positively or negatively skewed and did not conform to a normal distribution curve (Leedy, 1997). For this reason the standard parametric tests were inappropriate. Therefore, the necessary tests were performed using non-parametric techniques where distribution-free statistical tests were appropriate. The tests employed were used to compare ranked data from different populations to determine if the population locations differed significantly at 5% level of significance. To determine the appropriate test procedures when comparing the different populations, the following sample values were considered: the number of populations to be compared, whether the observations were independent or dependent (paired), and whether the data was ranked or qualitative but not normal. To compare the data, populations were grouped based on category of years of

experience (0 to 5, 6 to 15, and more than 15 years), and geographical locations of real estate professionals.

b. Testing for comparisons between different populations

To establish if there were significant differences between different populations, different appropriate tests were conducted, for example Friedman test was used to compare responses from three categories of years of experience of real estate professionals (0 to 5, 6 to 15, and more than 15 years).

5.3.3 Description of statistics of survey respondents

Tables 5.1, 5.2, 5.3, 5.4 and 5.5 show the description of statistics of respondents to the property industry survey. By qualification Table 5.1 shows that 7.6% of the respondents possessed Matric, 30.8% possessed Bachelor's degrees, 26.4% possessed Honour's degrees, 28% possessed Master's degrees, and 1.2% possessed Doctorate degrees. When the figures of respondents possessing a Bachelor's qualification is added to figures of holders of Honour's, Master's and Doctorate degrees, the total is 216 out of 250 respondents, representing 86.4% of all the respondents. This indicated that the majority of respondents in the survey had formal university education, which implied that the quality of data collected was reliable in terms of comments on a university real estate curriculum.

In terms of current employer/s, Table 5.2 shows by frequency that most of the respondents (63) worked for the banks and other financial institutions, representing 19.1%. This could suggest that the major providers of real estate related jobs to real estate professionals in South Africa during the time the survey was conducted were banks and other financial institutions. By comparing public, private and other sectors of employment, 82.4% of the respondents were employed in the private sector, 9.4% were employed in the public sector, and 4.2 % were employed by the universities and other training institutions. The results show that most of the respondents came from the private sector.

When the survey respondents were analysed based on current property involvement/s, it is noted in Table 5.3 that property development was the sector with most respondents (19.8%), followed by property / facilities management (17.8%). This could mean that at the time of

the survey most of the real estate professionals in South Africa were involved with property development as the main real estate activity.

Table 5.1: Description of statistics of survey respondents by qualification

Qualification of respondent	Frequency	Percentage (%)
Matric	19	7.6
Bachelor's degree	77	30.8
Honour's degree	66	26.4
Master's degree	70	28
Doctorate degree	3	1.2
Other	15	6
Total	250	100

Table 5.2: Description of statistics of survey respondents by current employer/s

Current employer	Frequency	Percentage (%)
University / trainer	14	4.2
Government:		
. Central	16	4.8
. Provincial	2	0.6
. Local	5	1.5
Parastatal	8	2.4
Private:		
. Bank / Financial Institution	63	19.1
. Listed Property Vehicle	15	4.5
. Property Developer	48	14.5
. Property / Facilities Manager	37	11.2
. Property Valuer	18	5.5
. Property Broker / Marketer	27	8.2
. Property Investor	31	9.4
. Construction Company	7	2.1
. Consultants e.g. QS, Eng.,etc	26	7.9
Other	13	3.9
Total	330	100

Table 5.3: Description of statistics of survey respondents by current property involvement/s

Current property industry involvement	Frequency	Percentage (%)
Academic / trainer	22	5.5
Property Developer	80	19.8
Property Valuer	37	9.2
Property / Facilities Manager	72	17.8

Property Investor	48	11.9
Property Broker / Marketer	35	8.7
Property Finance	55	13.6
Property Economist	6	1.5
Building Contractor	11	2.7
Other	38	9.4
Total	404	100

Table 5.4: Description of statistics of survey respondents by category of years of experience

Category of years of experience	Frequency	Percentage (%)
0 to 5 years	59	23.6
6 to 15 years	103	41.2
16 to 42 years	88	35.2
Total	250	100

Table 5.5: Description of statistics of survey respondents by geographical location

Geographic location	Frequency	Percentage (%)
Gauteng	138	55.2
Northern Cape	1	0.4
KwaZulu-Natal	27	10.8
Eastern Cape	5	2
Mpumalanga	3	1.2
Western Cape	27	10.8
Free State	2	0.8
National	33	13.2
International	14	5.6
Total	250	100

Table 5.4 shows categories of years of experience in real estate work of the respondents. Twenty three percent were recent graduates with 0 to 5 years of experience. Real estate curriculum comments from this category were based on recent course content and teaching methods. Respondents from category of 6 to 15 years work experience were in majority representing 41.2% while those from 16 years and above were 35.2%. The last two categories were considered more experienced and were employers or mentors of the recent graduates. Therefore, the comments from these categories included weaknesses observed in recent graduates who joined the real estate industry. The participation of real estate professionals in the survey from the three different categories of years of experience was advantageous because it further enriched the quality of data by collecting views from professionals with different practice perceptions based on years of experience.

By geographical location, Table 5.5 shows that the majority of the respondents were from Gauteng (55.2%), which is the most developed province economically in South Africa. This could imply that most real estate professionals in South Africa were employed in Gauteng. In general, the results show that geographically all provinces in South Africa were represented by respondents in the survey. Table 5.5 also shows that 5.6% of the respondents in the survey operated internationally, further justifying the claim that globalisation of real estate business was growing and gaining importance (Roulac, 2002; and Schulte, 2002). The participation of respondents from different geographical areas was beneficial for the study as it was considered a reliable indication of impressions received from all geographical areas of the real estate industry in South Africa.

5.3.4 Testing the hypotheses

Hypotheses of the study tested by the property industry survey through the questionnaire and survey results are:

Hypothesis 1:
Topics included in the existing Masters Real Estate curricula in South Africa are important for the real estate industry in South Africa.

Hypothesis 2:
New challenges and needs had emerged in the real estate industry in South Africa, which are inadequately being addressed by topics included in the existing Masters Real Estate curricula in South Africa.

5.4 Results and analysis

5.4.1 Testing hypothesis 1: Topics included in the existing Masters Real Estate curricula in South Africa are important for the real estate industry in South Africa.

5.4.1.1 Overall response on importance of Masters Real Estate topics by all respondents

To establish the overall response on importance of topics all real estate professionals in the survey were asked to rate the topics using the Lickert scale on a three point rating system as follows: 1 for Not Important, 2 for Important and 3 for Very Important. The respondents rated the topics based on their importance in the real estate industry. Table 5.6 shows the overall rating of the topics by the real estate professionals using the mean. The highest mean is 2.77 for Property Finance and the lowest mean is 1.88 for Information Technology which is almost 2. Based on this overall rating, it is observed that real estate professionals considered all eighteen topics included in the existing Masters Real Estate curriculum to be important for the real estate industry in South Africa. No topic scored 3 and none too scored 1.

Table 5.6: Ranking of Masters Real Estate topics by real estate professionals based on importance

Topic	Rank	Mean	Standard deviation
Property Finance	1	2.76707	0.46006
Property Investment	2	2.67470	0.53374
Property Economics	3	2.66265	0.52233
Property Development	4	2.64659	0.54956
Financial Management	5	2.56225	0.60670
Property Valuation	6	2.51004	0.60317
Property Law	7	2.47791	0.60950
Building Economics	8	2.37349	0.69056
Property Management / Facilities Management	9	2.31727	0.65972
Property Tax	10	2.27711	0.65340
Construction Contract Law	11	2.16867	0.73757
Property Marketing	12	2.16064	0.67074
Research	13	2.10843	0.69582
Environmental Economics and Management	14	2.00803	0.63495
Building Technology	15	1.94378	0.71056
Corporate Strategy	16	1.91968	0.72511
International Real Estate	17	1.91566	0.72743
Information Technology	18	1.88353	0.72296

5.4.1.2 Ranking of Masters Real Estate topics by all respondents

Table 5.6 shows ranking of the eighteen topics in the order of their importance by all real estate professionals by descending mean. In terms of topic importance, the respondents ranked Property Finance as number one with a mean of 2.77, Property Investment was ranked second with a mean of 2.67, Property Economics was ranked third with a mean of 2.66, and Property Development was ranked fourth with a mean of 2.65. Ranked at the bottom were the following topics: International Real Estate with a mean of 1.92 and Information Technology with a mean of 1.88. The results show that real estate practitioners regarded Property Finance

as the most important topic and Information Technology as least important topic in Masters Real Estate curriculum.

5.4.1.3 Rating of the importance of Masters Real Estate topics based on years of experience

Table 5.7 shows rating of the importance of Masters Real Estate topics by category of years of experience using the mode where 1 represents 'Not Important', 2 represents 'Important', and 3 represents 'Very Important'. Results in this table reveal two interesting issues. Firstly, professionals with 0 to 5 years work experience have indicated that Information Technology as a topic is not important in Masters Real Estate curriculum by rating it 1. The reason for this rating could be that real estate professionals in this category are generally younger and started to attend school in an era when Information Technology is being emphasised and taught even at lower levels of education. Secondly, professionals with 16 to 42 years work experience have rated International Real Estate as not important topic in the curriculum by assigning it 1. The reason for this rating could be that real estate professionals in this work experience category are generally older and studied as well as started practising in an era when influences of globalisation were not as critical on business in general and specifically on the real estate business as it is today.

Chi-Square tests were conducted on the three categories of years of experience (0 to 5 years, 6 to 15 years, and 16 to 42 years) for each topic to compare if there were relationships between importance of topics and years of experience. The test was conducted at 5% level of significance. Table 5.7 shows that only four topics out of eighteen topics (22.2%) had significant relationships between importance of topic and years of experience. These topics were: Construction Contract Law, International Real Estate, Property Law, and Property Tax. For the other topics there were no significant relationships between importance of topic and years of experience. This result indicated that despite the differences in years of experience, there were no serious differences among real estate practitioners on the impression of importance of topics.

Table 5.7: Rating of importance of Masters Real Estate topics by category of years of experience

	Mode				
Topic	**0-5 yrs**	**6-15 yrs**	**16-42 yrs**	**P-Value**	**Significance level**
Building Economics	3	3	3	0.3265	nsl
Building Technology	2	2	2	0.8626	nsl
Construction Contract Law	3	2	2	0.0164	sl
Corporate Strategy	2	2	2	0.2744	nsl
Environmental Economics & Management	2	2	2	0.4262	nsl
Financial Management	3	3	3	0.7925	nsl
Information Technology	1	2	2	0.1138	nsl
International Real Estate	2	2	1	0.0013	sl
Property Development	3	3	3	0.7701	nsl
Property Economics	3	3	3	0.1860	nsl
Property Finance	3	3	3	0.9668	nsl
Property Investment	3	3	3	0.3378	nsl
Property Management / Facilities Management	3	3	2	0.2208	nsl
Property Marketing	2	2	2	0.4031	nsl
Property Law	3	3	2	0.0141	sl
Property Valuation	3	3	3	0.1856	nsl
Property Tax	3	2	2	0.0016	sl
Research	2	2	2	0.1994	nsl
Key P-Value: Probability of significant difference nsl: No significant relationship sl: significant relationship					

5.4.1.4 Rating of importance of Masters Real Estate topics based on geographical location

In order to conduct a meaningful test to test for relationship between importance of topics and geographical location, the respondents were divided into five geographical locations. These regions are described as Cape, Transvaal, KwaZulu-Natal and Free State, National, and International. Cape region combined respondents from Northern Cape, Eastern Cape and Western Cape Provinces. Respondents from Gauteng, Limpopo, North West, and Mpumalanga Provinces were grouped together to form Transvaal region. The third geographical location combined respondents from KwaZulu-Natal and Free State. The fourth geographical location was National. This location included all respondents who operated in more than one of the four geographical locations. The last geographical location was International and included all respondents who also operated outside South Africa.

Table 5.8 shows rating of the importance of Masters Real Estate topics by geographical location using the mode where 1 represents ‘Not Important’, 2 represents ‘Important’, and 3 represents ‘Very Important’. Chi-Square tests were conducted on the five geographical

locations (Cape, Transvaal, KwaZulu-Natal and Free State, National, and International) for each topic to test if there were relationships between importance of topics and geographical location. The test was conducted at 5% level of significance. Table 5.8 shows that only two topics out of eighteen topics (11.1%) had significant relationships between importance of topic and geographical location. These two topics are: Construction Contract Law and International Real Estate. For the other topics there were no significant relationships between importance of topic and geographical location. This result showed that despite the differences of geographical locations, there were no serious differences among real estate practitioners on the impression of importance of topics.

Table 5.8: Rating of the importance of Masters Real Estate topics by geographical location

	Mode						
Topic	**C**	**T**	**KN + FS**	**N**	**I**	**P-Value**	**Significance level**
Building Economics	3	3	2	2	3	0.7018	nsl
Building Technology	1	2	2	1	2	0.2679	nsl
Construction Contract Law	2	2	1	2	2	0.0372	sl
Corporate Strategy	1	2	2	1	2	0.7247	nsl
Environmental Economics & Management	2	2	2	2	2	0.9082	nsl
Financial Management	3	3	3	3	3	0.9343	nsl
Information Technology	2	2	1	1	1	0.7427	nsl
International Real Estate	1	2	2	1	2	0.0150	sl
Property Development	3	3	3	3	3	0.7957	nsl
Property Economics	3	3	3	3	3	0.6179	nsl
Property Finance	3	3	3	3	3	0.9029	nsl
Property Investment	3	3	3	3	3	0.7334	nsl
Property Management / Facilities Management	3	2	3	2	3	0.3606	nsl
Property Marketing	2	2	2	2	3	0.4041	nsl
Property Law	2	3	3	3	3	0.6117	nsl
Property Valuation	3	3	3	3	3	0.6300	nsl
Property Tax	2	2	2	2	2	0.7009	nsl
Research	2	2	2	2	3	0.1191	nsl

Key: C = Cape. T = Transvaal. KN = KwaZulu-Natal. FS = Free State. N = National. I = International
P-Value = Probability of significant difference
Nsl = No significant relationship
Sl = significant relationship

5.4.1.5 Overall response on approximate percentages of time to be spent on Masters Real Estate topics by all respondents

All respondents were asked to indicate approximate percentages of time to be spent on each of the eighteen topics during the course. After allocating the percentages of time, the total for the eighteen topics was supposed to be 100%. Table 5.9 contains percentages of time the real estate professionals allocated to the topics. The results show that no topic was given zero

percent of time. By allocating percentages of time to all the topics, real estate professionals indicated that they agreed that all eighteen topics in the curriculum were important and should be allocated time during the course.

