COMMUNITIES OF PRACTICE IN INSTITUTIONS OF HIGHER LEARNING: A DESCRIPTIVE STUDY OF THE HUMANITIES AT THE UNIVERSITY OF KWAZULU-NATAL AND THE UNIVERSITY OF ZULULAND

by

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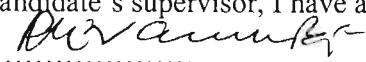
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DECLARATION

The author hereby declares that the contents of this dissertation are her own words and that the dissertation has not been submitted simultaneously, or at any other time, for another degree.

Signed: ....

Date: ....26/03/2007....

As the candidate's supervisor, I have approved this thesis for submission

Signed................................... Prof Patrick Ngulube

Date....26/03/2007....

DEDICATION

The work is dedicated to my parents, Mr and Mrs Mngadi. Thank you for the support you have given me throughout my studies.

ABSTRACT

Knowledge is a key resource. It enables individuals and organisations to perform through social interactions. New knowledge is created and shared that gives an organisation the edge to succeed in a highly complex and demanding world. Higher education institutions need to value and nurture the knowledge of academic staff and support and encourage social interactions that exist. One way of doing this is through the utilization of communities of practice. Communities of practice may improve performance of an organization and encourage and facilitate learning, collaboration and knowledge sharing.

The purpose of this study was to establish the extent to which communities of practice are defined and utilised within higher education institutions to foster learning and facilitate the sharing of knowledge among academic staff, in order to advance the scholarship of teaching and research in the humanities at the University of KwaZulu-Natal and the University of Zululand. The study intended to establish how communities of practice were understood, the nature of communities of practice and their formation, factors that support or inhibit the formation of communities of practice and the ways in which communities of practice can be cultivated and fostered within higher education institutions. Questionnaires, focus groups and semi-structured interviews were used to collect data.

The study found that most academics at the University of KwaZulu-Natal and University of Zululand were involved in communities of practice and had an understanding of communities of practice. The study also established that both institutions did not have a policy on communities of practice. The major problems facing the academics at UKZN and Unizul were that they had very heavy workloads, family responsibilities, lacked support from the institution, time constraints, the absence of policy on communities of practice and organizational culture (see Table 6).

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ACRONYMS USED

CPUT	Cape Peninsula University of Technology
CoPs	Communities of Practice
DVC	Deputy Vice Chancellor
HEIs	Higher Education Institutions
ICT	Information and Communication Technology
KM	Knowledge Management
NRF	National Research Foundation
OLS	Online Learning System
SAPSE	South African Post Secondary Education
UCED	University Continuing Education
UCT	University of Cape Town
UKZN	University of KwaZulu-Natal
UNESCO	United Nations Educational, Scientific and Cultural Organisation
Unizul	University of Zululand
UoY	University of York
UZ	University of Zululand
WCED	Western Cape Education Development
WISA	Writing Initiative to Support Academics

CHAPTER ONE: SETTING THE SCENE

1.1 Introduction to the study

Higher education institutions (HEIs), worldwide, have been confronted with many challenges and changes driven by the unprecedented global, social and economic forces of the knowledge economy (Guruz 2003; UNESCO 2004) in the information or knowledge society (Lor 2005; Martin 2004). HEIs are expected to address national needs and problems. The quality of knowledge generated within HEIs is becoming increasingly critical to national goals (Brennam and Shah 2000; Welsh Higher Education and Economic Development Task and Finish Group 2004). This particular emphasis is, in one way or another, forcing HEIs to rethink the ways in which they operate and do business.

There has always been an arguably increasing pressure on academic staff to keep up with new trends and developments within their fields of specialization and to become more creative and innovative (Abrahams and Melody 2004). Organizations have found that it is the expertise, know-how and skills of their staff that gives them the edge to succeed in highly complex and demanding environments (Van Wyk 2005). This requires academics to continuously engage in reflection on their practice, share good practice and continuously learn, to improve the quality and content of their knowledge. Knowledge is the key resource that can enable organizations, including academic institutions, to perform. Thus the knowledge that academic staff possess needs to be nurtured and valued, because it is through collective knowledge that institutions of higher learning can improve their teaching, research and community service. One way of achieving this is through the utilization of communities of practice (CoPs), also known as thematic groups or informal knowledge networks (King 2002).

Communities of practice are self-organising groups of people connected by a shared interest in a task, problem, job or practice (O'Hara, Alani and Shadbolt 2002). The literature reveals that communities of practice can improve the performance of any organization (Hislop 2005:63), as they encourage and facilitate learning, collaboration

1

and knowledge-sharing within the organization (Newell *et al.,* 2002:122). In communities of practice, knowledge is often shared through what Hildreth, Kimble and Wright (1998) referred to as an "apprenticeship system", that is, through shared practice and situated learning. The community of practice is a focus for situated learning, as members discover how best to practise and how best to integrate their practice with other aspects of their working lives (O'Hara, Alani and Shadbolt 2002).

There are a number of communities of practice that have been formed within the context of higher education. For instance, Illinois State University formed communities of practice to foster scholarship of teaching and learning (Illinois State University 2005). Another instance where a community of practice has been established is at Rockhurst University, where a community of practice is used for mentoring newer scholars of teaching and learning (Rockhurst University 2005). In addition, the University Continuing Education Association (UCEA) in the United States formed thirteen communities of practice. Each community of practice is a group of Association members organized around a professional function or critical issue of quality assurance and members are concerned with evaluating programmes and preparing for accreditation and unit reviews (University Continuing Education Association 2006).

In the case of South Africa, there is a project called Critical Research and Development. This collaborative project involves the Cape Peninsula University of Technology (CPUT), the Western Cape Education Development (WCED), the University of York (UoY), the University of Cape Town (UCT) and a number of schools in the Cape Town area. The project members formed a community of practice in which educators, curriculum developers, researchers and educator advisors work together to provide educators with the skills and insights necessary for them to develop argumentation in their learners. The focus of this community of practice is the shared responsibilities for the development of learning and teaching material to support critical thinking in educators (Cape Peninsula University of Technology 2006).

Academics at the University of KwaZulu-Natal (UKZN) within the School of Sociology and Social Studies formed what can be referred to as a community of

practice, that is, the Writing Initiative to Support Academics (WISA) (Maponya 2006). WISA was initiated by academics in 2005 as an informal community of practice to support each other in terms of writing and publishing research articles. WISA enables academics to share their experiences and ideas on ways to get articles published in reputable journals.

Although some of these groupings that exist in the institutions of higher learning are not labelled as "communities of practice", they do have characteristics of communities of practice. Such forums of groupings should be encouraged in higher education institutions. Some groupings or forums that already exist can be transformed or supplemented to establish communities of practice. It is in this context that the present study aimed at identifying and establishing the extent to which communities of practice were utilised within higher education institutions to advance teaching, research and community service.

1.2 Background to the study

This section will be giving background information about the University of KwaZulu-Natal and the University of Zululand (Unizul).

1.2.1 University of KwaZulu-Natal

1.2.1.1 History of the University of KwaZulu-Natal

The University of KwaZulu-Natal was formed on 1 January 2004, as a result of the merger between the University of Durban-Westville and the University of Natal. The new university brings together the rich histories of both the former universities.

The two KwaZulu-Natal universities were among the first South African institutions to merge in 2004, in accordance with the government's higher educational restructuring plans that will eventually see the number of higher educational institutions in South Africa reduced from 36 to 21. Confirmed by a Cabinet decision in December 2002, the mergers are the culmination of a wide-ranging consultative process on the restructuring of the Higher Education Sector that began in the early 1990s (University of KwaZulu-Natal 2006b). The University of KwaZulu-Natal is a truly South African university that is academically excellent, innovative in research,

critically engaged with society and demographically representative, redressing the disadvantages, inequities and imbalances of the past (University of KwaZulu-Natal 2006b).