5.4.1.6 Ranking of approximate percentages of time allocated to Masters Real Estate topics by all respondents

Table 5.9 shows the ranking of the percentages of time to be spent on each of the eighteen topics in a Masters Real Estate syllabus in descending order as proposed by the real estate professionals. Property Finance was given the highest percentage of time (8.46%) during the course. Ranked second was Property Development with 8.31%, third was Property Investment with 7.92% and fourth was Property Economics with 7.30%. Ranked at the bottom was Information Technology with 3.58% and Corporate Strategy with 3.43%. Based on this ranking, the perception of real estate practitioners was that more time should be assigned to Property Finance and least time to Corporate Strategy during the course.

Table 5.9: Ranking of approximate percentages of time allocated to Masters Real Estate topics by real estate professionals

Topic	Rank	Percentage of time (%)	Standard deviation
Property Finance	1	8.4680	4.2192
Property Development	2	8.3144	4.2252
Property Investment	3	7.9276	4.6663
Property Economics	4	7.2975	3.6711
Property Valuation	5	7.1635	4.8728
Property Management / Facilities Management	6	6.7068	5.2116
Financial Management	7	6.4143	3.5422
Property Law	8	6.1275	2.9267
Building Economics	9	5.6102	5.8948
Research	10	5.0544	4.8001
Property Marketing	11	4.7717	2.7184
Construction Contract Law	12	4.4233	2.4861

Property Tax	13	4.3851	2.4811
Building Technology	14	4.0238	3.6068
Environmental Economics and Management	15	3.8748	2.3415
International Real Estate	16	3.7612	2.4512
Information Technology	17	3.5823	2.2393
Corporate Strategy	18	3.4368	2.4269

5.4.1.7 Rating of the approximate percentages of time allocated to Masters Real Estate topics based on years of experience

Table 5.10 shows the rating of the approximate percentages of time allocated to Masters Real Estate topics by category of years of experience. Kruskal-Wallis test was conducted to determine if there were any significant relationships between categories of years of experience and approximate times to be spent on the topics at 5% level of significance. The results of the test were tabulated in Table 5.10. Property Tax was the only topic out of the eighteen topics (5.6%) which exhibited a significant relationship between years of experience and time assigned to be spent on a topic during the course. This result indicated that the respondents generally agreed on approximate times to be spent on Masters Real Estate topics as shown in Table 5.9 despite the differences in years of experience.

Table 5.10: Rating of approximate percentages of time allocated to Masters Real Estate topics by category of years of experience

	Percentage of time (%)				
Topic	**0-5 yrs**	**6-15 yrs**	**16-42 yrs**	**P-Value**	**Significance level**
Building Economics	4.6056	6.0811	5.6102	0.1102	nsl
Building Technology	3.8125	3.7149	4.4819	0.2719	nsl
Construction Contract Law	4.5260	4.6749	4.0729	0.3799	nsl
Corporate Strategy	3.3138	3.2834	3.6747	0.1916	nsl
Environmental Economics & Management	3.9056	3.8074	3.9337	0.7118	nsl
Financial Management	6.7074	6.7897	5.8096	0.5493	nsl
Information Technology	3.6278	3.3413	3.8247	0.2738	nsl
International Real Estate	3.8424	4.0558	3.3744	0.3999	nsl
Property Development	8.3750	8.7319	7.7916	0.5782	nsl
Property Economics	6.9000	7.4721	7.3090	0.6656	nsl
Property Finance	9.1354	8.4959	8.0494	0.9606	nsl
Property Investment	8.5833	7.8392	7.6518	0.9688	nsl
Property Management / Facilities Management	7.2083	6.2288	6.9753	0.4091	nsl
Property Marketing	4.9891	4.6228	4.8235	0.6512	nsl
Property Law	6.8333	5.8618	6.0554	0.1645	nsl
Property Valuation	7.6020	6.7968	7.3331	0.5221	nsl
Property Tax	5.0638	4.4124	3.9693	0.0355	sl

Research	5.5104	4.7631	5.1313	0.3007	nsl
Key P-Value: Probability of significant difference nsl: No significant relationship sgl: significant relationship					

5.4.1.8 Rating of the approximate time to be spent on Masters Real Estate topics based on geographic location

Rating of the approximate percentages of time allocated to Masters Real Estate topics by geographical location is shown in Table 5.11. Kruskal-Wallis test was conducted to determine if there were any significant relationships between geographical location and approximate times to be spent on the topics at 5% level of significance. Table 5.11 contains the results of the test. Property Finance and International Real Estate were two topics out of the eighteen topics (11.1%) which exhibited significant relationships between geographical location and time to be spent on a topic during the course. Results of the test proved that the respondents were generally in agreement on approximate times to be spent on Masters Real Estate topics as shown in Table 5.9 despite the differences in geographical location.

Table 5.11: Rating of approximate percentages of time allocated to Masters Real Estate topics by geographical location

	Percentage of time (%)						
Topic	**C**	**T**	**K+ F**	**N**	**I**	**P-Value**	**Sig. lvl**
Building Economics	5.9688	5.8591	5.5920	4.3620	5.1539	0.5635	nsl
Building Technology	4.7219	3.7751	4.0920	3.9483	4.8182	0.3803	nsl
Construction Contract Law	3.8419	4.6066	4.4365	4.1724	4.5385	0.6587	nsl
Corporate Strategy	3.1645	3.4654	2.8920	3.6964	4.4546	0.6539	nsl
Environmental Economics & Management	3.5516	3.9108	4.1320	3.6785	4.2308	0.8912	nsl
Financial Management	6.0969	6.6315	6.0865	6.7069	5.0769	0.2336	nsl
Information Technology	3.0677	3.7359	3.5313	2.8393	5.0385	0.1266	nsl
International Real Estate	3.4871	3.9238	3.7604	2.9655	4.6154	0.0242	sl
Property Development	8.1750	8.1218	9.3846	8.4655	8.0769	0.9214	nsl
Property Economics	7.2969	7.5071	7.4220	6.5345	6.7308	0.6499	nsl
Property Finance	8.3438	8.3233	8.6400	9.9483	6.5769	0.0374	sl
Property Investment	7.9688	7.7946	7.3600	8.7241	8.4615	0.1766	nsl
Property Management / Facilities Management	6.7063	6.0784	8.7692	7.2586	7.5385	0.3525	nsl
Property Marketing	5.3438	4.4971	5.2800	5.2241	4.0385	0.1740	nsl
Property Law	6.0469	6.2198	6.6600	6.0517	4.5769	0.1606	nsl
Property Valuation	7.75	7.2278	5.8481	7.2759	7.4615	0.1809	nsl
Property Tax	4.4065	4.5499	3.5620	4.3621	4.3462	0.5553	nsl
Research	4.7344	5.3052	5.4620	3.7931	5.3846	0.4875	nsl
Key: C = Cape. T = Transvaal. K = KwaZulu-Natal. F = Free State. N = National. I = International. P-Value = Probability of significant difference. Sig. lvl = Significance level Nsl = No significant relationship. Sl = significant relationship							

5.4.1.9 Conclusion regarding hypothesis 1

Topics included in the existing Masters Real Estate curricula in South Africa and other parts of the world were important for the real estate industry in South Africa. The hypothesis was supported by the data from importance of topics and percentages of time allocated to topics in the curriculum given by real estate practitioners.

5.4.2 Testing hypothesis 2: New challenges and needs had emerged in the real estate industry in South Africa, which are inadequately being addressed by topics included in the existing Masters Real Estate curricula in South Africa.

In order to determine if new challenges and needs had emerged in the real estate industry in South Africa which were inadequately being addressed by the existing Masters Real Estate curricula the respondents were asked two open-ended questions (see Part 3 of the Questionnaire: Appendix A). First question asked the respondents to list a maximum of five other topics to be included in the curriculum which they considered important for the real estate industry. Second question asked the respondents to give a maximum of five any other comments to be considered in the curriculum. The first question was aimed at obtaining real estate topics while the second question was aimed at getting other comments in general to be considered in the existing Masters Real Estate curricula in order to make them deal with new challenges and needs the industry was facing. The respondents were restricted to give only five answers to each question to assist them list only important answers. The two open-ended questions were still recommended while realising that respondents' answers would be difficult to summarise and that an attempt to do so would create bias in data interpretation. The recommendation was based on the fact that the open-ended questions offered a unique opportunity to real estate professionals to express themselves by giving topics and comments they thought should be considered in the curriculum to address new challenges and needs that had emerged in the industry.

5.4.2.1 Overall response on any other topics to be included in a Masters Real Estate curriculum by all real estate professionals

Appendix E contains a list of other topics the respondents suggested should be included in a Masters Real Estate curriculum in ranking order by frequency. In total 129 topics were suggested. The phrasing of the suggested topics as shown in Appendix E was exactly the same as respondents' statements. In some cases where there were similarities between the proposed topics, they were grouped together.

When the responses were analysed, it was noted that real estate professionals had a diverse view of topics which they wanted to be included in a Masters Real Estate curriculum in order to address new challenges and needs in the industry. Several topics were suggested ranging from topics expected in a real estate curriculum to topics which are traditionally viewed as not part of the real estate discipline. Examples of topics requested which are not part of real estate include Move management, Banking practice, and Supply chain management (see Appendix E). This result agrees with the observations made by Roulac (2002) and Black and Rabianski (2003) who noted that the challenge today was to determine which topics belonged to real estate as there appears to be no clear cut consensus on the boundary lines of the discipline.

In terms of desired topic ranking, Appendix E shows that the group comprising of the following related topics: 'Town planning / urban management / urban design and planning / urban studies / principles of urban planning / rezoning' had the highest responses (42), representing 10.61%. Second in the rank was Project management (24 responses), third was Negotiation skills (18 responses), and fourth was Corporate real estate management / institutional property asset management (13 responses). The suggestion of other topics in the survey by real estate professionals indicated that there were challenges in the industry which were inadequately being addressed by the existing curricula. By following the trend of response frequencies given to suggested topics, more challenges were related to issues of Town Planning, Project Management, Negotiation, and Corporate Real Estate Management.

However, when the suggested topics were reassessed it was observed that some of the requested topics were already offered in some of the existing curricula as sub-topics, topics or electives (see Appendix E). Based on this reassessment, it was noted that out of 129 suggested topics, 89 topics were already offered representing 69% while 40 topics were not offered representing 31%. As indicated earlier, despite the domination of 'offered suggested topics' over 'not offered suggested topics', the results still show that the industry was facing

challenges which were inadequately being addressed by the existing curricula. The fact that real estate practitioners had mentioned the suggested topics, it meant that there was a need to further investigate the topics regardless of whether they were currently 'offered' or 'not offered'. Even if some topics were shown as currently offered in the existing curricula, but the fact that they were included on the desired list that could imply that there were other problems associated with the topics in the existing curricula which made them fail to support the industry effectively. These problems need to be investigated and could include, for example, out-of-date course content. The results further reveal a critical need for a second stage of research in the suggested topical areas so that the challenges the industry is facing could be fully understood and get addressed.

5.4.2.2 Overall response on any other comments to be considered in a Masters Real Estate curriculum by all real estate professionals

Any other comments to be considered in a Masters Real Estate curriculum which were given by all real estate professionals in the survey are listed in ranking order by frequency in Appendix F. The phrasing of the comments as shown in Appendix F was exactly the same as respondents' statements. In some cases where there were similarities between the comments, they were grouped together. In total 109 comments were given by the respondents. As expected from an open-ended question, a variety of comments were submitted. Some of the comments were not helpful. However, most of the comments provided were constructive and could contribute significantly towards curriculum improvement.

When the comments from real estate professionals were analysed it was noted that they were diverse in nature and comprised of two main groups: (a) weaknesses of the curriculum and curriculum needs; and (b) strengths of the curriculum. Comments related to weaknesses and curriculum needs were in majority (106 out of 109 comments) than comments related to strengths of the curriculum. This response rate supported the supposition that existing curricula were not fully addressing the needs and challenges of the industry.

Two important comments related to strengths of the curriculum which were given by real estate professionals in the survey are:

- Your list is very comprehensive / all topics listed seem to cover every thing / course seems comprehensive

- Holistic content or approach

Some of the critical weaknesses and curriculum needs which were mentioned by the professionals in the survey are:

Weaknesses of the curriculum:

- Inadequate practical component in the curriculum.
- Lack of case studies.
- Masters Real Estate syllabus must include real estate issues in the entire Southern Africa region because a good number of students are coming from there.
- Graduates require an understanding of what is expected of them in an employment environment, often graduates are clueless when inducted into an employment environment.

Curriculum needs:

- Involvement of guest lecturers.
- Experienced lecturers are ideal for valuable education / experienced lecturers add huge value to the course.
- Curriculum must be relevant in South Africa.
- Site visits and discussions with industry professionals must be included.
- Invite motivational speakers.
- All assignments must be based on practical problems.
- Specialisation must be encouraged.
- Experiential learning must be considered.
- Modules should not be seen in isolation because project success is determined by a combination of information obtained from several modules.
- Students should have basic property knowledge before undertaking these studies.
- Consider social aspects of property development.
- Property courses related to property or land ownership and redistribution initiatives must be considered in South Africa, including black economic empowerment, property and construction charters.
- Students should be grouped and produce a full property development and management mock assignment.

- Organise property development educational tour for students.
- Issues on how to deal with tribal or customary land for development must be considered.
- Consider business skills.
- Consider issues of leadership.

Generally, the comments on the curriculum were critical. The impression given by the real estate practitioners is that several areas in the curriculum require to be improved to enable the existing Masters Real Estate curricula in South Africa adequately support the production of real estate professionals who would deal with new industry challenges and needs competently. Therefore, this study recommends that continued research efforts be undertaken, which are directed towards addressing curriculum weaknesses and needs identified in the survey.

In terms of ranking of comments by response frequency, Appendix F shows that responses on comment 'practical component / real life project practicals' ranked number one with fifteen responses. Second was 'case studies' (6 responses). Ranked third were demands for writing / communication skills, guest lecturers, and experienced lecturers. Based on these results, two important concerns are raised by the real estate professionals.

Firstly, the existing curricula were not covering adequately the practical issues required in the industry. This requirement could be based on the fact that 'practicals / real life projects' supported students to immediately become productive when they join the workplace. In addition, practical exposure enabled students to easily cope with challenges and needs that have emerged in the industry. This research finding is in line with a recurring theme in research which continues to emerge: a graduate programme must possess an appropriate blend of theory and practice to succeed in the eyes of the real estate industry (Gallupo and Worzala, 2004).

Secondly, the industry is demanding that writing / communication skills to be emphasised in the existing curricula. This result is again in line with observations noted by Gibler (2001); and Miles and Trefzger (2006) that there is a continuing high demand for effective writing and communication skills in the workplace.

5.4.2.3 Conclusion regarding hypothesis 2

New challenges and needs have emerged in the real estate industry in South Africa, which are inadequately being addressed by topics included in the existing Masters Real Estate curricula in South Africa. The hypothesis was supported by the data from desired topics and other comments given by real estate professionals.

5.5 Conclusions of the property industry survey

Results of the property industry survey show that Masters Real Estate education programmes offered in South Africa have both strengths and weaknesses. The main strength of the curricula is that real estate practitioners rated all topics included in the existing curricula which were identified through the curriculum survey as important for the industry. These topics are: Building Economics, Building Technology, Construction Contract Law, Corporate Strategy, Environmental Economics and Management, Financial Management, Information Technology, Property Development, Property Economics, Property Finance, Property Investment, Property Management / Facilities Management, Property Marketing, Property Law, Property Valuation, Property Tax, and Research. In addition, practitioners also commented that the curricula were comprehensive in nature. The impression given by the practitioners is that real estate should be viewed broadly, and for graduates to function competently in the industry they need to be exposed to different topics relevant to the proper understanding of real estate. The practitioners are in favour of the interdisciplinary approach to the study of real estate. However, results from rankings of topic importance and percentages of time to be spent on topics revealed that practitioners considered Property Finance as the most important topic in the curricula and that this topic should be allocated more time than the other topics in the curriculum.

In the survey seven major weaknesses of the curricula were identified. First, International Real Estate, a topic which was not offered in existing curricula in South Africa was rated as important by real estate professionals. The perception given by the respondents is that they are aware that real estate business was now global and that it was relevant for professionals to be exposed to real estate knowledge required in the global context to enable them effectively practice real estate internationally. However, it is important to point out that the professionals recommended less time to be allocated to the topic in the curriculum as compared to the other

topics. Related to 'International Real Estate', was a comment given by the respondents in one of the open ended questions that the curricula should include real estate issues relevant to students from other Southern African countries. The view of the practitioners is that the curricula lacked enough course content on foreign real estate markets. As a consequence the existing curricula failed to address international real estate issues adequately.

Second, the respondents expressed a general feeling that even though existing postgraduate real estate curricula in South Africa were traditionally strong, they had inadequately supported real estate practitioners to deal with new challenges and needs which had emerged in the industry. This was expressed through answers given to the first open ended question in Part 3 of the survey questionnaire where practitioners were asked to give other topics to be considered in the curricula (see Questionnaire: Appendix A). The practitioners responded by giving desired topics which they thought could support them deal with the new challenges and needs. These topics include: Town planning / urban management / urban design and planning / urban studies / principles of urban planning / rezoning; project management; negotiation skills; and corporate real estate management / institutional property asset management. Even though some of the desired topics were sub-topics, topics or electives in the existing curricula, the impression given by the industry is that topical issues raised require further investigation in order to support practitioners deal with new challenges and needs which had emerged. It is possible that topical areas desired by the practitioners in the survey were not adequately meeting industry needs in terms of course content.

Third, the respondents indicated that the existing postgraduate real estate curricula in South Africa had exposed students to practical real estate issues inadequately. The opinion of the practitioners is that the curricula were putting emphasis on theory and not practice of real estate issues.

Fourth, the practitioners suggested that they required experienced lecturers to be involved in the teaching of Masters Real Estate students. Most of postgraduate real estate students are working and it was inappropriate for them to be taught by inexperienced lecturers. Experienced real estate lecturers added value to the time spent by postgraduate students during their studies.

Fifth, the respondents pointed out that the curricula failed to integrate different real estate topics taught to enable the students appreciate their relationships and importance in real estate studies. In the process students have viewed different courses separately and lacked the ability to build linkages between the courses offered while in the industry.

Sixth, the curricula were not responding quickly enough to political, social and cultural changes in South Africa. In recent years South Africa has transformed a lot politically and socially since the democratic era from 1994. In the survey practitioners expressed concerns that the curricula had not transformed enough to accommodate relevant political, social and cultural changes in society which were important to real estate.

Finally, there is an indication from the respondents that real estate as a profession has evolved. As a consequence it is common these days to see real estate professionals being requested to undertake new tasks they were traditionally not asked to do before. The practitioners feel that the curricula should adapt to accommodate new emerging professional demands. A good example of an emerging task mentioned by professionals in the survey which they are frequently getting involved in is Project Management.

CHAPTER 6

MODEL CURRICULUM

6.1 Introduction

Chapter 6 contains a model curriculum which has been developed based on the findings of literature research, the curriculum and property industry surveys for postgraduate real estate education in South Africa. The main objective of the model is to demonstrate to institutions offering Masters Real Estate programmes in South Africa how an acceptable curriculum can be developed in line with industry requirements. This model is relevant because of its contribution to knowledge in real estate education. While it is appreciated that the existing curricula were developed by consulting experts in different property fields in South Africa, it is relevant to confirm the educational needs by following a more rigorous scientific approach with the intention of improving the curricula wherever necessary in order to continue meeting industry requirements in the future. In addition, postgraduate real estate education is relatively new in South Africa. Therefore it was relevant to assess the quality of education offered so far to allow rectification of deficiencies identified at an early stage with the input from the industry. This model is aimed at addressing this important desire.

The model should be viewed as a solution to address requirements which were expressed by the industry to improve postgraduate real estate education in South Africa. Of importance, the model should only be viewed as a guide to the development process of a suitable curriculum for the industry in the South African context. Decisions to be taken on the most appropriate educational programmes to be implemented depend largely on judgements to be made by universities offering the courses. These decisions will depend on several other factors which include goals and resources.

6.2 Critical factors considered in the development of the model curriculum

Significant factors identified in this study which have offered a comprehensive and systematic approach to the development of a model for postgraduate real estate education in South Africa are outlined below.

- Constituents of the real estate industry in South Africa

- Conventional real estate knowledge and skills
- Industry requirements
- Student requirements
- Education institution requirements
- Research and technology
- Political, social, economic and cultural factors

6.3 Constituents of the real estate industry in South Africa

The objective of postgraduate real estate education is to support the real estate industry. This objective can be achieved by understanding the nature and characteristics of the industry to be supported. At the beginning of the process of curriculum development it is advisable to identify constituents of the real estate industry to be supported in order to formulate relevant curriculum. Black *et al*., (1996) argued that constituent needs should be the driving force to guide the development of real estate curriculum. In this study, constituents of the real estate industry in South Africa were first identified from the type of real estate topics offered in the existing curricula. This decision was based on the fact that universities offering the courses consulted experts in the various fields of real estate in South Africa to establish topics to be included in the curricula. Findings of the property industry survey which followed, in relation to the importance of real estate topics offered, provided a second platform to confirm constituents of the real estate industry in South Africa. In the survey, real estate practitioners indicated that all topics were important. Ideally, topics supported the industry and therefore, indirectly gave an indication of the characteristics of the industry. By accepting that the topics were important, it was then possible to determine characteristics of the real estate industry in South Africa and its main constituents. Some of the important constituents confirmed are: property development, property economics, property finance, property investment, property management / facilities management, property marketing, property law, property valuation, and property tax. This model curriculum is targeted at supporting these constituents in the industry. It is significant to mention that constituents of the real estate industry identified in South Africa were similar to those identified in related studies done in other countries, for example in the USA (Black *et al*., 1996; and Black and Rabianski, 2003).

6.4 Conventional real estate knowledge and skills

For postgraduate real estate education in South Africa to remain relevant to the industry in future, it has to continue conveying conventional knowledge and skills required by a real estate professional. Black *et al*., (1996) offered a guideline for the development of a comprehensive real estate curriculum. They noted that a comprehensive real estate curriculum should be envisioned as a four-cornered approach to cover the many specific topics of the real estate field. Four main components which were identified as essential for a comprehensive real estate curriculum were: market subjects; financial subjects; legal and public policy subjects; and physical and development subjects. Carn and Rabianski (1986) identified investment, finance, marketing, valuation, and law as important topics which should constitute a real estate curriculum. Property law was also recommended by Placid and Weeks (2009) as a cornerstone of every real estate programme. Important skills required by real estate professionals include: negotiation, information processing, management, communication, and problem-solving (Institute for Corporate Finance, 1992 cited in Black *et al*., 1996).

6.5 Curriculum

The guiding philosophy behind the model curriculum for postgraduate real estate education in South Africa is that education will continue to change to respond to relevant changes taking place in the industry and society. In addition, the systems approach is emphasised as the means to make education relevant in future. In this approach interaction between education institutions offering the curricula and industry is encouraged. Of importance, research on factors causing change in education and the industry will continuously be undertaken to provide reliable evidence for curriculum improvement. The model curriculum also incorporates the following procedures to improve its effectiveness and maintain high quality:

- Revisit regularly real estate knowledge and skills required.
- Implement an objective curriculum assessment method.
- Create an efficient feedback mechanism on the curriculum from students and industry.
- Adopt a quick response reaction to curriculum improvement.
- Include a rigorous validation test for curriculum improvement.
- Hire well qualified and experienced teaching and research staff.

6.5.1 Education institution requirements

Contents of this section have been determined in line with the intentions and requirements of the departments and schools at the universities offering Masters Real Estate curricula in South Africa. These requirements were identified in the curriculum survey.

6.5.1.1 Aim of the curriculum

The aim of the model curriculum is to produce competent real estate professionals for the industry who are equipped with management, decision-making and research skills.

6.5.1.2 Purpose of the curriculum

The purpose of the model curriculum is to prepare real estate professionals for career advancement in different real estate fields in the private sector, public service, academic and research institutions.

6.5.1.3 Student admission

Applicants for Masters Degree in Real Estate should possess an honour's, a present four-year or a previous five-year degree in a built environment related discipline or an appropriate field from a recognised tertiary institution. Built environment disciplines include: real estate, quantity surveying, construction management, project management, architecture, town planning, and engineering. Other appropriate fields include: commerce and law. In addition, applicants should have appropriate work experience in a relevant real estate related environment. Candidates with inadequate knowledge in the built environment will be required to take additional course subjects in the first year in order to supplement the built environment knowledge.

6.5.1.4 Duration of the course

A minimum of two years will be required for a student to complete a Masters Real Estate degree, either on full time or part time basis.

6.5.1.5 Delivery of the curriculum

The preferred method of delivery of the curriculum is by block release, whereby a block is equivalent to one week. A maximum of eight block weeks should be enough to complete implementation of the curriculum. For a course duration of two years, eight block weeks will be split into half for each year. This entails that two block weeks will be allocated per semester.

The block release system has been recommended for the model because universities offering the courses agree that the system allows learners based far away from the universities to easily make arrangements to attend the courses when required. In addition, the system allows students to work while studying. This is of particular importance bearing in mind that most of the students following the courses are already employed.

6.5.1.6 Student assessment

Student assessment will comprise of two components. These are course work and research assessments. Course work assessment will be split between continuous assessment and examinations. Continuous assessment would be allocated 40 percent while examinations will be given 60 percent of the final mark. Continuous assessment would consist of assignments, group projects and other assessment tools which do not form part of examinations. A sub-minimum of 40 percent for semester and year marks will be required for admission to examinations on any subject. A minimum final mark of 50 percent will be required for a student to obtain a pass in any subject. 50 percent will also be required to pass the treatise.

6.5.1.7 Total credits

Results of the curriculum survey revealed that the existing five Masters Real Estate curricula in South Africa are using different total credits for their programmes except for UW and UCT. The UP, UW, UCT, UFS and NMMU allocated 230, 180,180, 240 and 202 credits, respectively to their programmes. Despite this disagreement, they all meet SAQA requirements in terms of minimum total credits required for a Masters Degree in South Africa, which are 180 total credits. Because of lack of uniformity in total credits used by the universities it was decided that one credit system out of the five be selected for design purposes of this model curriculum. Based on convenience reasons, it was decided that total

credits followed by the UP be used in this model. Out of 230 total credits, the UP allocated 170 credits for coursework and 60 credits for treatise.