1.2.1.2 Structure of the University of KwaZulu-Natal

The University of KwaZulu-Natal consists of five campuses, namely:

- Howard College Campus, Glenwood, Durban
- Pietermaritzburg Campus, Pietermaritzburg
- Westville Campus, Westville
- Nelson Mandela Medical School, Durban
- Edgewood Campus, Pinetown (teachers' training)

Table 1: University of KwaZulu-Natal college and faculty structure

College	Campus
1. The College of Humanities • The Faculty of Education • The Faculty of Humanities Development and Social Sciences	Edgewood, Pietermaritzburg Howard College and Pietermaritzburg
2. The College of Agriculture, Engineering and Science • The Faculty of Engineering • The Faculty of Science and Agriculture	Howard College, Pietermaritzburg and Westville
3. The College of Health Science • The Nelson R Mandela School of Medicine • The Faculty of Health Science	Nelson R Mandela School of Medicine
4. The College of Law and Management Studies • The Faculty of Law • The Faculty of Management Studies	Pietermaritzburg, Howard College

The University is divided into four colleges, each divided into faculties, as given in Table 1. Each faculty is further subdivided into schools, many of which were created by the merger of several departments. Although departments are no longer officially part of the management structure, many schools are still effectively subdivided into departments (University of KwaZulu-Natal 2006b).

1.2.1.3 College of Humanities

The College of Humanities consists of two faculties, Faculty of Education and Faculty of Humanities, Development and Social Sciences. The following paragraphs discuss these two faculties briefly (University of KwaZulu-Natal 2006b).

1.2.1.3.1 The Faculty of Education

The Faculty of Education is located on two sites, namely Edgewood (Pinetown) and Pietermaritzburg. The Faculty offers a wide range of undergraduate degrees and diplomas, as well as postgraduate certificates, honours, masters and doctoral studies programmes.

The vision of the university is of an education that is accessible and relevant to the full range of learners, appropriate to both national and global contexts, of high quality and that contributes to lifelong learning in a South Africa characterised by social justice and sustainable economic development. The Faculty sees itself as being a Faculty located within an African university which is socially inclusive, contextually relevant and has, as its primary function, the generation of knowledge needed in the society that it serves.

Its main responsibility is to offer studies of education in the context of lifelong learning, through teaching, research and service. This study involves the professional development of educators and leaders in education. The Faculty adheres to and promotes principles of equity, access, quality, collaboration and academic freedom (University of KwaZulu-Natal 2006b).

1.2.1.3.2 Faculty of Humanities, Development and Social Sciencies

The Faculty of Humanities, Development and Social Sciences administers a wide range of undergraduate degrees of international standing. This Faculty is located on the Pietermaritzburg and Howard College campuses, depending on the different subjects (University of KwaZulu-Natal 2006b).

1.2.2 The University of Zululand

1.2.2.1 History of the University of Zululand (Unizul)

Unizul has been designated to serve as the only comprehensive tertiary educational institution north of the uThukela River in KwaZulu-Natal. Its new status is in accordance with South Africa's National Plan for Higher Education aimed at eradicating inequity and costly duplication (University of Zululand 2006b). As a result, Unizul offers career-focused programmes, as well as a limited number of relevant university degree courses that have been structured with potential employees and employers in mind.

1.2.2.2 Structure of Unizul

Unizul consists of four faculties, namely:

- Faculty of Arts
- Faculty of Commerce, Administration and Law
- Faculty of Science and Agriculture
- Faculty of Education

1.2.2.3 The Faculty of Arts

The Faculty of Arts is the largest Faculty at Unizul, representing the largest number of enrolled students and the highest student to staff ratio. The 18 departments cover a wide range of fields, from language and linguistics to social sciences and the humanities. The Faculty of Arts remains dedicated to excellence and innovation in all fields and supports many research programmes and South African Post Secondary Education (SAPSE)-recognised journals (University of Zululand 2006b).

1.3 Problem statement

The notion of communities of practice was first used in 1991 by Jean Lave and Etienne Wenger, who used it in relation to situated learning, as part of an attempt to rethink learning (Wenger 1998a). More recently, communities of practice have become associated with knowledge management, as people have begun to see them as a way of developing social capital, nurturing new knowledge, stimulating innovation, or sharing existing tacit knowledge within an organisation (King 2002; Tight 2004; Wenger 1998a). The concept of communities of practice has been widely applied in both the private sector and development organisations (King 2002; Hildreth, Kimble, and Wright 1998) and, to a limited degree, within South African higher education institutions.

To varying degrees, academics, by the nature of their work, are concerned with teaching, research and community service (Sallis and Jones 2002; Kidwell, Vander Linde and Johnson 2002). They usually want to acquire a deeper understanding of their practice, but often do not have an enabling environment to support this action. One way of achieving this is through what Wenger (1998a) referred to as having "shared ways of engaging in doing things together", or communities of practice.

If the importance of such groups is accepted, it then becomes crucial for institutions of higher learning to create, support and sustain an enabling environment that would encourage academics to engage in collaborative conversations and dialogues, for instance around issues of policy, practice and educational research across departments, schools and faculties. Therefore "knowing what others know, what they can do, and how they can contribute" is key to improving performance among individuals and the institution" (Wenger 1998a). Despite the growing body of research on communities of practice, little is known about how communities of practice are defined and utilised within UKZN and Unizul.

1.4 Purpose of the study

The purpose of this study was to establish the extent to which communities of practice were defined and utilised within higher education institutions to foster learning and facilitate the sharing of knowledge among academic staff, in order to advance the scholarship of teaching and research in the humanities at the University of KwaZulu-Natal and the University of Zululand.

1.5 Research objectives

To achieve the above-mentioned purpose, the following objectives were posed (all refer to the humanities at UKZN and Unizul):

- To identify existing and evolving communities of practice (existing social interactions and networks).
- To determine how communities of practice are defined and understood by the academic staff.
- To understand the nature of these communities of practice.
- To determine the benefits that members get from existing and evolving communities of practice.
- To establish the role communities of practice can play within faculties and schools in advancing the scholarship of teaching, learning and research.
- To identify the institutional conditions which are most likely to favour or inhibit the emergence of communities of practice.
- To recommend how communities of practice can be fostered to encourage learning and sharing of knowledge among academic staff.

1.6 Research questions

To address the central research problem the following questions were formulated:

- Do communities of practice exist within the humanities? If so, how are they defined and utilized?

- What role do communities of practice play within the humanities?
- Are they recognized and supported within various levels of the institution?
- How can communities of practice be fostered in the humanities?

The objectives of the study and the research issues are summarised in Table 2.

Table 2: Conceptualisation of research issues

Research objectives	Research questions	Source of data
1. To determine how CoPs are defined and understood by the academic staff.	1. How are CoPs understood by the academic staff?	Questionnaires; focus groups
2. To identify existing and evolving CoPs (social interactions and networks).	2. Are there any existing and evolving CoPs (social interactions and networks)?	Questionnaires; focus groups observations
3. To determine the benefits that members get by belonging to the existing and evolving CoPs.	3. What benefits do members get by belonging to the existing and evolving CoPs?	Questionnaire focus groups literature review
4. To understand the nature of these CoPs.	4. How is the nature of these CoPs understood?	Questionnaires; focus groups
5. To establish the role CoPs can play within faculties and schools in advancing the scholarship of teaching, learning and research.	5. What role do CoPs play within faculties and schools in advancing the scholarship of teaching, learning and research?	Questionnaires; focus groups
6. To identify the institutional conditions which are most likely to favour or inhibit the emergence of CoPs.	6. Which institutional conditions are most likely to favour or inhibit the emergence of CoPs?	Questionnaires; focus groups
7. To recommend how CoPs can be fostered to encourage learning and sharing of knowledge among academic staff.	7. How can CoPs be fostered to encourage learning and sharing of knowledge among academic staff?	Questionnaires; focus groups

1.7 Justification for the study

The present study aims at creating an understanding of what communities of practice are and how they could be cultivated within higher education institutions if they do exist. This study may help academics within the humanities of the University of KwaZulu-Natal and the University of Zululand to establish better ways of improving knowledge sharing. Communities of practice can be seen as an important factor in improving the performance of an organisation. In addition, communities of practice encourage learning and collaboration and add value to practice (Newell *et al.,*

2002:122). This study will help in broadening the literature on communities of practice in higher education. This study is one of the studies funded by the National Research Foundation (NRF). The project aims to focus on how institutions of higher learning, particularly the UKZN and Unizul, can take advantage of knowledge management to achieve institutional goals. The application of communities of practice in higher education institutions may assist both institutions to share tacit knowledge in the area of teaching, research and community service.