6.5.1.8 Graduation

In order to be considered for the award of the degree, it is assumed in this model curriculum that a student should have obtained the minimum credits required by the UP, i.e. 230 credits.

6.5.2 Curriculum requirements of the industry

Course content requirements of the model curriculum which were determined based on the requirements expressed by real estate professionals in the property industry survey are shown in Table 6.1.

Table 6.1: Masters Real Estate topic requirements of the industry in South Africa

Topic	Topic importance rank	Topic mean	Topic time rank	Time allocated (%)
Property Finance	1	2.76707	1	8.4680
Property Investment	2	2.67470	3	7.9276
Property Economics	3	2.66265	4	7.2975
Property Development	4	2.64659	2	8.3144
Financial Management	5	2.56225	7	6.4143
Property Valuation	6	2.51004	5	7.1635
Property Law	7	2.47791	8	6.1275
Building Economics	8	2.37349	9	5.6102
Property Management / Facilities Management	9	2.31727	6	6.7068
Property Tax	10	2.27711	13	4.3851
Construction Contract Law	11	2.16867	12	4.4233
Property Marketing	12	2.16064	11	4.7717
Research	13	2.10843	10	5.0545
Environmental Management	14	2.00803	15	3.8748
Building Technology	15	1.94378	14	4.0238
Corporate Strategy	16	1.91968	18	3.4368
International Real Estate	17	1.91566	16	3.7612
Information Technology	18	1.88353	17	3.5823
Total	18			100%

In Table 6.1 it is noted that when the ranking of percentages of time allocated to the topics during the course is compared to the ranking of importance of topics, there are some similarities. Property Finance was ranked first in both rankings. For the other topics, all

topics which appeared in the top 10 ranking for topic importance also appeared in the top 10 ranking for percentage of time to be spent on a topic during the course expect for Property Tax which dropped to position 13 in the time rank. Like in the topic importance rank, Corporate Strategy, International Real Estate and Information Technology were ranked at bottom in the time rank. Based on these results, the two separate rankings can guide real estate educators reasonably in curriculum improvement with regard to time to be allocated to a topic by relating topic importance and time as suggested by real estate professionals.

6.5.3 Recommended curriculum

6.5.3.1 Course subjects

The model curriculum consists of 18 course subjects required by the industry to be taught to real estate professionals in South Africa. It is important to recognise that the curriculum is focused on real estate and intends to produce competent professionals who are specialised in real estate. As a consequence course subjects in the model curriculum are classified into three groups which are: compulsory, recommended and optional real estate course subjects. These groups are given below:

A. Compulsory subjects

- Property Finance,
- Property Investment,
- Property Economics,
- Property Development,
- Property Valuation,
- Property Law,
- Property Management / Facilities Management,
- Property Tax, and
- Property Marketing.

B. Recommended subjects

- Building Economics,
- Construction Contract Law,

- Corporate Strategy,
- Environmental Management,
- Financial Management,
- International Real Estate, and
- Research Methodology.

C. Optional subjects

- Building Technology, and
- Information Technology

Compulsory subjects comprise of important real estate course subjects ranked in the top 10 in the survey by real estate practitioners that should be given priority in the curriculum. Property Marketing has been included in the list of compulsory subjects even though it was not ranked in the top 10 by real estate professionals because in existing literature it is regarded as a principle subject (Carn and Rabianski, 1986 cited in Finch and Weeks, 2003). Because Financial Management and Building Economics are not considered in existing literature as principle real estate subjects, they are excluded from the list of principle subjects despite the fact that the industry ranked them in the top 10.

Recommended course subjects in the model curriculum consist of subjects which were ranked below 10 in the property industry survey by real estate professionals and are not considered as principle real estate subjects in the existing literature. The intention of these course subjects in the curriculum is to equip real estate professionals with additional relevant knowledge and skills required by real estate professionals to function competently in the industry. These subjects will be allocated less time in the curriculum than compulsory real estate course subjects.

The last category of subjects in the curriculum comprise of optional course subjects. These subjects are important for real estate professionals but will only be recommended to be taken by a student depending on his past educational background to supplement built environment knowledge or to gain exposure to information technology which is required by real estate professionals in the industry.

6.5.3.2 Skills

Skills desired by real estate professionals which were identified in the existing literature and property industry survey that are required by professionals to function successfully in the industry to be incorporated in the model curriculum include:

- Negotiation;
- Management;
- Interpersonal;
- Change management;
- Time management;
- Teamwork;
- Writing, communication, presentation, and public-speaking;
- Problem-solving;
- Business; and
- Leadership skills.

From the above list it is noted that a host of skills are required for a real estate professional to be competent in the industry. In the model curriculum, these skills will blend with the technical expertise acquired from real estate course subjects to support the students to compete for employment opportunities and function effectively at management level in the private sector, public service, research and academic institutions.

6.5.3.3 Areas of emphasis

In addition to offering required real estate course subjects and desired skills, the following areas are emphasised in the model curriculum in order to produce graduates with specialized skills needed by real estate industry and society:

- Hiring of well qualified and experiencing lecturers.
- Creation of good teaching environment for lecturers.
- Involvement of experienced guest lecturers.
- Creation of good learning environment for students.
- Promoting research to equip students with problem-solving skills and critical thinking.

- Balance between theory and practical course content in the curriculum in response to the industry request for graduates to "hit the ground running" immediately when they join the work place.
- Application of case studies in the curriculum which are relevant to real estate students.
- Use of real-life projects where students notice theory learnt in class being executed into practice.
- Integration of course subjects in the curriculum with the intention of making students understand the interrelationships between different real estate course subjects in the industry.
- Inclusion of educational tours and site visits to enable students appreciate theoretical issues learnt in class taking place in the field.
- Encouraging internship, experiential learning, and mentorship to be part of the learning process to offer the opportunity to students to apply theory into practice and to learn from experienced real estate professionals in the industry.
- Exposing students to real estate knowledge required in the global context.
- Sensitising students on environmental concerns as they study real estate.
- Making students realise the significance of applying ethics and morals in real estate practice.
- Making students aware of public-private sector concerns in property development projects.
- Sensitising students on political and social implications in real estate decision-making.
- Equipping students with decision-making skills more especially financial analysis in real estate.
- Exposing students to important information technology tools required in the industry.
- Teaching students to learn how to deal with change in their lives and in the industry.
- Making students aware of the significance of independent and continuous learning in their lives as professionals.
- Encouraging students to develop networking skills to be successful as real estate professionals.

6.5.4 Curriculum structure

6.5.4.1 Structure of curriculum block weeks

The model curriculum will be delivered to students in a period of two years which consist of four semesters. In the four semesters, a maximum of eight block weeks (two block weeks per semester) will be utilised to present the curriculum. Table 6.2 shows the spread of curriculum block weeks over the study period.

Table 6.2: Structure of blocks weeks for Masters Real Estate Education in SA

Year 1	**Dates**	**Activity**
Semester 1	**January to June**	
1. Block week 1	January	Orientation, lectures, assignments
2. Block week 2	April	Lectures, assignments, tests
Examinations	June	Semester 1 examinations
Semester 2	**July to December**	
3. Block week 3	July	Lectures, assignments, tests
4. Block week 4	September	Lectures, assignments, tests
Examinations	November	Year-end examinations
Year 2		
Semester 3	**January to June**	
5. Block week 5	January	Lectures, assignments, tests
6. Block week 6	April	Lectures, assignments, tests
Semester 4	**July to December**	
7. Block week 7	July	Lectures, assignments, tests
8. Block week 8	September	Lectures, assignments, tests
Examinations	November	Year-end examinations

6.5.4.2 Organisation of course subjects in the curriculum

Real estate practitioners in the industry require a curriculum which gives students a solid foundation by exposing them to many different fields which make up the real estate profession. This is reflected by the number of course subjects required in the curriculum. Eighteen course subjects were recommended to be included in the curriculum. In terms of curriculum planning, this request presents a huge challenge in the development of this model curriculum. It is a challenge because 18 subjects are too many to be fitted in four semesters, which is a very limited time to cover all the subjects in detail. The right approach to deal with this problem was to develop a condensed curriculum which satisfies requirements of the main

interested parties in the curriculum. These parties include: the industry; students; education institutions offering the courses; and education authorities.

To develop an acceptable condensed curriculum, the required course subjects were re-grouped into modules which would convey the required knowledge expected by the industry. The aim of the curriculum, which is to produce professionals who are specialised in real estate, was the guiding principle in the re-grouping process. Consequently, real estate course subjects that were categorised as compulsory subjects were prominent in the re-grouping process by being allocated space first in the curriculum. Compatibility of the course subjects was a key factor considered in the re-grouping process of the subjects. Course subjects which were related and compatible were easily grouped together. In the re-grouping process, course subjects from the recommended category were built around compulsory course subjects to offer supplementary knowledge required by professionals in the industry. Eleven important modules for the model curriculum that emerged from the 18 course subjects after the re-grouping process are shown in Table 6.3. It will be noted that in certain cases after re-grouping related subjects, new representative names to identify the modules are given. For example the course module which combines Property Finance, Property Investment, Property Economics, and Property Tax is named Property Finance, Investment and Economics. It will also be observed that Property Development is a name of a course module which represents the following combined subjects: Property Development, Property Marketing, Building Economics, and International Real Estate. Credits allocated to modules in the curriculum were determined by making use of the percentages of time allocated to the subjects by real estate professionals in the property industry survey and the assumed total course work credits required to complete the degree are 170.

Table 6.3: Modules for model curriculum

Modules	Time allocated (%)	Credits (out of 170)
1. Construction Contract Law	4.4233	7
2. Corporate Strategy	3.4368	6
3. Financial Management	6.4143	11
4. Property Finance, Property Investment, Property Economics & Property Tax (Property Finance, Investment & Economics)	8.4680 7.9276 7.2975 4.3851 (28.0782)	47
5. Property Development, Property Marketing, Building Economics & International Real Estate (Property Development)	8.3144 4.7717 5.6102 3.7612 (22.4575)	38
6. Property Management / Facilities Management & Environmental Management (Property and Facilities Management)	6.7068 3.8748 (10.5816)	18
7. Property Law	6.1275	10
8. Property Valuation	7.1635	12
9. Research Methodology	5.0545	8
Optional modules		
10. Building Technology	4.0238	7
11. Information Technology	3.5823	6
Total	100	170

6.5.4.3 Sequence of course modules in the curriculum

The sequence and spreading of course modules in the curriculum over the period of two years are given in Table 6.4.

The spread and sequencing of the modules enables the curriculum to focus on producing a professional who is specialised in real estate. To achieve this, the model curriculum is structured around modules which contain compulsory real estate subjects, being subjects emphasising on the real estate profession as required by the industry. These modules are: Property Finance, Investment and Economics; Property Development; Property and Facilities Management; Property Valuation; and Property Law. Except for Property Law, these modules are offered in sequence as year modules in first and second years. The curriculum is built around these modules as integrating devices in the curriculum. In the first year introductory real estate course content for the modules is offered to the students while in the second year advanced real estate course content is taught. By spreading and sequencing these important real estate modules over two years, the arrangement allows the students to focus and specialise in real estate.

With the exception of Property Law, semester modules consist of course subjects which are classified as recommended in the curriculum to support the compulsory subjects in the process of producing a well-rounded real estate professional. They have been spread over the semesters depending on the most appropriate time they are required by students in the learning process. For example Research Methodology has been placed in Semester 1 to equip students with research skills in preparation for the thesis they will undertake in the second year. In the curriculum Property Law has been classified as a semester module and not a year module, even though it is a compulsory subject because the quantity of its course material is adequate for a semester period.

Table 6.4: Sequence of course modules in the curriculum

First Year			
Semester 1	**Semester 2**	**Credits**	**Comment**
Research Methodology		8	Semester module
Financial Management		11	Semester module
	Construction Contract Law	7	Semester module
Property Finance, Investment and Economics I	Property Finance, Investment and Economics I	47	Year module
Property Development I	Property Development I	38	Year module
Property and Facilities Management I	Property and Facilities Management I	18	Year module
Property Valuation I	Property Valuation I	12	Year module
Second Year			
Semester 1	**Semester 2**		
Corporate Strategy		6	Semester module
	Property Law	10	Semester module
Property Finance, Investment and Economics II	Property Finance, Investment and Economics II	-	Year module
Property Development II	Property Development II	-	Year module
Property and Facilities Management II	Property and Facilities Management II	-	Year module
Property Valuation II	Property Valuation II	-	Year module
Optional modules			
Building Technology		7	Semester module
Information Technology		6	Semester module
	Total	170	

6.5.5 Summary of proposed curriculum content

Summary of the proposed model curriculum which shows modules, course subjects, credits, and percentages of content is shown in Table 6.5.

Table 6.5: Summary of the proposed model curriculum

Core Modules	Course subjects	Credits	Content (%)
Construction Contract Law	Construction Contract Law	8	4.7
Corporate Strategy	Corporate Strategy	6	3.5
Financial Management	Financial Management	11	6.5
Property Finance, Investment & Economics	Property Finance, Investment, Tax & Economics	46	27
Property Development	Property Development, Marketing, Building Economics & International Real Estate	38	22
Property & Facilities Management	Property Management, Facilities Management & Environmental Management	18	10.6
Property Law	Property Law	10	5.9
Property Valuation	Property Valuation	12	7
Research Methodology	Research Methodology	9	5.3
Optional modules			
Building Technology	Building Technology	6	3.5
Information Technology	Information Technology	6	3.5
	Total	170	100

6.5.5.1 Description of course subjects

Building Economics – A course subject which teaches students various methods of controlling the cost of buildings at the design stage to achieve economic efficiency in the building process and maximise value for money for the client. Both present and future building costs are taken into account. Study themes include: building cost estimates; contract price adjustments; payment certificates; variation orders; and influence of design on costs.