1.8 Scope and limitations of the study

The study is delimited to academics in the humanities in UKZN and Unizul, given the constraints of time and resources. The generalisability of the findings of the study will then make it possible for the findings to be more applicable to academics in humanities in the two universities and other universities.

1.9 Definitions of key concepts used in this study

This section briefly defines important terms that are used repeatedly in the thesis. By understanding the way these terms are used, the reader will gain a clearer understanding of the nature of the research.

Academic staff
Academics or academic staff are the people who teach and undertake research at a university. Examples of titles of academic staff are professor, associate professor, reader, lecturer, tutor or demonstrator (Glossary of Terms, Abbreviations and Acronyms [n.d.]). For the purpose of this study, academic staff comprises professors, associate professors, senior lecturers, lecturers, junior lecturers and senior tutors, irrespective of their terms of employment.

Communities of practice
A community of practice is a "network of people who share a common interest in a specific area of knowledge or competence and are willing to work and learn together over a period of time to develop and share that knowledge" (Wenger and Snyder

2000). In further explaining this concept, Wenger (1998a) stated that communities of practice are small groups of people who have worked together over a period of time, but are not a team, or a task force; not necessarily an authorised or identified group or a formal structure such as a department or project team. They are informal entities existing in the minds of the members and bound together by a shared interest or problem. What holds them together is a common sense of purpose and a real need to know what each other knows.

Explicit knowledge

Explicit knowledge is defined as the expressed knowledge, which can be recorded, stored or searched (Collinson and Parcel 2001:16 cited in Van Wyk 2005:7).

Humanities

According to *New Encyclopaedia Britannica* (2005:138), the humanities are those branches of knowledge that concern themselves with human beings and their culture. The humanities include the study of all languages and literature; the arts, history and philosophy. For the purpose of this study, the term humanities will be used to refer to the humanities in UKZN and Unizul. The humanities in UKZN consist of the following schools: Anthropology, Gender and Historical Studies; Architecture, Planning and Housing; Development Studies; IsiZulu Studies; Literary Studies, Media and Creative Arts; Music; Philosophy and Ethics; Politics, Psychology; Religion and Theology; Social Work and Community Development and Sociology and Social Studies.

The humanities at the Unizul is made of the following departments: Afrikaans, Anthropology and Development Studies; Centre for Arts and Culture; Communication Science, Criminal Justice, All Languages; General Linguistics; Geography and Environmental Studies; Intercultural Communication, Library and Information Science, Nursing; Philosophy; Recreation and Tourism; Social Work; Sociology; Theology; Psychology and Human Movement Science and Education.

Knowledge

Davenport and Prusak (1998:5) define knowledge as a "fluid mix or frame of experience, values, contextual information, expert insight and grounded institutions

11

that provides an environment and framework for evaluating and incorporating new experiences and information". Knowledge is a condition of knowing something gained through experience or the condition of apprehending truth or fact through reasoning (Bouthillier and Shearer 2002). Knowledge involves a higher degree of certainty or validity than information and has the characteristic of information shared and agreed upon within a community (Meadow, Boyce and Kraft 2000:38).

Knowledge management

Davenport and Prusak (1998) indicate that "knowledge management is concerned with the exploitation and development of the knowledge assets of an organisation with a view to furthering the organisation's objectives. This requires systems for the creation and maintenance of knowledge and organisational learning".

Learning

Learning is regarded by Strata (1989:64) as the "process whereby individuals obtain new knowledge and insight and through which their behaviour and actions are changed" (Strata 1989:64 cited in Van Wyk 2005:52).

Tacit knowledge

Tacit knowledge is defined as personal knowledge embedded in individual experience and involving such intangible factors as personal belief, perspective and values (Ponelis and Fairer-Wessels 1998:3 cited in Van Wyk 2005:9). Defining tacit knowledge is important for this study, because it is tacit knowledge that people generally share in communities of practice.

1.10 Structure of the dissertation

The study consists of five chapters. Chapter One gives direction to the study. It covers the background of the study, objectives, research problem, key questions to be asked and definition of concepts.

Chapter Two gives an understanding of communities of practice and how they are defined. This is followed by the nature of communities of practice and their

formation. Following this are factors that support or inhibit the formation of communities of practice. This section looks at the ways in which communities of practice can be cultivated and fostered within higher education institutions. Chapter Two looks at the roles of communities of practice in fostering learning and facilitating knowledge-sharing among academics. In addition, social learning theory is discussed, to better understand the concept of communities of practice.

Chapter Three discusses research design and methodology that will be used in the study. It will explain how the population of the study was selected, data collection methods used and data collection procedures.

Chapter Four discusses the results of the study. It will show whether academic staff at UKZN and Unizul are involved in communities of practice and how communities of practice can be cultivated. The results will be presented using tables and graphs.

Chapter Five presents the interpretation of the results and relates them to theory. In Chapter Six conclusions are made regarding the findings of the study. This is followed by recommendations of the study and suggestions of areas in which future research should be conducted.

1.11 Summary of the chapter

In this introductory chapter, the research problem was presented, followed by the purpose and objectives of the study. Research questions were given, followed by the importance of the research project, its scope and limitations. Finally, key concepts used in the research project were defined, followed by the structure of the thesis.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The literature review gives an understanding of communities of practice and how they are defined. This is followed by a discussion of the characteristics of communities of practice. An overview of relationships among teams, informal networks and communities of practice is provided. Types or forms of communities of practice are discussed. After this, the stages and development of communities of practice are explored, followed by the investigation of why communities of practice are important to the organization. This is done by looking at the value they have for the organization, for the community and for the individual member of these communities. This review also discusses the roles of communities of practice in fostering learning and facilitating knowledge-sharing. Factors that support and inhibit the formation of communities of practice are discussed. In addition, the principal theories upon which the research project was constructed are presented in the literature review.

2.2 Definitions of communities of practice

When defining communities of practice it is important to understand what is meant by community and what is meant by practice. According to Wenger (1998b:5), the term community implies "a way of talking about social configuration in which our enterprises are defined as worth pursuing and our participation is recognized as competence" (Wenger 1998b:5). According to Allee (2000) people function as a community through relationships of mutual engagement that binds members together into a social entity. They interact regularly and engage in joint activities that build relationships and trust. The term practice is defined as "a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action" (Wenger 1998b:5).

Diverse definitions of communities of practice exist, yet they have similar characteristics. The phrase "communities of practice" was first used in 1991 by

Etienne Wenger and Jean Lave (Duncan, Gordon and Hu 2001:107, Hildreth and Kimble 2004:28). Wenger defined communities of practice as a "group of people who share information, insight, experience and tools about an area of common interest" (Wenger 1998a). In these communities, newcomers learn from old-timers by being allowed to participate in certain tasks related to the practice of the community. Over time, newcomers move from being peripheral to full participation in the community (Hildreth, Kimble and Wright 2000:28).

Communities of practice are self-organising groups of people connected by a shared interest in a task, problem, job or practice (O'Hara, Alani and Shadbolt 2002). Wenger and Snyder (2000:4) defined a community of practice as "a network of people who share a common interest in a specific area of knowledge or competence and are willing to work and learn together over a period of time to develop and share that knowledge". In other words, communities of practice are groups of people who have a common interest or bond and who have worked over a period of time together. People within communities of practice communicate with one another and develop a common sense of purpose and a desire to share ideas and work-related knowledge and experience. On a slightly different note, Sharp (1997) defined a community of practice as a "special type of informal network that emerges from a desire to work more deeply among members of a particular speciality or work group".

Although there are many definitions of communities of practice, the definition from Hildreth, Kimble and Wright (2000:3) is relevant and useful to this study. The authors defined a community of practice as "a group of professionals informally bound to one another through exposure to a common class of problems, common pursuit solutions, and thereby themselves embodying a store of knowledge". This definition is useful in the sense that it defines communities of practice as groups of professionals, not just any group of people. The study population is made up of academics who are professionals. As they are all academics they may have common challenges which may require similar solutions. For instance, they can form communities of practice to discuss issues concerning teaching, research and other matters.

In that regard, communities of practice in institutions of higher learning can be used as a way of helping academic staff to share ideas through talking about their

experiences within a specific field. Communities of practice have been used in a variety of environments to bring people together to share insights, develop expertise and to foster good practice through the exchange and creation of knowledge in a specific area (Wenger 1998a; Sallis and Jones 2002). For instance, the University of KwaZulu-Natal has an Online Learning System (OLS), that is meant to be used by academic staff and students for teaching and learning purposes. Academic staff of the University could form a community of practice to discuss issues concerning "online teaching methods". Some academic staff at the University put their lecture notes on the OLS and others are using it as a tool for facilitating social constructivist learning. Using an OLS can be challenging to academic staff in terms of how they may best use the OLS to facilitate online teaching and learning, as opposed to the traditional mode of delivery (face-to-face teaching).

Examples of communities of practice are found in many organizations and have been called by different names at various times, such as "learning communities" at Hewlett-Packard Company, "family groups" at Xerox Corporation, "thematic groups" at the World Bank, "peer groups" at British Petroleum and "knowledge networks" at IBM Global Services, but they remain similar in general intent (Gongla and Rizzuto 2001; Cummings and van Zee 2005:10). Some communities of practice have names, many do not (Lave and Wenger 2003).

2.3 Characteristics of communities of practice

Communities of practice have many characteristics. People belonging to communities of practice have a sense of connectedness. Communities of practice function within an organisational unit, can be cross-divisional, can span geographical boundaries or even span several different companies or organisations (Wenger 1998a; Van Wyk 2005:92). Some communities of practice are homogenous, composed of people from the same discipline or function, for example lecturers. Lecturers may collaborate on shared tasks. Some are heterogeneous, meaning that they bring together people with different backgrounds, for example lecturers, librarians and technicians (Wenger, McDermott and Snyder 2002:25). Communities of practice are mostly self-sufficient, meaning they develop informally with or without organisational support, but they can

benefit from some resources, such as outside experts, travel, meeting facilities and communication technology. According to Couros and Kesten (2003), bringing in outsiders may help members see the possibilities within their own mechanisms, or help in adopting other tools or procedures.

Some communities of practice are small and intimate, involving only a few specialists while others consist of hundreds of people, but it should be noted that the larger the group the more difficult it becomes to share knowledge. The development of practice takes time, but the lifespan varies widely. Some exist over centuries, while others exist for a short period of time (Wenger, McDermott and Snyder 2002:25).

According to Wenger (2001), cited in Sherer, Shea and Kristensen (2003:188), a community of practice has three main characteristics:

- **The domain:** a community of practice is not just a group of friends. Involvement in the community of practice requires some knowledge and some competence in the focus area, or domain. According to Snyder and de Souza Briggs (2003:7), the domain of a community of practice includes the key issues or problems that practitioners consider essential to what they do. For example lecturers share their thoughts and experiences about lessons, plans and ways to adopt them from different students.
- **The community:** members of the community interact and learn together, they engage in joint activities and discussions, help each other and share information.
- **The practice:** members of the community develop a shared repertoire of resources such as experiences, stories, tools and ways of addressing recurring problems. According to Snyder and de Souza Briggs (2003:9), practice is used to denote both methodologies and skills. It includes codified "best practice" that can be documented, as well as the tacit skills of an expert.

2.3.1 The difference between communities of practice, project teams or formal workgroups and informal networks

The following sections look at the differences between communities of practice, project teams and informal networks.

2.3.1.1 Communities of practice versus teams or formal workgroups

According to Allee (2000), communities of practice differ from team or formal workgroups in a number of ways. The lifecycle of communities of practice is determined by the value it creates for its members, whereas the teams or the workgroups are determined by the project deadlines. Communities of practice last as long as their members want them to last, whereas teams and workgroups reorganise once they have finished the activity. Teams and workgroups are required to deliver tangible results, whereas communities of practice are not necessarily required to do this. Teams and workgroups are formed to focus on a specific objective or activity, while communities of practice may not have a focus. They might have some stated goals, but they are usually more general and fluid (Duncan, Gordon and Hu 2001:108).

2.31.2 Communities of practice versus informal networks

All organisations have informal networks of people who communicate, share information and build relationships and reputations. A community of practice is different from such a network, in the sense that it is about something. It is not just a set of relationships. A shared interest alone does not constitute a community of practice. For example, you may be interested in French cinema and enjoy reading postings on a news group, but the members of this news groups are not developing a community of practice (Wenger, McDermott and Snyder 2002:43). Table 3 summarises the differences between communities of practice, teams and informal networks. It was compiled from Allee (2000); Wenger, McDermott and Snyder (2002:42) and Duncan, Gordon and Hu (2001:108).

Table 3: Communities of practice and other forms of groups

	Mission	Members	Driving force	Duration
Communities of practice	Develop members' capabilities, build and exchange knowledge	Self-selected volunteers	Identification with subject and expertise	As long as members remain active
Formal workgroups	Deliver product or service	All who report to group managers	Job requirements and common goals	Until reorganisation
Project teams	Accomplish specific task	Employees assigned by managers	Project milestones and goals	Until proper completion
Informal networks	Collect and pass on information	Friends and business acquaintances	Mutual needs	As long as members wish

(Allee 2000; Wenger, McDermott and Snyder 2002:42 and Duncan, Gordon and Hu 2001:108).

2.3.2 Types or forms of communities of practice

When people work together, they automatically form informal networks of relationships that go beyond formal organisational patterns (Sharp 1997). Many studies show that people working in organisations develop informal networks based on personal attraction and common background amongst its members. Communities of practice start as very informal groups, where members share a common interest they wish to collaborate on. At a later stage they may evolve into more formal groups (Sallis and Jones 2002:26). In other words, a community may start by sharing little things, sometimes not work related, but can end up meeting specific business objectives and generating new business.

According to Joseph ([n.d]), there are two types of communities of practice, self-organising and sponsored communities of practice. The following text discusses the two types of communities of practice.

2.3.2.1 Self-organizing versus sponsored communities of practice

Self-organising communities of practice pursue the shared interest of the group's members. These communities of practice add value to a company by sharing lessons learned, acting as distribution points for best and emerging practices, providing forums in which issues and problems can be raised and resolved and, in general, by learning from each other (Joseph [n.d.]). Owing to their voluntary, informal nature, self-organising communities of practice are fragile and extremely resilient (Joseph [n.d.]). Sponsored communities of practice, on the other hand, are initiated, chartered and supported by the management. They are expected to produce measurable results that benefit the company. They get needed resources and they have more formal roles and responsibilities. Even so, they are much more self-governing and wide-ranging than the typical cross-functional project team (Joseph [n.d.]).

IBM provides an example of sponsored communities of practice (Gongla and Rizzuto 2001). Today there are over 60 knowledge network communities, with members from virtually every country that IBM serves. All of these communities evolved with some assistance from the knowledge management programme specialists, tools and processes. However, the level of assistance varied widely. If the business identified a need for a knowledge network, the sponsor or leaders instigated its formation, with the help of the specialists. Sometimes, if there was an existing informal community and the business recognized the importance of supporting that community's further development, it would seek the guidance of the knowledge management programme. Occasionally, a community on its own seeks assistance from the knowledge management group for help with its development, usually to obtain some level of organizational recognition, support and access to the common technology infrastructure (Gongla and Rizzuto 2001).

Communities of practice can take another form. They can meet face-to-face or virtually, online. The following paragraphs elaborate on virtual and face-to-face communities of practice.