Building Technology – A course subject which teaches students issues related to the building components and process. Study themes include: soil mechanics and building foundations; building design and construction; brick work; roofs; joinery, windows, frames, and doors; plastering; flooring and tiling; ceilings; glass and glazing.

Construction Contract Law – A course subject that teaches students legal issues related to construction. Study themes include: principles of the law of contract; procurement of

construction and engineering contracts; roles of the parties; negligence; allocation of risk; construction defects; remedies for breach of contract; arbitration and litigation; and contractual abuse.

Corporate Strategy – A course subject which teaches students issues related to business success. Study themes include: corporate decision making; marketing and business planning; competitive advantage; and economic and social factors which influence the performance of firms. These principles are applied to construction and property business.

Environmental Management – A course subject which teaches students issues related to the management and efficient utilisation of environmental resources. Study themes include: environmental pollution; waste management systems; environmental legislation; impact of construction on the environment; environmental impact assessment; environmental management systems; and effects of environmental pollution on land values.

Facilities Management – A course subject which teaches students an integrated approach to managing, improving and adapting the buildings used by an organisation in order to create an environment that strongly supports the core objectives of the organisation. Study themes include: space and services planning; services and energy management; maintenance management; life cycle costing; value management; outsourcing; and performance measurement.

Financial Management – A course subject that teaches students issues related to effective use of finances for an organisation and financial reports. Study themes include: structure of financial statements; analysis and interpretation of financial statements; valuation of businesses; planning, control and management of finance; and construction accounting.

Information Technology – A course subject which teaches students issues related to computer programmes in order to become computer literate. This may include GIS.

International Real Estate – A course subject that teaches students real estate issues from a global perspective.

Property Development – A course subject which focuses on teaching students land or existing property improvement processes. Study themes include: principles of urban economics; planning control; township development; residential property development; commercial property development; industrial property development; specialised forms of property development; traffic and parking; location studies; and feasibility studies.

Property Economics – A course subject that focuses on teaching students efficient utilisation of land resources and their improvements in society. Study themes include: factors influencing the property market; market mechanisms (supply and demand); property / construction cycles; national economy; location objectives; population and urbanisation; and different forms of urban property markets.

Property Finance – A course subject which focuses on teaching students utilisation of finance in property. Study themes include: money and banking; sources and forms of property finance; cost of capital; and capital budgeting.

Property Investment – A course subject which focuses on teaching students real estate as an alternative investment. Study themes include: nature and scope of real estate investment; the investment decision process; investment analysis; investment time horizons; property investment decision-making approaches; investment strategy; the ownership entity; and property selection.

Property Management – A course subject which focuses on teaching students the administration of property with the objectives of maximising return on property investment; maintaining or increasing property value; and keeping property in good condition for its intended use. Study themes include: the role of property management; property portfolio management; property asset management; property management and property owner relationship; operating costs; leasing; energy and water management; management structures; employee relations; and marketing of management services.

Property Marketing – A course subject which equips students with skills of buying, selling and letting of property. Study themes include: marketing management process; environment of the property market; property market analysis; the estate agent; property market segmentation; and property marketing strategy.

Property Law – A course subject that teaches students legal issues related to property. Study themes include: ownership of property; property conveyancing; interests in property; forms of land tenure; joint ownership; registration of rights over property; and statutory control over property.

Property Valuation – A course subject that equips students with skills of determining the most probable exchange prices of property. Study themes include: the concept of value; methods of valuation; purposes of valuation; types of valuations; principles of town planning; and factors influencing value.

Property Tax – A course subject that focuses on teaching students issues related to money which has to be paid to government from property investments and transactions. Study themes include: income tax; value added tax; capital gains tax; and assessment rates.

Research – Means a course subject which teaches students general research process. Study themes include: research design; research methods; writing literature review; methods of data collection and analysis; research writing skills and referencing conventions; and concluding research.

CHAPTER 7

CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

7.1 Introduction

The intent of this study was to assess content of existing postgraduate real estate curricula in South Africa to determine if they were relevant to the industry and to suggest areas requiring improvement. Specifically, the study was aimed at answering the research question shown in Section 1.2.

Four sub-problems (research objectives) were set to achieve the aims of the study (see Section 1.3). The hypotheses in Section 1.4 guided the gathering and analysis of data and the interpretation of results in line with the objectives of the research.

To build up the theoretical framework for the study, relevant literature on the subject was reviewed in Chapter 2. Literature of the study was reviewed under three main subheadings: real estate discipline; critical issues of real estate education; and influential elements of real estate curriculum development.

Three research approaches were used to collect data for the study (see Chapter 3). These are: use of relevant publications, postgraduate real estate curriculum survey, and the property industry survey. According to Leedy (1997), the method of research adopted for this study is typified as the descriptive method.

Data analysis and interpretation of results for the research was done in Chapters 4 and 5. Testing of the hypotheses based on results of the property industry survey was covered in detail in Chapter 5.

To complete the research process, a model curriculum for postgraduate real estate education in South Africa was finally developed based on a number of significant factors including requirements of the property industry in Chapter 6.

Findings from literature review supported the results in the two original surveys (i.e. curriculum and property industry surveys) to draw conclusions and recommendations for the study in Chapter 7.

7.2 Key research findings of the study

The key findings of the investigation are summarised in this section based on the research objectives outlined in Section 1.3.

7.2.1 Findings of first research objective

The first research objective of the study was to identify important elements presently influencing real estate education and industry which may continue to introduce significant changes to the profession in the future. To achieve this objective a detailed literature research was undertaken to identify the factors. It was found in the study that some of the important influential elements causing change in the real estate curriculum include: accreditation bodies; clients; climate and environmental concerns; demographic factors; economic development; employers; entrepreneurship; finance; globalisation; government and political factors; information technology advances; land; local communities and professionals; publications and research; real estate educators; real estate constituents; real estate consumer behaviour, social and cultural factors; real estate cycle; students; and urban form changes and problems (see Section 2.4).

7.2.2 Findings of second research objective

The second objective of the research was to analyse existing postgraduate real estate curricula to identify topics which supported the real estate profession to contribute significantly to society in South Africa. To achieve this objective, a survey and analysis of existing Masters Real Estate curricula offered in South Africa and other parts of the world was done in Chapter 4. When Masters Real Estate curricula in South Africa were analysed and compared locally and with equivalent curricula internationally the following conclusions were found:

- Numerically, few formal postgraduate real estate curricula were offered in South Africa than in USA and UK. In South Africa five programmes were identified which are offered by Universities of Pretoria, Witwatersrand, Free State, Nelson Mandela Metropolitan, and

Cape Town. In USA and UK, seven Master's programmes specialising in Real Estate were selected in each of these countries for comparison purposes. However, South Africa offered more Masters Real Estate curricula than other countries in Africa. Only three programmes were found from other African countries (see Tables 4.1, 4.2, and 4.3).

- When compared locally, Masters Real Estate curricula in South Africa exhibited some differences and similarities. Differences included: names given to curricula, diversity of real estate topics, percentages allocated to common course subjects, and course credit allocation systems. Similarities included: common real estate topics, location of curricula, student admission requirements, duration, and delivery methods of courses. Common topics included: property valuation, property management, property development, property finance, property investment, and property marketing (see Sections 4.3.1.1 and 4.3.1.2).
- When Masters Real Estate curricula in South Africa were compared with equivalent curricula internationally, similar differences and similarities were identified. From the international comparison, noteworthy differences which emerged were location of real estate programmes, the diversity of topics, and curriculum emphasis. Comprehensive curricula in South Africa like curricula in other African countries, UK and other British Commonwealth countries were housed together with other built environment programmes. The USA programmes were housed in business schools where finance and investment were emphasised in the curricula. An additional difference was International Real Estate as a topic which did not feature in any of the curriculum in South Africa (see Sections 4.3.2 and 4.3.3). An important similarity with some curricula in other parts of the world was accreditation of some curricula in South Africa by the RICS. Such similarities support the conclusion that despite disagreements in some course offerings, Masters Real Estate curricula in South Africa were comparable to equivalent courses internationally.
- Based on curriculum analysis, eighteen important postgraduate real estate topics which supported the real estate profession to contribute significantly to society in South Africa and other parts of the world were identified. These topics were: building economics, building technology, construction contract law, corporate strategy, environmental economics and management, financial management, information technology, international real estate, property development, property economics, property finance, property investment, property management / facilities management, property marketing,

property law, property valuation, property tax, and research. The topics were incorporated in the study questionnaire to determine their importance to the property industry in South Africa.

7.2.3 Findings of third research objective

The third objective of the research was to determine current requirements of the real estate industry in South Africa. To determine the requirements, a property industry survey was conducted to obtain views from real estate professionals. This was achieved in Chapter 5. The investigation was limited to four main areas.

Firstly, the professionals were asked to rank the eighteen topics in terms of importance to the industry using the Lickert scale. Results revealed that the industry required all topics in the curriculum. However, the industry considered Property Finance as the most important topic in the curriculum with a mean of 2.77 and Information Technology as the least important with a mean of 1.88. The opinion of the professionals was that Property Finance was more important to the industry than the other topics (see Table 5.6).

Secondly, the practitioners were asked to suggest approximate percentages of time to be spent on the eighteen topics in the curriculum. Practitioners allocated percentages of time to all the eighteen topics in the curriculum. Property Finance was allocated the highest percentage (8.47%) while Corporate Strategy was allocated the lowest percentage (3.43%). Perception of the industry was that more time should be allocated to Property Finance during the course (see Table 5.9).

Thirdly, professionals were asked to suggest any other topics they required to be included in the curriculum. ‘Town planning / urban management / urban design and planning / urban studies / principles of urban planning / rezoning’ had the highest responses (42), second was Project Management (24 responses), third was Negotiation Skills (18 responses), and fourth was Corporate real estate management / institutional property asset management (13 responses) (see Appendix E). The suggestion of other topics in the survey by real estate professionals indicated that there were challenges and needs in the real estate industry which were being addressed inadequately by topics in the existing curricula.

Finally, the industry was asked to give any other comments they thought should be considered in the curriculum. In terms of frequency, responses requesting a strong 'practical component' in the curriculum ranked number one with fifteen responses. Second was 'case studies' (6 responses) (see Appendix F). Based on these results, the opinion of industry was that the existing curricula were not exposing students adequately to practical issues required at the workplace. Other important weaknesses of the curricula which were identified from the list of comments were:

- Lack of course content on foreign real estate markets.
- Curricula failed to integrate different real estate topics.
- Curricula were not responding quickly to political, social and cultural changes.
- Curricula were not adapting to accommodate new emerging professional tasks.

Despite the deficiencies reported above, an important strength of the curricula identified from comments given by the respondents was that the curricula were comprehensive. The view of the practitioners was that students were being exposed to most of the important topics required for a professional to function competently in the industry.

7.2.4 Findings of fourth research objective

The last objective of the research was to develop a postgraduate real estate educational model in line with the requirements of the real estate industry in South Africa. This was achieved in Chapter 6. The model which describes the process of developing an acceptable postgraduate real estate curriculum for the industry in South Africa will be made available to universities offering the courses to be used in improving the courses in future.

7.3 Conclusions of the study

Conclusions reached in this study have come from findings of the literature research and two original surveys conducted specific to South Africa. The conclusions drawn are outlined below:

- The study confirmed that real estate is a multidisciplinary field which is influenced by many factors from society and industry. To produce capable professionals, postgraduate real estate education needs to expose students to a variety of relevant topics necessary for a real estate professional to function competently. Apart from the traditional real estate

course content, a competent professional also requires exposure among others to the effects of finance; social and cultural factors; laws; and political factors in the curriculum (Chikafalimani and Cloete, 2008).

- The existing postgraduate real estate curricula in South Africa are diverse. However, despite the disagreements in course content, the curricula were comparable locally and with equivalent curricula internationally through exhibition of common elements in some course offerings expected in a real estate curriculum like property valuation, property management, property development, property finance, property investment, and property marketing.
- The existing postgraduate real estate curricula offered in South Africa have contributed positively to society and industry by covering well the traditional areas of the curriculum expected from a real estate professional. This was proved by the study in two ways. Firstly, real estate professionals indicated that all topics included in the curriculum were important. Secondly, some respondents commented that the curricula were comprehensive.
- While the positive contribution of the curricula to society and industry is significant, the industry identified weaknesses in the curricula which need to be addressed. Some of these deficiencies are: (a) inadequate exposure of students to practical real estate issues in the curriculum; (b) lack of enough course content on foreign real estate markets; (c) failure to integrate real estate topics in the curriculum; (d) slow response to political, social and cultural changes taking place in South Africa; and (e) failure to accommodate new emerging professional tasks.

7.4 Recommendations of the study

Recommendations regarding future direction of postgraduate real estate education in South Africa are drawn from findings and conclusions outlined above.

Firstly, postgraduate real estate curricula should be strengthened to improve the traditional areas of preparation for a real estate professional they are offering today. This was important because the education provided now will form a strong foundation for new directions of postgraduate real estate education depending on changes to be accommodated in the future. This can partially be achieved by maintaining the comprehensive and interdisciplinary

approach to the study of real estate at higher education institutions. In this approach students are well prepared to take challenges in the industry by being exposed to all relevant real estate topics required by a real estate professional. In addition, real estate faculty should pay attention to the opinion given by real estate professionals with regard to importance of real estate topics to the industry in curriculum improvement processes.

Secondly, the practical component of the curricula should be improved to prepare students well for responsibilities they will resume at the workplace. Currently, the perception of the industry is that the curricula placed more emphasis on theory than practice. Institutions offering the programmes should explore ways of balancing these two significant issues in the curricula. This could be achieved by introducing innovations in the traditional real estate curriculum. These can include: practical assignments; real life projects; case studies; site visits; internship / experiential learning; hiring experienced lecturers; and involving specialist guest lecturers.