2.3.2.2 Online communities of practice versus face-to-face communities of practice

Face-to-face communities of practice are those communities which are formed in same geographical area. The members of these communities of practice meet face-to-face when they have their meetings. Communities of practice do not have to involve physical co-location. Indeed, there are many communities of practice which are geographically dispersed, but which still operate effectively. These communities are called virtual or online communities of practice. These communities of practice often depend on access to shared Information and Communication Technology (ICT) infrastructures (Newell *et al.*, 2002). Virtual communities primarily communicate by telephone, emails, online discussion groups and video-conferencing (Wenger and Snyder 2000). According to Snyder and de Souza Briggs (2003:16), teleconference provides the heartbeat of the community – regular, easily accessible ways to keep up-to-speed on retrieved topics and to hear what others are saying. Websites provide a mechanism for catching up on resources or finding contact names or resources mentioned during the calls. Face-to-face meetings, on the other hand, provide a crucial foundation for all these activities. They provide a forum "where we can break bread together" – to meet in person and find connections (Snyder and de Souza Briggs 2003:16). These personal relationships weave the community together and help to build trust and mutual commitment (Snyder and de Souza Briggs 2003:16).

2.4 Stages and development of communities of practice

Like other living things, communities of practice are not born during their final stage, but go through a natural cycle of birth, growth and death. Wenger, McDermott and Snyder (2002: 68) described five stages that represent the lifecycle of the community. These five stages include potential and coalescing, maturing and stewardship and transformation:

- **Formation (potential and coalescing):** here, initial networks are discovered, common ground is formed and relationships are formed.
- **Integration (maturing and stewardship):** at this stage there is focus upon a particular topic and the admission of new members. Tools and methods are developed that are unique to the community. New ideas are continually welcomed as the community evolves.

- **Transformation:** at this stage the community may fade away or officially close. This may also mean that the community has become redundant, or that this stage brings the beginning of a new community. Other possibilities include merging with other communities or becoming institutionalised as a formal unit.

2.5 The value of communities of practice

In the past, the value of communities of practice has been regarded as being primarily relevant to the individual members of the community of practice, but, increasingly, organisations are recognising communities of practice as valuable organisational assets (Lesser and Stock 2001:832 cited in Van Wyk 2005:97).

According to Wenger *et al.* (2002 cited in Snyder and de Souza Briggs 2003:6), the benefit of communities of practice is to bridge formal organisational boundaries in order to increase the collective knowledge, skills and reciprocity of practitioners who serve in the organisation. Hislop (2005:63) pointed out that communities of practice provide a vital source of innovation in the organisations.

Knowledge management (KM) literature which have utilised communities of practice concepts argue that communities of practice facilitate the organisational knowledge process. They thus provide workers with a sense of collective identity and social context in which they can effectively develop and utilise their knowledge. Having discussed this, it can be stated that communities of practice are beneficial for the business, for the community itself and for employees. They are powerful both for sharing and achieving organisational results (Allee 2000).

For the organisation
- Help drive strategy
- Support faster solutions, both locally and organisation-wide
- Aid in developing, recruiting and retaining talent
- Build core capabilities and knowledge competencies
- More rapidly diffuse practices for operational excellence

- Cross-fertilise ideas and increase opportunities for innovation (Allee 2000).

For the community

- Help build common language, methods and models around specific competencies
- Embed knowledge and expertise in a larger population
- Aid retention of knowledge when employees leave the organisation
- Increase access to expertise across the company
- Provide a means to share power and influence with the formal part of the organisation (Allee 2000).

For the individual

- Help people do their jobs
- Provide a stable sense of community with other internal colleagues and with the company
- Foster a learning-focused sense of identity
- Help develop individual skills and competencies
- Help a knowledge worker stay current
- Provide challenges and opportunities to contribute (Allee 2000).

2.6 Role of communities of practice in fostering learning and facilitating knowledge sharing

Learning can be defined in various ways. Learning is regarded by Strata (1989:64) as the "process whereby individuals obtain new knowledge and insight and through which their behaviour and actions are changed" (Strata 1989:64 cited in Van Wyk 2005:52). Effective organisations recognise that there are different kinds of learning for different situations (Ackerman, Pipek and Walf 2003:58). Ackerman, Pipek and Walf (2003) stressed that there are two different kinds of learning in the organisation, the learning of newcomers and the learning of the experts. A central assumption is that learning takes place within communities of practice. Therefore newcomers need to know who knows what in the organisation, so that they can learn what they need to

know from those who have this knowledge. According to Newell *et al.* (2002:121) there are three essential features of learning:

- New skills, attitudes, values and behaviour are created and acquired.
- What is learned becomes the property of some collective unit.
- What is learned remains within the organisation or group even if individuals leave.

For instance, academics bring to the institution their prior education, experience, knowledge and skills. As they interact with each other in a network of inter-connectedness, they draw on new experience to further develop their skills and knowledge, thus adding value to the collective knowledge of the institution. An institution thus depends on individuals to draw on experience and to continuously grow and learn.

Fostering knowledge-sharing is all about creating an environment in which academics are able to distinguish whether or not their colleagues possess certain types of knowledge and are willing to share it, to the benefit of other academics (Maponya 2005:907). Organisational culture needs to change in a way that encourages the individuals to share knowledge, for instance the reward system should encourage people to share knowledge. If people are rewarded on the basis of individual achievement in the organisation they may be reluctant to share their knowledge with others (Montano 2005:313). Organisations may encourage team-based knowledge-sharing practices through the utilisation of communities of practice because communities of practice encourage learning and collaboration and add value to practice (Newell *et al.* 2002: 122).

2.7 Barriers to knowledge sharing in the organisation

Knowledge-sharing involves two types of individuals: knowledge seekers those who are looking for knowledge and knowledge sources and those who either have knowledge that seekers need or who can point the seekers to another knowledge source. Effective knowledge-sharing occurs when appropriate connections are built between one or more of these parties (Lesser and Fontaine 2004:16).

Prusak and Borgatti (2001), in Lesser and Fontaine (2004:16), suggested that there are four features of these relationships that determine the effectiveness of knowledge-sharing:

- Knowing what another person knows and thus when to turn to them
- Being able to gain time access to the person
- Willingness of the person sought out to engage in problem-solving, rather than to dump information
- The degree of safety in the relationship that promotes learning and creativity

Lesser and Fontaine (2004:16) identified four common barriers to knowledge sharing. These are awareness, access, application and perception.

2.7.1 Awareness

Communities of practice can be particularly useful in helping individuals become aware of the knowledge and skills of the person who performs the same or similar task within an organisation by creating a single space, either virtually or physically, where individuals can be exposed to the knowledge of the critical thinkers/mass. In most globally dispersed organisations, finding the expert on a topic, particularly if the individual is not located in the same geographical area, is often difficult, if not impossible. Individuals, especially those who are new in the organisation, have few tools to locate individuals outside of their small personal protocol. This is a problem faced not only by the knowledge seeker, but by knowledge sources as well. For example, one may find out that within UKZN, on another campus, there is a lecturer who is good at teaching research; a person who is newly employed as a research lecturer may not have the expertise or experience in the field and the senior lecturer on another campus may have little awareness that others in the organisation may benefit from his/her knowledge.

2.7.2 Access

Even if knowledge seekers and knowledge sources are aware of one another, it can be difficult for them to engage in a knowledge-sharing dialogue. In some organisations there may be limited incentives for a knowledge source to assist a knowledge seeker.

2.7.3 Application

Even if knowledge seeker and knowledge source are able to find time to connect and share knowledge, it is often difficult to ensure that the knowledge is understood and applied properly by the knowledge seeker. From the seekers' point of view, they must be able to take the knowledge provided by the source and relate it to their specific situations. Communities of practice can also help to facilitate the transfer of knowledge across firms by fostering regular dialogues between practitioners on day-to-day business challenges.

2.7.4 Perceptions

In a competitive work environment many find it difficult to ask questions at all. The pressure to know all the answers makes it difficult for knowledge seekers to request assistance from others, especially from more experienced professionals. As a result, seekers do not seek out the best possible answers, but remain satisfied with an answer that seems close enough. Communities of practice can create an environment in which everyone is free to seek or share information.

2.8 Overcoming barriers to knowledge sharing

In large and widely-dispersed organisations, enabling knowledge seekers and knowledge sources to effectively share knowledge is often a significant challenge. It has been discovered that communities of practice can help to overcome the barriers that prevent the exchange of information from taking place (Lesser and Fontaine 2004:20).

2.8.1 Providing a central venue where individuals new to the organisation or discipline can find others

Communities of practice, like most knowledge management initiatives, require some investments to facilitate knowledge sharing. Organisations can support communities of practice by providing them with resources that enable members to connect with each other. By giving members time to interact in a community meeting, training sessions or community forums, the seeds for the trust needed to keep the conversation alive can be planted. Additionally, in this time of reduced corporate travel, organisations can provide technologies that allow for the establishment of virtual space, where members can access knowledge shared in documents (Lesser and Fontaine 2004:21).

2.8.2 Making the directory of community participants, key skills and interests

To help with physical meetings and virtual collaboration, many organisations provide their communities of practice with directories that not only contain contact information such as email, and office telephone numbers, but also a listing of backgrounds, skills, interests and previous work experience. Knowing who knows what in the organisation can direct the employees to the right direction of finding information, without wasting organisational time and money (Lesser and Fontaine 2004:16).

2.8.3 Evaluating submissions to a knowledge repository of an organisation

In many organisations a significant amount of attention is paid to providing communities of practice with repositories: technologies designed to capture and store structured or written knowledge without evaluating and updating the content of the information in the repositories. It is important to ensure that the information provided is current and up-to-date (Lesser and Fontaine 2004:21).

2.8.4 Fostering an environment where practitioners feel comfortable to test ideas without fear of misappropriation

It is important to build a strong community perception built on trust. Moorman, Deshpande and Zaitman (1993) defined trust as the "willingness to rely on an exchange partner in whom one has confidence". To build the relationships that are based on high degrees of trust requires the following behaviour:

- **Competence:** involve the ability of an individual person to meet the expectations of other people (Newell *et al.* 2002).
- **Openness and transparency:** it is crucial for an organisation to assess whether or not the organisational members are willing to share, openly, important information and knowledge, honestly with one another. Openness requires people within the organisation to talk about things as they are and that managers should be available and accessible to employees when needed.

2.8.5 User communication and recognition vehicles to increase visibility of member contribution and reuse

Some organisations recognise and broadcast achievements of the whole community, while others single out key players for their accomplishments. Successful communities of practice help overcome knowledge sharing barriers by recognising and marketing achievements internally and externally, selling success up to senior managers via story telling and community achievements and singling out key players for their accomplishments (Lesser and Fontaine 2004:22). Newell *et al.* (2002:120) asserted that story telling is a more important way of communicating knowledge than codifying it in ICT systems. Brown and Duguid (1991), cited in Newell *et al.* (2002:120), provided reasons why stories are important. According to them, stories:

- Present information in an interesting way
- Present information in a way with which people can empathise
- Personalise information
- Bring people together
- Express value

2.9 Factors that inhibit communities of practice

Many elements in the organisation can foster or inhibit the formation of communities of practice. These include management interests, reward systems, work processes, corporate culture and company policies (Wenger 1998a). These factors determine whether or not people form communities of practice and they can facilitate or hinder participation in them. For instance, if people are not being given enough time to meet as a group, participation in communities of practice is hindered (Wenger 1998a). These factors can be divided into three components, people, process and technology (Montano 2005:310).

2.9.1 People issues

People issues are closely aligned to corporate culture. The ways individuals respond to change reflect their past experience (Abell and Oxbrow 2001:40). People are reluctant to share knowledge, for many reasons. They tend to ask questions such as:

- What's in it for me?
- What recognition will I get?
- If I share will others abuse it?
- Can I trust knowledge that others share?
- Will I lose control/power?

Montano (2005:310) pointed out that viewing knowledge as a source of power encourages hoarding it. This negatively affects the organisation. If a person has knowledge that others do not, he/she may feel more important than the others, who do not possess that knowledge. The organisation's responsibility is to encourage employees to share knowledge. According to McDermott and O'Dell (2001:76), organisational culture is often seen as the key inhibitor of effective knowledge sharing. Organisational culture, performance measurements, reward systems, human resource policies and communication style are key to the success of KM efforts.

2.9.2 Process issues

The process issues include:

- How to integrate knowledge creation and utilisation into the business process
- How to build communities around the business process
- Linking knowledge process to the benefit of the business (Montano 2005:310).

2.9.3 Technology issues

Many organisations which are striving to increase knowledge sharing among their employees create and acquire a database or knowledge repository to which employees contribute their expertise electronically. KM is failing in many organisations because they use technology as the driver, not the enabler of the process (Montano 2005:310). Knowledge technologies offer a number of advantages. For instance, communication can be nearly instantaneous, even across a wide geographical separation (Connelly and Kelloway 2003:296).

2.10 Factors that foster communities of practice within the organization

Communities of practice are a natural part of organisational life. They will develop on their own and many will flourish, whether or not the organisation recognises them (Wenger 1998a). Just because communities of practice arrive naturally, it does not mean that organisations cannot do anything to influence their development. It is hard to build communities of practice, but destroying them is fairly easy. One way of destroying communities of practice is to keep on moving people, promoting them, keeping work groups fairly unstable and not being able to market their newly developed skills. Organisations need to cultivate communities of practice for their own benefit and for the benefit of the members of the communities (Wenger, McDermott and Snyder 2002:12).

According to Newell *et al.* (2002:123), communities of practice need to be cultivated rather than to be controlled. This can be done in many ways. For instance, the company may organise public events that bring the communities together, including the formal and the informal communities. Another way is to facilitate connections

between different groups. This can be done by asking each and every group to report back on these public events.

Wenger (1998a) identifies five things that can be done to foster communities of practice within the organisations:

- Legitimising participation
- Negotiating their strategic context
- Being attuned to real practice
- Fine-tuning the organisation and
- Providing the support

2.10.1 Legitimising participation

Organisations can support communities of practice by recognising the work they are doing, giving members the time to participate in activities and by creating the environment in which the value communities bring is acknowledged. These communities can also be encouraged by being asked to share with other staff members what they came up with in their meetings. By doing this, they will feel important and valued in the organisation (Wenger1998a).

2.10.2 Negotiating their strategic context

People in the organisations work in teams for the projects they are being assigned to, but those people belong to different communities of practice. They use knowledge and expertise that is gained through involvement in these communities. Organisations must therefore develop a clear sense of how knowledge is linked to business strategies and use this understanding to help communities of practice articulate their strategic value (Wenger1998a).

2.10.3 Being attuned to real practice

For the organisation to be successful it must first identify existing practices. For instance, when the customer service department of a large corporation decided to combine services, sales and repairs, researchers from the Institute for Research

Learning discovered that people were already learning from each other on the job while answering telephone calls (Wenger 1998a). By identifying and recognising what they were already doing, workers achieve competency in the three areas much faster than they would have through traditional training. This is very important, because it saves organisational money. It can always be discovered that the needed knowledge already exists in the organisation but, when communities of practice are not fostered, it becomes difficult to identify such knowledge (Wenger 1998a). According to Couros and Kesten (2003), all members, regardless of participation level (core or peripheral worker), should be valued.

2.10.4 Fine-tuning the organisation

Many elements in the organisation can foster or inhibit communities of practice, including management interests, reward systems, work processes, corporate culture and company policies (Wenger 1998a). These factors determine whether or not people form communities of practice, but they can facilitate or hinder participation. For instance, if people are not given enough time to participate and meet as a group, participation is hindered.

2.10.5 Providing support

Communities of practice are mostly self-sufficient, meaning they develop informally with or without organisational support, but they can benefit from some resources, such as outside experts, travel, meeting facilities and communication technology. According to Couros and Kesten (2003), bringing in outsiders may help members see the possibilities within their own mechanisms, or in adopting other tools or procedures.

2.11 Principal theories upon which the research project was constructed

The theoretical framework of the present study is based on the work of Etienne Wenger (1998a) who is probably the most prominent theorist in the area of communities of practice. He, in turn, drew on the social learning theory, seen in the work of Bandura (1997).