Thirdly, the course content on foreign real estate markets should be improved. This was relevant because the postgraduate real estate programmes in South Africa attracted students from foreign countries. This can be achieved by introducing International Real Estate as a topic in the curriculum. The topic would convey to students real estate knowledge required in the global context.

Fourthly, lecturing staff of the institutions offering the courses should investigate innovative ways of improving integration of real estate topics in the curricula. The recommendation is based on the complaint raised by some respondents in the property industry that students treated real estate topics separately and failed to relate them and show how they complemented each other at the workplace. To achieve this real estate faculty should introduce innovative ways to integrate topics in the curriculum.

7.5 Further research

The study was intended to offer an overview of current industry requirements in connection with postgraduate real estate education in South Africa. Due to limitations of time and resources it was not possible to investigate all problems linked with postgraduate real estate education and the industry. Therefore, specific studies on education and curriculum

development to address diverse educational needs of the industry are recommended since the industry will always remain in transition. Areas of particular importance for continued research in South Africa include:

- More detailed assessment of individual Masters Real Estate curriculum offered in South Africa to investigate methods of how the individual programmes can be improved since they are all unique. In this study, the curriculum assessment was addressing all existing postgraduate real estate programmes in South Africa and was general in its approach.
- Determination of specific sub-topics preferred by the industry to be included in the important postgraduate real estate topics identified in the study. Sub-topics were critical because they indicated actual study themes covered in the course. Differences in sub-topics could equally produce different educational products from the real estate programmes in terms of industry expectations. This study only investigated the topics and not their contents.
- Assessment of employer perceptions on abilities of postgraduate real estate graduates which must be addressed in the curriculum.
- Investigation of appropriate teaching and learning environments to meet student and industry requirements.
- Investigation of optimal real estate staff qualifications, training, selection and career development requirements.
- Investigation of innovative teaching techniques which would support students to integrate separate real estate topics.
- Assessment of the shifts in political, social, economic and cultural changes in society impacting on real estate curriculum.
- Investigation of newly emerging real estate profession specialisations and tasks to be supported by postgraduate real estate education.

7.6 Contributions to knowledge

In the past no research was undertaken to determine if industry requirements were being met by postgraduate real estate curricula in South Africa. This study was intended to address that gap by offering insight as to how postgraduate real estate education can be made to remain relevant to the industry. This section highlights some of the contributions to the existing body of knowledge on the subject.

- Contribution towards the discovery of contents of real estate curriculum and extending literature on real estate curriculum in the global context. This was particularly important because to date no consensus has been reached with regard to a common body of knowledge in real estate studies (Epley, 1996; Black and Rabianski, 2003; Weeks and Finch, 2003; and Gallupo and Worzala, 2004).
- Identification of important elements influencing changes in real estate education and industry.
- Determination of the importance of postgraduate real estate topics to the real estate industry in South Africa.
- Establishment of real estate industry requirements to be considered for incorporation into postgraduate real estate curriculum.
- Development of an educational model, which demonstrates a process to be followed in the production of an acceptable postgraduate real estate education programme in line with industry requirements in South Africa (see Chapter 6).

7.7 Summary

Conclusions and recommendations made in this study have been reached from findings of two original surveys (curriculum survey and property industry survey) and relevant literature sources. Based on these findings, postgraduate real estate education requirements for the industry were determined scientifically.

The study found out that existing postgraduate real estate curricula in South Africa were applauded by the industry for preparing real estate professionals well by exposing them to relevant traditional areas of real estate expected by the profession. However, due to changes which have taken place in the industry and society a gap has been created between education required by the industry and education provided by the existing postgraduate real estate curricula. The factors which have introduced challenges and changes in the industry and society include deteriorating socio-economic conditions; environmental concerns; public-private sector concerns; urban decay; globalisation; technology advances; and government and political factors. Evidence was also gathered through the study from the industry that new professional tasks were growing which were being inadequately addressed by the existing curricula, like Project Management.

The process of change does not stop and will always introduce new conditions and challenges which will be required to be addressed in the future. Change is also not predictable. Therefore, for postgraduate real estate education to remain relevant to industry and society with the evolving requirements, continued research aimed at solving new problems will be the appropriate solution in the future. The influential elements pointed out earlier, which are causing change in the industry and curricula were critical areas of research that required to be monitored. However, since change is continuous there could be other new influential elements merging in future, not mentioned in this study requiring further investigation. Under such circumstances, consistent research studies will support the processes of curriculum development to accommodate important changes required by the industry and society in the curricula in future. Lack of continued research will widen the gap between education required and education provided.

Finally, it is hoped that this study will contribute significantly to the improvement of postgraduate real estate education in South Africa and that it will stimulate further research in this important area in the future for the benefit of students, universities, society, industry and the country.

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APPENDIX A

THE QUESTIONNAIRE

APPENDIX A

THE QUESTIONNAIRE

INSTRUCTION: Simply fill or tick in the space to give answer

PART 1: DETAILS OF RESPONDENT	
1. What is your highest qualification?	
Matric	
Bachelor's degree	
Honour's degree	
Master's degree	
Doctorate degree	
Other (specify):	
2. Please indicate your current employer/s	
University / trainer	
Government:	
• Central	
• Provincial	
• Local	
Parastatal	
Private Sector:	
• Bank / Financial Institution	
• Listed Property Vehicle	
• Property Developer	
• Property / Facilities Manager	
• Property Valuer	
• Property Broker / Marketer	
• Property Investor	
• Construction Company	
• Consultants e.g. QS, Eng., etc	
• Other (specify):	
3. What is / are your current property industry involvement/s?	
• Academic / trainer	
• Property Developer	
• Property Valuer	
• Property / Facilities Manager	

APPENDIX A (CONTINUED)

THE QUESTIONNAIRE (CONTINUED)

3. What is / are your current property industry involvement/s?			
• Property Investor			
• Property Broker / Marketer			
• Property Finance			
• Property Economist			
• Building Contractor			
• Other (specify):			
4. How many years of experience do you have in your real estate activity?			
5. In which geographical location/s are you based?			
• Gauteng			
• Limpopo			
• North West			
• Northern Cape			
• KwaZulu-Natal			
• Eastern Cape			
• Mpumalanga			
• Western Cape			
• Free State			
• Other (specify):			
PART 2: ASSESSMENT OF MASTERS REAL ESTATE TOPICS OFFERED IN SOUTH AFRICA AND OTHER PARTS OF THE WORLD			
1. Please indicate importance of the subject in the course			
Not Important = 1. Important = 2. Very Important = 3			
Building Economics	1	2	3
Building Technology	1	2	3
Construction Contract Law	1	2	3
Corporate Strategy	1	2	3
Environmental Economics and Management	1	2	3
Financial Management	1	2	3
Information Technology	1	2	3
International Real Estate	1	2	3
Property Development	1	2	3

APPENDIX A (CONTINUED)
THE QUESTIONNAIRE (CONTINUED)

PART 2: ASSESSMENT OF MASTERS REAL ESTATE TOPICS OFFERED IN SOUTH AFRICA AND OTHER PARTS OF THE WORLD			
1. Please indicate importance of the subject in the course.			
Not Important = 1. Important = 2. Very Important = 3			
Property Economics	1	2	3
Property Finance	1	2	3
Property Investment	1	2	3
Property Management / Facilities Management	1	2	3
Property Marketing	1	2	3
Property Law	1	2	3
Property Valuation	1	2	3
Property Tax	1	2	3
Research	1	2	3
2. Please indicate the approximate percentage (%) of time you suggest should be spent on each subject during the course.			
Building Economics			
Building Technology			
Construction Contract Law			
Corporate Strategy			
Environmental Economics and Management			
Financial Management			
Information Technology			
International Real Estate			
Property Development			
Property Economics			
Property Finance			
Property Investment			
Property Management / Facilities Management			
Property Marketing			
Property Law			
Property Valuation			
Property Tax			
Research			
Total should be 100%			

APPENDIX A (CONTINUED)

THE QUESTIONNAIRE (CONTINUED)

PART 3: REQUIREMENTS OF THE PROPERTY INDUSTRY
1. Please list other topics to be included in a Masters Real Estate syllabus (maximum 5 topics)
(a)
(b)
(c)
(d)
(e)
2. Please give any other comments to be considered in a Masters Real Estate syllabus (maximum 5
(a)
(b)
(c)
(d)
(e)

APPENDIX B

LETTER OF TRANSMITTAL

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

APPENDIX B

LETTER OF TRANSMITTAL

……
……
……
……

Dear Sir / Madam

ASSESSMENT OF MASTERS REAL ESTATE EDUCATION IN SOUTH AFRICA

I am conducting PhD research to assess the scope and relevance of the course content of Master's degrees in Real Estate / Property Studies in South Africa.

It would be highly appreciated if you could complete the attached questionnaire and return it in the enclosed pre-addressed envelope before 31 August 2006.

Completion of the questionnaire should not take up more than 15 minutes of your valuable time.

As a selected respondent, your response is valuable and will assist in the improvement of quality of the curricula for the benefit of the property industry.

Your answers will be confidential and only summary results will be published.

Your contribution to the research is highly appreciated.

Yours faithfully

Samuel H.P. Chikafalimani
PhD Student
Department of Construction Economics
University of Pretoria
Republic of South Africa

Professor C.E. Cloete
Study Supervisor
Department of Construction Economics
University of Pretoria
Republic of South Africa

APPENDIX C

LIST OF MASTERS REAL ESTATE PROGRAMMES IDENTIFIED IN THE WORLD

APPENDIX C

LIST OF MASTERS REAL ESTATE PROGRAMMES IDENTIFIED IN THE WORLD

A. Masters Real Estate Programmes in Europe		
Country	**Name of institution**	**Name of degree offered**
1. Austria	Danube University Krems	MSc Real Estate
2. Baltic States: Lithuania	Vilnius Gediminas Technical University	Masters in Construction Economics and Property Management
3. Belgium	University of Antwerp	Master in Real Estate
4. Hungary	Budapest University of Technology and Economics	MSc Real Estate in conjunction with Nottingham Trent University
5. Finland	1. Helsinki University of Technology	Master's in Real Estate Economics
	2. HANKEN (Swedish School of Economics and Business Admin.)	Master's in Real Estate Finance
6. Germany	European Business School (ebs)	MSc Real Estate in conjunction with affiliated universities
7. Great Britain	1. University of Aberdeen	1. MSc Property 2. Master of Land Economy
	2. University of the West of England Bristol	MSc Real Estate and Business Management
	3. University of Cambridge	1. MPhil in Real Estate Finance 2. MPhil in Land Economy
	4. University of Central England in Birmingham	1. MSc Real Estate and Mgt 2. MSc International Real Estate
	5. City University (Cass Business School - City of London)	1. MSc Real Estate Investment 2. MSc Corporate Real Estate Finance and Strategy
	6. University of Greenwich	MSc Real Estate Development and Investment
	7. Heriot Watt University	1. MSc Property Investment and Finance 2. MSc Urban Real Estate Mgt and Development
	8. Kingston University	MSc Real Estate
	9. Liverpool John Moores University	MSc Commercial Property
	10. London South Bank University	MSc Estate Management
	11. Napier University	MSc Property Mgt and Investment
	12. Northumbria University	MSc Real Estate Management
	13. Oxford Brookes University	1. MSc Real Estate Management 2. MSc International Real Estate
	14. University of Reading	1. MSc Real Estate 2. MSc International Real Estate
	15. University of Salford	MSc Real Estate and Property Mgt
	16. Sheffield Hallam University	MSc Property Appraisal and Mgt
	17. University of Ulster	MSc Real Estate and Facilities Mgt
8. Italy	Politecnico di Milano	Master "Real Estate Management"
9. Netherlands	University of Amsterdam (Amsterdam School of Real Estate)	MSc Real Estate
10. Sweden	KTH (Royal Institute of Technology)	MSc Real Estate Management

APPENDIX C (CONTINUED)

LIST OF MASTERS REAL ESTATE PROGRAMMES IDENTIFIED IN THE WORLD (CONTINUED)

B. Masters Real Estate Programmes in North America		
Country	**Name of institution**	**Name of degree offered**
11. United States	1. Clemson University	Master of Real Estate Development
	2. Columbia University	MSc in Real Estate Development
	3. Cornell University	Master of Professional Studies in Real Estate
	4. University of Denver	MSc in Real Estate & Construction Management
	5. University of Florida	MSc in Real Estate
	6. Georgia State University	MSc in Real Estate
	7. Johns Hopkins University	MSc in Real Estate
	8. Massachusetts Institute of Technology	MSc in Real Estate Development
	9. New York University	MSc in Real Estate
	10. University of North Texas	MSc in Real Estate Analysis
	11. University of San Diego	MSc in Real Estate
	13. University of St Thomas	MSc in Real Estate
	14. University of Texas at Arlington	MSc in Real Estate
	15. Texas A&M University	Master of Land Economics & Real Estate
	16. University of Wisconsin	MSc in Real Estate and Urban Economics
C. Masters Real Estate Programmes in Asia		
Country	**Name of institution**	**Name of degree offered**
12. China	1.Tianjin, Tongji and Tsinghua Universities	MSc Real Estate in collaboration with University of Hong Kong
	2. Zhejiang University	MSc International Real Estate in conjunction with the Hong Kong Polytechnic University
	3. University of Hong Kong	MSc Real Estate
	4. Hong Kong Polytechnic University	MSc International Real Estate
13. Japan	Meikai University	Masters in Real Estate Sciences
14. Malaysia	University of Malaya	MSc Real Estate
15. Singapore	National University of Singapore	MSc Real Estate
D. Masters Real Estate Programmes in the Pacific-Rim		
Country	**Name of institution**	**Name of degree offered**
16. Australia	1. Deakin University	MSc Real Estate in collaboration with University of Greenwich, UK
	2. Curtin University of Technology	Master of Property
	3. University of Melbourne	Master of Property & Construction
	4. University of Newcastle	Master of Property
	5. University of New South Wales	Master of Real Estate
	6. University of Queensland	Master of Property Studies
17. New Zealand	1. University of Auckland	Master of Property
	2. Lincoln University	Master of Property Studies