2.11.1 Social learning theory

The social learning theory focuses on the learning that occurs within a social context. It considers that people learn from one another (Ormrod 1999). According to Wenger (1998b:7), participation in social learning is important for individuals, communities and organisations. It is important, in the sense that:

- For individuals, it means that learning is an issue of engaging in and contributing to the practices of their communities.
- For communities, it means that learning is an issue of refining their practice and ensuring new generations and members.
- For organisations, it means that learning is an issue of sustaining the interconnected communities of practice through which an organisation knows what it knows and thus becomes effective and valuable as an organisation (Wenger 1998b:7-8).

2.11.2 Social capital

The present study will draw on the concept of social capital, because communities of practice are among the major sources of social capital in the organizations (Pierce 2002; Bavel, Punie and Tuomi 2005). Social capital has been defined as accumulated wealth that an individual benefits from as a result of having social relationships with others (Lesser 2000 cited in Ngulube 2005a: 55). Social capital fosters trust, openness and a willingness to share information, ideas and opportunities in a particular field (Woolcock and Narayan 2000:243; Lesser and Stock 2001: 831).

The literature suggests that social capital can be separated into five distinct dimensions (Bravel, Punie and Tuomi 2005). They are informal channels, social norms, identity, obligations and expectations and moral infrastructure. Listed below are the separate dimensions of social capital.

2.11.2.1 Informal channels

Information channels are social networks within the organisation and are also the mechanisms that connect them to the outside world. Information channels are the most obvious example of social capital. They are the directly observable inventory of

social capital. This dimension of social capital consists of personal relationships that people develop with others through a history of interaction (Hoffman, Hoelscher and Sherif 2005:96).

2.11.2.2 Social norms

Social norms provide for social control in an organisation. They are general, internalised sets of accepted behaviour for members of the social network. Social norms are the common belief system that allows participants to communicate their ideas and make sense of common experience.

2.11.2.3 Obligations and expectations

Lesser (2000), cited in Hoffman, Hoelscher and Sherif (2005:96), viewed this dimension of social capital as the positive interactions that occur between individuals in a network. These interactions have been viewed as positive, largely because of the levels of trust and reciprocity that they engendered (Putnam 1988 cited in Hoffman, Hoelscher and Sherif 2005:96).

2.11.2.4 Identity

Identity occurs when individuals see themselves as one with another person or group of people. Group identity increases perceived opportunities for information exchange and enhances frequency of co-operation Lewick and Bunker 1996 cited in Hoffman, Hoelscher and Sherif 2005:96). In a different vein, where identity is not present there are significant barriers to information sharing, learning and knowledge creation.

2.11.2.5 Moral infrastructure

The fifth dimension of social capital is moral infrastructure. The moral infrastructure is identified as the structure or network which allows an organisation to encourage norms of conduct within the organisation's scope of influence.

2.11.3 Possible benefits of social capital

Researchers and writers in the social sciences and humanities have consistently supported the presence and value of social capital in physical communities. This has promoted extending social capital research to new contexts. Putnam (2000) suggested that social capital allows people to resolve collective problems more easily. In other words, people are normally better off if they co-operate with each other. He also observed that social capital greases the wheel that allows communities of practice to run smoothly. For instance, when people are trusting and trustworthy, and maintain continuous interaction, everyday business becomes more easy and enjoyable. He added that networks serve as a conduit for helpful information dissemination that contributes to the achievement of personal and community goals. For example, people who are well connected usually receive good news first.

Leadership of the universities and the programme should focus on building social capital. Social capital in higher learning institutions can help in the transfer of tacit and explicit knowledge (Ngulube 2005a:55).

Social capital can help preserve social norms in the community and reduce delinquent or selfish behaviour. People who are well connected in a community and have active trusting connections with others are likely to behave in an accepted social manner (Hoffman, Hoelscher and Sherif 2005:96).

Some companies are on record as having provided complimentary food and drinks in order to promote frequent interactions of their employees (Flaherty 2000, cited in Ngulube 2005a:55). Firms benefit from social capital because it facilitates co-operation and co-ordination, which minimizes transaction costs, such as negotiation and enforcement, imperfect information and layers of unnecessary bureaucracy. Reciprocal, interdependent relationships reinforce compliance, which helps firms minimize financial risks (Hoffman, Hoelscher and Sherif 2005:96).

Social capital can bridge cultural differences by building a common identity and shared understanding. The fact that building social capital requires continuous interaction enables people to identify common interests and build trust. This raises their level of shared commitment and encourages a sense of solidarity within a

community. From the perspective of organizational management, Prusak and Cohen (2001) claim that social capital can promote better knowledge sharing due to established trust relationships, common frames of reference and shared goals. In that regard, leadership at academic institutions should use the advantages provided by social capital in their organizations to bring about knowledge sharing and innovation (Ngulube 2005a:55).

2.12 Summary of the chapter

Chapter Two, gave an understanding of communities of practice and their definitions and also the characteristics of communities of practice. An exploration followed the relationships between teams, informal networks and communities of practice. Stages and development of communities of practice were discussed, as was the value of communities of practice. The review examined the roles of communities of practice in fostering learning and facilitating knowledge sharing. Factors that support and inhibit the formation of communities of practice were discussed. Lastly, the principal theories upon which the research project was constructed were explained.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the research methods used to conduct research on communities of practice in the humanities, at institutions of higher learning, the University of KwaZulu-Natal and the University of Zululand, are discussed and evaluated.

3.2 Research methods

Research methodology revolves around two major approaches, qualitative and quantitative (Powell 1999:3). Quantitative studies measure phenomena using numbers, in conjunction with statistical procedures, to process data and summarise results (Durrheim 1999:42a). Qualitative researchers collect data in the form of written or spoken language, or in the form of observations that are recoded in language, and analyse the data by identifying and categorising themes (Durrheim 1999:42a). The present study used a quantitative research approach and some element of a qualitative research methodology. The researcher used both approaches because the nature of the study requires the use of both approaches. According to Bryman (1998), there are situations and topics in research that are better served by a marriage of the two traditions (Bryman 1988 cited in Ngulube 2003:197). The paradigms can also be used together, to demonstrate concurrent validity (Cohen, Manion and Morrison 2000 cited in Ngulube 2003:197).

3.3 Survey research design

The survey design was used to collect data, as it samples many respondents who answer the same questions. Surveys can measure many variables and test multiple hypotheses (Neuman 2000:250). Survey research involves acquiring information about one or more groups of people, perhaps about their characteristics, attitudes, opinions, or previous experiences, by asking them questions and tabulating their

answers (Leedy and Ormrod 2005:183). The ultimate goal of using this design is to learn about a large population by surveying a sample of that population. According to Babbie and Mouton (2001:230), survey research is the most frequently used design in the social sciences and in South Africa generally. A survey is quite simple in design. A researcher poses a series of questions to willing participants, summarises their responses with percentages, frequency counts and then draws inferences about a particular population from the responses of the sample (Leedy and Ormrod 2005:183-4). Surveys are characterised as either cross-sectional or longitudinal. According to Welman, Kruger and Mitchell (2005:95), the cross-sectional design is a special case of the criterion-groups design. In the cross-sectional design the criterion groups typically comprise different age groups. These groups are examined in terms of one or more variables, at approximately the same time. The longitudinal design involves examining the same group at different time intervals (Welman, Kruger and Mitchell 2005: 95). The present study adopted the cross-sectional approach rather than the longitudinal approach. The reason was that longitudinal studies are difficult to carry out and demand a lot of resources and time, since the same set of variables have to be studied over a period of time (Robson 1993: 50 cited in Ngulube 2003: 200).

3.4 Population

A study population is an aggregation of elements from which the sample is selected (Babbie and Mouton 2001:74). The study population is academic staff in the humanities at UKZN and Unizul. Depending on the size of the population and purpose of the study, a researcher may study the whole population or subset of the population, which is referred to as a sample (Ngulube 2005b:129). In the present study, which is for a coursework masters degree, the researcher could not study the whole population as it was very large. The population was thus sampled. Permission and access to both Unizul and UKZN were sought and obtained.