APPENDIX C (CONTINUED)

LIST OF MASTERS REAL ESTATE PROGRAMMES IDENTIFIED IN THE WORLD (CONTINUED)

E. Masters Real Estate Programmes in Africa		
Country	**Name of institution**	**Name of degree offered**
18. South Africa	1. University of Pretoria	MSc Real Estate
	2. University of Witwatersrand	MSc Property Development & Mgt
	3. University of Cape Town	MSc Property Studies
	4. University of Free State	Master of Property Science
	5. Nelson Mandela Metropolitan University	MSc Built Environment
19. Tanzania	University College of Lands & Architectural Studies	MSc Real Estate
20. Kenya	University of Nairobi	MA Valuation & Property Mgt
21. Nigeria	Obafemi Awolowo	MSc Estate Management
22. Ghana	Kwame Nkrumah University of Science and Technology	MPhil Land Management

APPENDIX D

COURSE CONTENT OF MASTERS REAL ESTATE CURRICULA IN OTHER CONTINENTS

APPENDIX D

COURSE CONTENT OF MASTERS REAL ESTATE CURRICULA IN OTHER CONTINENTS

Continent / Country / University / Degree offered	**Core curriculum**	**Credit hours**
North America		
U.S.A.		
1. Johns Hopkins: MSRE	Capital Markets. Real Estate Enterprise. Legal Issues in Real Estate. Managerial Accounting for Developers and Investors. Real Estate Construction Technology. Market Analysis and Sit Selection. Design Issues. Regulation of Real Estate. Real Estate Finance. Urban Analysis. Analytical Techniques in Real Estate Development.	40
2. New York: MSRE	Advanced Financial and Managerial Decision Making. Demand Analysis for a specific property and location. Public Equity and Debt Markets. Finance and Investment. Development. Valuation and Analysis. Asset Management. International Real Estate. Capstone Course.	42
3. San Diego: MSRE	Principles of Real Estate. Land Market Analysis. Planning. Valuation. Investment Analysis. Finance. Law. Accounting. Economics. Statistics. Management.	30
4. George State: MSRE	Real Estate Finance. Real Estate Investment. Market Analysis. Real Estate Law. Land Use Controls. Urban Land Economics. Micro Computer Applications. Appraisal. Residential or Commercial Development.	42
5. Texas at Arlington: MSRE	Real Estate Analysis. Real Estate Development. Real Estate Finance. Real Estate Investment. Real Estate Market Analysis.	30/36

APPENDIX D (CONTINUED)
COURSE CONTENT OF MASTERS REAL ESTATE CURRICULA IN OTHER CONTINENTS (CONTINUED)

Continent / Country / University / Degree offered	**Core curriculum**	**Credit hours**
North America		
U.S.A.		
6. Pennsylvania State: MSRE	Real Estate Finance. Real Estate Investment. International Real Estate. Real Estate and Portfolio Management. Real Law. Real Estate Valuation.	30 +
7. Florida: MSRE	Introduction to Real Estate. Investment Property Analysis. Real Estate Portfolios and Securities. Primary Mortgage Markets and Institutions. Secondary Mortgage Markets and Institutions. Real Estate Market and Transaction Analysis. Quantitative Analysis. GIS/Location Analysis. Real Estate Development. Law of Real Estate Transactions. Capstone Seminar and Applied Project.	34
Europe		
U.K.		
1. Reading: MSRE	*Core Modules:* Appraisal. Real Estate Economics. Real Estate Finance and Funding. Real Estate Environment. Capital Project Analysis and Investment. *Six Optional Modules:* Real Estate Development. International Real Estate Markets. Real Estate Investment. Option Pricing in Real Estate Decision Making. Real Estate Portfolio Analysis. Real Estate Management and Real Estate Valuation. Property Law	180
2. Ulster: MSRE	Planning and Property Law. Property Valuation. Research Design Methods. Maintenance Management. Business Management and Finance. Real Estate Appraisal and Finance. Construction Project Management. Global Real Estate Market Analysis.	300
3. Aberdeen: MSP	Valuation Principles. Land and Property Economics. Building Technology. Property Law and Institutions. International Property. Advanced Valuation. Property Use and Investment. Property Research. Corporate Real Estate.	190

APPENDIX D (CONTINUED)

COURSE CONTENT OF MASTERS REAL ESTATE CURRICULA IN OTHER CONTINENTS (CONTINUED)

Continent / Country / University / Degree offered	**Core curriculum**	**Credit hours**
Europe		
U.K.		
4. Central England in Birmingham: MSREM	Planning Practice. Property Development. Law. Asset Management. Strategic Management. Marketing and Practice Development. Valuation and Investment Appraisal. Construction.	8 modules
5. Kingston: MSRE	*Compulsory modules:* Corporate Strategy in Real Estate. IT for Real Estate Applications. Research Orientated Modules. *Option Modules:* Advanced IT for Real Estate Applications. Appraisal of Trading Properties. Real Estate versus Competing Asset Classes. Sustainable Investment. Alternative Dispute Resolution. Applied Management Project. Economic Sustainability European Real Estate Practice. Facilities Management and Corporate Asset Management. Real Estate Corporate Finance and Funding. Real Estate Investment and Development Appraisal. Real Estate Law. Real Estate Portfolio and Risk Management. Real Estate Securitisation and Regulatory Environment. Real Estate Valuation. Regeneration.	12 modules
6. London South Bank: MSEM	Valuations. Law for Property Professionals. Construction and Planning. Professional Practice. Land Economics, Corporate Management and Marketing. Landlord and Tenant Valuations and Law. Statutory Valuations. Property Investment Appraisal. Development Appraisal and Finance. Research Methods.	
7. West of England, Bristol: MSREBM	Real Estate Appraisal and Valuation. Real Estate Planning and Development. Property Economics. Property Management and Law. Property Investment Management. Organisational Analysis and Change. Finance for Managers. Research for Policy and Practice	8 modules

APPENDIX D (CONTINUED)

COURSE CONTENT OF MASTERS REAL ESTATE CURRICULA IN OTHER CONTINENTS (CONTINUED)

Continent / Country / University / Degree offered	Core curriculum	Credit hours
Europe		
Belgium		
8. Antwerp: MRE	Real Estate Markets. Real Estate Investment and Valuation. Real Estate Contracts. Real Estate Technology and Management. Real Estate Portfolio Management. Real Estate Economics.	300
Netherlands		
9. Amsterdam: MRE	Valuation. Market Analysis. Portfolio Analysis. Investment Analysis. Development Process. Real Estate Management.	
Asia		
Singapore		
1. Singapore: MSRE	Real Estate Investment and Portfolio Analysis. Real Estate Marketing and Negotiation. Corporate Real Estate. Legal and Institutional Framework. Real Estate Economics. International Real Estate. Real Estate Development. Valuation. Planning.	40
Hong Kong		
2. Hong Kong: MSRE	Economics for Professionals. Management Theory and Construction Projects. Law for the Real Estate and Construction Industry. Real Estate Economics. Real Estate Investment and Finance. Real Estate Management. Real Estate Investment and Capital Markets. Land Economics	9 modules
Pacific-Rim		
Australia		
1. Curtin: MP	Property Management. Construction and Building Costs. Income Property Analysis. Property Economics. Real Estate Market Analysis. Land Law. Property Finance. Real Estate Planning and Development. Valuation Methodology. Business Valuation. Statutory Valuation. Valuation Practice.	300

APPENDIX D (CONTINUED)

COURSE CONTENT OF MASTERS REAL ESTATE CURRICULA IN OTHER CONTINENTS (CONTINUED)

Continent / Country / University / Degree offered	**Core curriculum**	**Credit hours**
Pacific-Rim		
Australia		
2. Melbourne: MPC	Asset Management. Building Services and Operations. Corporate Real Estate. Facility Management. Property Development. Property Investment. Property Valuation and Analysis. Property Securitisation.	100-300 points
New Zealand		
3. Auckland: MP	Property Valuation. Plant and Machinery Valuation Property Marketing. Property Management. Facilities Management. Property Development. Property Finance and Investment. Property Economics. Building Economics.	28 points
4. Lincoln: MPS	Property Investment and Portfolio Analysis. Property Market Analysis. Property Asset Management. Property Development. Financial Management.	1000 hours to complete

Sources: Directory of Real Estate Programs, Urban Land Institute (2005), RICS Prospectus of Surveying Education (2005), and university websites

APPENDIX E

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

APPENDIX E

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Suggested topics	Rank	Freq.	%	Offered or not	Comment
1	Town planning / urban management / urban design & planning / urban studies / principles of urban planning / rezoning	1	42	10.61	1	Offered as subtopic
2	Project management	2	24	6.06	1	Offered as elective
3	Negotiation skills	3	18	4.55	1	Offered as subtopic
4	Corporate real estate management / institutional property asset management	4	13	3.28	1	Offered as subtopic
5	Architecture / basic architectural design / property design / understanding of plans / basic knowledge of architecture / building design	5	10	2.53	0	
6	Recent property finance methods as offered by major banks / corporate finance (deal structuring) / types of finance from bank to capital markets / structured finance / development financing / innovative finance	5	10	2.53	1	Offered as subtopic
7	Listed property / listed property sector dynamics and funds	5	10	2.53	1	Offered as subtopic
8	Risk management / hedge (strategy)	6	9	2.27	1	Offered as subtopic
9	Property and construction transformation charters / property charter requirements / black economic empowerment	6	9	2.27	1	Offered as subtopic
10	Feasibility studies / financial viabilities / feasibility of project	7	8	2.02	1	Offered as subtopic
11	Human resources management / people management / staff management / labour laws	8	7	1.77	1	Offered as elective
12	Presentation skills / public speaking / public relations / communication skills (techniques) / writing skills	8	7	1.77	1	Offered as subtopic
13	Government policy (role) and its effects on the real estate industry / role of government in urban planning and services provision / property & government (municipality) interaction	8	7	1.77	1	Offered as subtopic
14	Real estate investment trusts market in South Africa / property unit trusts / real estate investment trusts / property investment vehicles / investment vehicles	8	7	1.77	1	Offered as subtopic
15	Property portfolio management / property asset management	9	6	1.52	1	Offered as topic
16	Economics / development economics and planning / general economics	10	5	1.26	0	

APPENDIX E (CONTINUED)

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Suggested topics	Rank	Freq.	%	Offered or not	Comment
17	How to do leases / leasing of property / commercial lease agreements	10	5	1.26	1	Offered as subtopic
18	Sale agreements (contracts) and stamp duty / commercial sale documentation	10	5	1.26	1	Offered as subtopic
19	Basic accounting	10	5	1.26	1	Offered as topic
20	Life cycle costing	10	5	1.26	1	Offered as subtopic
21	Quantity surveying methods (costing) / basic quantity surveying / basic knowledge of quantity surveying / building costs	11	4	1.01	1	Offered as subtopic
22	Securitisation / securitisation of property portfolios / debt securitisation structures	11	4	1.01	1	Offered as subtopic
23	Energy efficiency / energy / electricity consumption / energy saving / power	11	4	1.01	1	Offered as subtopic
24	Business skills / entrepreneurship / customer relations	11	4	1.01	1	Offered as subtopic or elective
25	Changes in demographics-how these affect property market, South Africa specifically / demographic studies / demographic research i.e. profiling of clients	11	4	1.01	1	Offered as subtopic
26	Leadership skills	11	4	1.01	1	Offered as elective
27	Research techniques / research	12	3	0.76	1	Offered as topic
28	Basic statistics / statistics	12	3	0.76	1	Offered as subtopic
29	Health and safety management / occupational health and safety act training	12	3	0.76	1	Offered as subtopic
30	Property cycles / real estate cycles vs lending cycles	12	3	0.76	1	Offered as subtopic
31	Land use management / land management	12	3	0.76	0	
32	Financial skills / interpretation of financial statements / property financial reporting	12	3	0.76	1	Offered as topic
33	Shopping centre management / strategic retail management	12	3	0.76	1	Offered as subtopic
34	Listed property funds worldwide	12	3	0.76	0	
35	Retail, industrial, office, residential & leisure property dynamics	12	3	0.76	1	Offered as subtopic
36	Time value of money	12	3	0.76	1	Offered as subtopic
37	Sociology / anthropology / socio-economic development / social economics	12	3	0.76	0	

APPENDIX E (CONTINUED)

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Suggested topics	Rank	Freq.	%	Offered or not	Comment
38	International market trends / trends in real estate internationally	12	3	0.76	0	
39	Construction management	12	3	0.76	1	Offered as elective
40	Legal process / legal implications	12	3	0.76	1	Offered as subtopic
41	Professional ethics	12	3	0.76	1	Offered as subtopic
42	Direct property vs listed property / direct property vs other asset classes / importance of property as a diversification tool / property investment relative to other asset classes	12	3	0.76	1	Offered as subtopic
43	Low cost housing	12	3	0.76	1	Offered as subtopic
44	Management science	13	2	0.51	0	
45	Total quality management / quality assessment	13	2	0.51	1	Offered as subtopic/ elective
46	Latest information technology / programming skills	13	2	0.51	1	Offered as elective
47	Interpersonal relations	13	2	0.51	1	Offered as subtopic/ elective
48	World economics / international economics	13	2	0.51	0	
49	Environmental management	13	2	0.51	1	Offered as subtopic
50	Negotiating contracts / contract law	13	2	0.51	1	Offered as subtopic
51	Current trends in property development / new property trends	13	2	0.51	1	Offered as subtopic
52	Economic appraisal of projects	13	2	0.51	1	Offered as subtopic
53	Property insurance	13	2	0.51	1	Offered as subtopic
54	Green buildings	13	2	0.51	0	
55	Tendering / procurement	13	2	0.51	1	Offered as subtopic
56	Regional building regulations / regional planning	13	2	0.51	1	Offered as subtopic or topic
57	Rural development / management	13	2	0.51	0	
58	Cash flow analysis / cash flow management	13	2	0.51	1	Offered as subtopic

APPENDIX E (CONTINUED)

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Suggested topics	Rank	Freq.	%	Offered or not	Comment
59	Credit risk / credit management	13	2	0.51	1	Offered as subtopic
60	Public administration / government structures particularly local	13	2	0.51	1	Offered as subtopic
61	Social aspects of built environment / property development and society	13	2	0.51	1	Offered as subtopic
62	Sustainability / sustainable development	13	2	0.51	0	
63	Distinguishing differences between different types of properties: commercial, industrial, residential, retail and leisure	13	2	0.51	1	Offered as subtopic
64	Office practice and behaviour / organisational behaviour	13	2	0.51	0	
65	Financial cost modelling / financial modelling	13	2	0.51	0	
66	Syndications / joint venture structures	13	2	0.51	1	Offered as subtopic
67	Valuation of special properties	14	1	0.25	1	Offered as subtopic
68	Property rates act	14	1	0.25	1	Offered as subtopic
69	Valuation case law	14	1	0.25	1	Offered as subtopic
70	Forecasting	14	1	0.25	0	
71	Regression analysis	14	1	0.25	1	Offered as subtopic
72	Change management	14	1	0.25	0	
73	Policy formulation and analysis	14	1	0.25	0	
74	Property portfolio analysis	14	1	0.25	1	Offered as subtopic
75	Land policies	14	1	0.25	1	Offered as subtopic
76	Human behaviour (psychology)	14	1	0.25	0	
77	International property policies	14	1	0.25	0	
78	Mercantile law	14	1	0.25	0	
79	Brick laying	14	1	0.25	0	
80	Advanced financial management	14	1	0.25	0	
81	Global and financial innovation	14	1	0.25	0	
82	Corporate real estate	14	1	0.25	1	Offered as subtopic
83	Time management	14	1	0.25	1	Offered as subtopic or elective
84	Professional bodies	14	1	0.25	1	Offered as subtopic

APPENDIX E (CONTINUED)

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Suggested topics	Rank	Freq.	%	Offered or not	Comment
85	Evolution of property markets	14	1	0.25	1	Offered as subtopic
86	Due diligence on exist properties	14	1	0.25	1	Offered as subtopic
87	Value added services or means to generate revenue through adding value	14	1	0.25	1	Offered as subtopic
88	Land claim issues (property ownership)	14	1	0.25	1	Offered as subtopic
89	Global influence	14	1	0.25	0	
90	Property management computer systems	14	1	0.25	1	Offered as subtopic
91	Capital funding	14	1	0.25	1	Offered as subtopic
92	Value of effective networking	14	1	0.25	1	Offered as subtopic
93	Bulk infrastructure	14	1	0.25	1	Offered as subtopic
94	Supply chain management	14	1	0.25	0	
95	Science of counting	14	1	0.25	0	
96	Business economics	14	1	0.25	0	
97	Hotel property industry research	14	1	0.25	1	Offered as subtopic
98	Corporate governance	14	1	0.25	0	
99	Company law including closed corporations and trusts	14	1	0.25	0	
100	Location theory	14	1	0.25	1	Offered as subtopic
101	Heritage	14	1	0.25	0	
102	Transport policy	14	1	0.25	0	
103	Tenant installation	14	1	0.25	1	Offered as subtopic
104	Operations management	14	1	0.25	0	
105	Team skills	14	1	0.25	1	Offered as subtopic
106	Banking practice	14	1	0.25	0	
107	Tenant mix	14	1	0.25	1	Offered as subtopic
108	Building services	14	1	0.25	1	Offered as subtopic or elective
109	Air conditioning	14	1	0.25	1	Offered as subtopic
110	Water management-recycling	14	1	0.25	0	

APPENDIX E (CONTINUED)

LIST OF OTHER TOPICS TO BE INCLUDED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Suggested topics	Rank	Freq.	%	Offered or not	Comment
111	Strategic management of a listed property company	14	1	0.25	0	
112	Investor / tenant / stakeholder relationship	14	1	0.25	1	Offered as subtopic
113	Urban form and its impact on property market	14	1	0.25	1	Offered as subtopic
114	Value of timeless design	14	1	0.25	0	
115	Debt structuring (mezzanine, senior debt & stretched senior)	14	1	0.25	0	
116	Lead / lag correlation between capitalisation rates and interest rates in South Africa environment (perspective)	14	1	0.25	1	Offered as subtopic
117	Relevance (applicability) of equity valuation models to that of property valuation models	14	1	0.25	0	
118	Dynamics of CBD properties	14	1	0.25	1	Offered as subtopic
119	Property investment analysis	14	1	0.25	1	Offered as subtopic
120	Sectional title management	14	1	0.25	1	Offered as subtopic
121	Township establishment / township proclamation procedures	14	1	0.25	1	Offered as subtopic
122	Private-public partnerships	14	1	0.25	1	Offered as subtopic
123	Property related professional services	14	1	0.25	1	Offered as subtopic
124	Knowledge management	14	1	0.25	0	
125	Move management	14	1	0.25	0	
126	International property funding	14	1	0.25	0	
127	Effects of politics on property	14	1	0.25	1	Offered as subtopic
128	Impact of CBD degeneration	14	1	0.25	1	Offered as subtopic
129	GIS and satellite mapping	14	1	0.25	1	Offered as subtopic
	Total		396	100		

APPENDIX F

LIST OF ANY OTHER COMMENTS TO BE CONSIDERED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

APPENDIX F

LIST OF ANY OTHER COMMENTS TO BE CONSIDERED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Comment	Rank	Freq.	%	Remark
1	Practical component / include a practical and real life project / practicals are important-interact with professionals / virtual projects	1	15	9.74	Weakness
2	Case studies should be included	2	6	3.90	Weakness
3	Writing / communication skills	3	4	2.60	Need
4	Guest lecturers	3	4	2.60	Need
5	Experienced lecturers are ideal valuable education / experienced lecturers huge value to the course	3	4	2.60	Need
6	Property courses related to property or land ownership and redistribution initiatives must be considered in South Africa / black economic empowerment, property and construction charters / property as a tool to uplift the poor	3	4	2.60	Need
7	Companies listed on stock exchange / listed sector / JSE rules and regulations to be covered	4	3	1.95	
8	Specialisation must be encouraged / the whole industry is too broad / allow areas of specialisation i.e. commercial, retail, etc / specialisation in different types of property (sectors of property) i.e. commercial, industrial, residential, or retail	4	3	1.95	Need
9	Experiential learning	4	3	1.95	Need
10	Your list is very comprehensive / all topics listed seem to cover every thing / course seems comprehensive	4	3	1.95	Strength
11	Masters Real Estate syllabus must include and cover real estate issues in the entire Southern Africa region because a good number of students are coming from there	5	2	1.30	Weakness
12	Business skills / business management / business entrepreneurship training	5	2	1.30	Need
13	Market trends	5	2	1.30	
14	Land use and policies	5	2	1.30	
15	Integrated development projects	5	2	1.30	
16	Site visits and discussion with industry professionals to be included	5	2	1.30	
17	Masters syllabus should expose students (even in a very limited way) to: local government politicians and officials; urban and town planning practices; banks and financial institutions; property developers; estate agents; and property end-users	5	2	1.30	Need
18	Social impact of a property development / consider social aspects of property development even in profit orientated developments	5	2	1.30	Need
19	Graduates require an understanding of what is expected of them in an employment environment, often graduates are clueless when inducted into an employment environment	5	2	1.30	Weakness
20	On-site occupational health and safety act compliance / safety and security design principles	5	2	1.30	

APPENDIX F (CONTINUED)

LIST OF ANY OTHER COMMENTS TO BE CONSIDERED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Comment	Rank	Freq.	%	Remark
21	Transport requirements / provision of public transport infrastructure and services	5	2	1.30	
22	50% research and 50% course work / at M- level research should make up at least 50% of offer and the balance must be given to the specific subject material	5	2	1.30	Need
23	Operating costs / costing and management of utilities	5	2	1.30	
24	Selection of information technology (IT) depends on prior learning i.e. could be optional / IT to include Excel for use in the property industry	5	2	1.30	
25	How to determine yields and capitalisation rates for different types of property and locations / yields / capitalisation rates	5	2	1.30	
26	Legislation updates	6	1	0.65	
27	Numerical skills	6	1	0.65	
28	More time to be spent on field specialising e.g. valuation, marketing or management	6	1	0.65	Need
29	Include internationally accepted reference material	6	1	0.65	Weakness
30	Asking banking institutions to get more involved in credit finance course for property development	6	1	0.65	
31	Educating people on mass property development or investment	6	1	0.65	
32	Request leaders in government to participate or understand real estate development	6	1	0.65	
33	Courses like property valuation should be taught by registered valuers with more than 10 years experience	6	1	0.65	Need
34	Students studying MSc Real Estate should do property law not construction contract law	6	1	0.65	
35	Upon completion of course work a postgraduate diploma should be offered	6	1	0.65	
36	Candidates from other countries need more information on how the construction or real estate industry works in South Africa	6	1	0.65	Need
37	Bridging courses for financial subjects	6	1	0.65	
38	General technical awareness subject similar to property practice is important	6	1	0.65	Need
39	Organise property development educational tour for students	6	1	0.65	Need
40	Students should be grouped and produce a full property development and management mock assignment - similar to what is done at property development programmes	6	1	0.65	Need
41	Balance 50% theory and 50% practicals	6	1	0.65	Need
42	More emphasis on property finance	6	1	0.65	Need
43	More time to be allocated to property economics, finance, investment, law and valuation	6	1	0.65	Need
44	Motivational speakers	6	1	0.65	Need
45	Income producing vs non income producing properties	6	1	0.65	

APPENDIX F (CONTINUED)

LIST OF ANY OTHER COMMENTS TO BE CONSIDERED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Comment	Rank	Freq.	%	Remark
46	Leisure market property	6	1	0.65	
47	Negotiation skills	6	1	0.65	Need
48	Course work should be intensive	6	1	0.65	
49	Thesis should be innovative and show original thought	6	1	0.65	Need
50	"Real estate" is American, in South Africa term "property" is more appropriate	6	1	0.65	
51	Indexing / index for construction	6	1	0.65	
52	All assignments must be based on practical problems or situations	6	1	0.65	Weakness
53	Students should have a basic property knowledge before undertaking these studies	6	1	0.65	Need
54	Holistic content or approach	6	1	0.65	Strength
55	Must be relevant in South Africa	6	1	0.65	Need
56	Outsourcing	6	1	0.65	
57	Construction process	6	1	0.65	
58	Implementation of controls	6	1	0.65	
59	Risk management	6	1	0.65	
60	Market information is vitally important in all aspects of real estate	6	1	0.65	
61	No technical building material	6	1	0.65	
62	More intensive year long programme and one year thesis	6	1	0.65	
63	Investment vehicles	6	1	0.65	
64	Corporate finance as it relates to issues of shares (vendor consideration), JSE, and scheme arrangement	6	1	0.65	
65	Understanding property design is useful	6	1	0.65	
66	FICA requirements for tenanted properties	6	1	0.65	
67	Financial modelling	6	1	0.65	
68	Energy efficient buildings	6	1	0.65	
69	Water storage	6	1	0.65	
70	Sustainable economic housing	6	1	0.65	
71	Use of recyclable materials	6	1	0.65	
72	Efficient building methods	6	1	0.65	
73	Corporate strategy should be optional	6	1	0.65	
74	Research should be optional	6	1	0.65	
75	A critical review of South African urban form must take place	6	1	0.65	
76	Modules should not be seen in isolation because project success is determined by a combination of information obtained from several modules	6	1	0.65	Need
77	Property development process	6	1	0.65	
78	Property funding options	6	1	0.65	
79	Community tourism	6	1	0.65	
80	Valuation of bare dominium	6	1	0.65	

APPENDIX F (CONTINUED)

LIST OF ANY OTHER COMMENTS TO BE CONSIDERED IN A MASTERS REAL ESTATE CURRICULUM IN RANKING ORDER

	Comment	Rank	Freq.	%	Remark
81	Emphasis should be made to make students understand interrelationships (integration) of separate but related subjects offered in the syllabus for a property professional	6	1	0.65	Need
82	How to handle tribal land for development purposes (traditional or customary land)	6	1	0.65	
83	Must focus on the property development cycle or process	6	1	0.65	
84	The degree is too broad	6	1	0.65	
85	Time allocated to subjects or topics in Masters syllabus also depends on prior learning	6	1	0.65	
86	A research paper (thesis) is essential	6	1	0.65	Strength
87	Methods of measuring floor areas	6	1	0.65	
88	The candidate must have “gut feel” for property	6	1	0.65	
89	Performance over time	6	1	0.65	
90	Life cycle costing	6	1	0.65	
100	Project management	6	1	0.65	
101	Capital (property) or fixed asset management	6	1	0.65	
102	Decision making in uncertain environment	6	1	0.65	
103	Leadership	6	1	0.65	Need
104	Practical evaluation rather than examinations in different real estate fields e.g. construction, property management, academics, etc	6	1	0.65	
105	Combine expertise in facilities management, property management, and property development	6	1	0.65	Need
106	There is gap between academic qualification and business experience	6	1	0.65	
107	Conflict management	6	1	0.65	
108	Team dynamics	6	1	0.65	
109	Majority of time should be spent on: property development, property economics, property valuation, property tax, property investment, and financial management	6	1	0.65	Need