3.4.1 Sampling procedures

Probability and non probability are the major types of survey sampling procedures. Probability sampling comprises simple random sampling, systematic sampling and

stratified sampling. Non-probability sampling includes purposive sampling, quota sampling, convenience sampling and snowball sampling (Babbie and Mouton 2001: 166; Brewerton and Millward 2001:115-117; Welman, Kruger and Mitchell 2005:59-69). Probability or random sampling describes sample selection in such a way that all members in the population have a known chance of being selected (Brewerton and Millward 2001:115), whereas in non probability units are deliberately selected (Babbie and Mouton 2001:166).

Probability samples are preferable, because they are more likely to produce representative samples and also enable estimates of the sample's accuracy to be made (Brewerton and Millward 2001:115). According to Welman, Kruger and Mitchell (2005:68), the advantage of non probability samples is that they are less complicated and more economical, in terms of time and financial expenses, than probability sampling. The present study used a probability sampling technique for the survey, as the participants were randomly selected from the target population. It also used non-probability sampling for the focus groups interviews, to find out whether or not their shared experience corroborated questionnaire data.

3.4.2 Sampling frame

A sampling frame is the list of all members in the population who are eligible for inclusion in a sample (Glossary 1999:483). To compile a sampling frame for the present study, a list of academic staff in the faculty of humanities at UKZN was obtained from the Faculty of Humanities, Development and Social Sciences Handbook (University of KwaZulu-Natal 2006a). A list of all academic staff in the humanities at the University of Zululand was obtained from the Unizul Staff Directory (University of Zululand Staff Directory 2006a). No sampling frame is perfect and there is a possibility that some members of staff would be missing from the list. For this reason, the sampling frame was evaluated for comprehensiveness and currency.

3.4.3 Proportionate stratified random sampling

Stratified random sampling was used to establish a greater degree of representativeness in situations where the population consists of subgroups or strata (Durrheim and Painter 2006:136). In the present study the researcher used stratified random sampling to select the units of analysis. The principle of stratified random sampling is to divide a population into different groups, called strata, so that each element of the population belongs to one stratum. Within the strata, random sampling is performed, using either the simple or interval sampling method (Babbie and Mouton 2001:191; Bless and Higson-Smith 1995:91; Neuman 2000; Van Vuuren 1999:278). In the present study, the first stratum was made up of 442 (79%) academic staff in the humanities at UKZN and the second one was made up of 114 (21%) academic staff in the humanities at Unizul. That made the total population of the study 556. Proportional stratified random sampling was used to ensure that every stratum was equally represented according to its size (Leedy and Ormrod 2005:204). The sample size is presented in Table 4.

Table 4: Sample frame and sample size

Strata	Size of Population	Percentage	Sample size
UNIZUL	114	21	80
UKZN	442	79	196
TOTAL	556	100	276

Sample size was determined using the table by Krejcie and Morgan (1970) in Payne and Payne (2004:203).

3.5 Data collection methods

This study used three methods of data collection. The use of two or more methods is called triangulation (Babbie and Mouton 2001:275; Kelly 1999:430). The rationale for using multiple methods is that, although no single method is perfect, if different methods lead to the same answer, then greater confidence can be placed in the validity of the conclusions (Ngulube 2005b:136). The study used questionnaires and focus groups and semi-structured interviews as data collection methods.

3.5.1 Self-administered questionnaire

A self-administered questionnaire was used to collect data. The questionnaire technique was chosen as the most appropriate tool for data collection, as the study covered a geographically dispersed population. There are many advantages that are associated with questionnaires, some of which are discussed in this paper. Questionnaires are inexpensive and allow a large number of respondents to be surveyed in a relatively short period of time, even if the respondents are widely distributed geographically. If the questions are closed-ended, they are easy to complete and easy to analyse. In addition, questionnaires allow respondents to answer questions at times that are convenient to them (Bless and Higson-Smith 2000:109; Babbie and Mouton 2001:262; Busha and Harter 1980:62). Questionnaires have their drawbacks as well.

Typically, the majority of people who receive questionnaires do not return them. In other words, there may be a low response rate and the people who *do* return them are not necessarily representative of the originally selected sample. Even if people are willing to participate by completing the questionnaire, limitations such as reporting errors, completion of the questionnaire by a wrong person, a lack of control over how respondents interpret questions and lack of opportunity to probe or correct misunderstandings still exists (Leedy and Ormrod 2005:185). In the present study the questionnaire was ten pages long and consisted of thirty seven questions or items. The questionnaire consisted of closed and open-ended questions (See Appendix 1).

3.5.1.1 Forms of questions

In asking questions, researchers have two options. They may ask open-ended questions or closed-ended questions. The following paragraphs discuss these options, briefly.

3.5.1.1.1 Closed-ended questions

In closed-ended questions, the respondent is asked to select an answer from among the list provided by the researcher (Babbie and Mouton 2001:233). Closed-ended questions are very popular because they provide a greater uniformity of responses and

are more easily processed. They are also less time-consuming for the respondent to answer. In this case, question number twelve can be used as an example of a closed-ended question (See Appendix 1). Respondents were asked if the community of practice they belonged to was formal or informal. Respondents may select either formal or informal. The disadvantage of the closed-ended questions is that they oblige the respondent to choose between the answers provided. In the present study's questionnaire the option "other" was added, to overcome this problem.

In the present study only seven out of thirty nine questions were open-ended. This was done to save the time of respondents and of coding during data collection.

3.5.1.1.2 Open-ended questions

In open-ended questions the respondent is asked to provide his or her own answer to the question (Babbie and Mouton 2001:233). Respondents are free to give their own thoughts and feelings, in their own words Open questions were used in the questionnaire where the range of questions could not be predicted. In this case, question number twenty can be used as an example of an open-ended question. Academics were asked to show their own understanding of communities of practice. The drawbacks of open-ended questions is that much time is spend on recording the answer and the researcher has to deal with responses which are ambiguous, wide-ranging and difficult to categorise (Babbie and Mouton 2001:233).

3.5.1.2 Pre-testing the questionnaire

The questionnaires were pre-tested to ensure that all items are clear and understandable. According to Ngulube (2005b:136), no questionnaire should be considered ready for use until it has been pre-tested.

3.5.1.3 Population for the pre-test

The questionnaire was pre-tested on eight lecturers in UKZN. Five lecturers were from the Department of Information Studies and three from Policy Development. The respondents were asked to fill in the questionnaire and comment on the format and

wording of the questionnaire. These lecturers were chosen because they were accessible and they had consented to participate in the pre-testing.

3.5.1.4 Administering the pre-test

The questionnaire was sent to eight lecturers through email and hardcopies were submitted to those lecturers who preferred them. The respondents were given one week to complete the questionnaire. Some did not return it on time. After a week, reminders were sent; out of the eight questionnaires sent, three were returned. Very few changes were made to the questionnaire after the pre-test; some of the changes were to correct spelling mistakes.

3.5.1.5 Administering the questionnaires

After the questionnaire was pre-tested, it was mailed with a covering letters to all the members of the population who had been randomly selected to be part of the study. The letter explained the purpose of the study and requested the recipients to complete the questionnaire and return it to the researcher as soon as possible, using the addressed envelope provided for the respondent. For UKZN the addresses were obtained from the faculty handbooks and for Unizul the addresses were obtained from the Unizul staff directory. The UKZN questionnaires were distributed using the internal mail system and those for Unizul were distributed using the conventional mail system. Emails were also sent to all members, as they all had email addresses. This was done in case there were people who would have liked to complete the questionnaire online and return it to the researcher by email. The advantage of administering questionnaires by email is that email costs less in terms of time and money. One does not have to buy envelopes and stamps. Secondly, one can copy one email to many people.

3.5.1.6 Response rate

Babbie and Mouton (2001:261) pointed out that the response rate is the guide to the representativeness of the respondents. If a high response rate is achieved, there is less chance of significant response bias than if the response rate is low. Babbie and

Mouton (2001:261) stated that, conversely, a low response rate is a danger signal, because the non-respondents are likely to differ from the respondents in ways other than merely their willingness to participate in a survey. Different authors do not agree on the acceptable response rate. Anything below 50% is considered to be poor and over 90% excellent (Neuman 2000: 267). However, Shipman (1997:63 cited in Ngulube 2003:220) pointed out that although Hite (1994) used a response rate of 4.5% in his study, the normal figure is between 20% and 30%. Babbie and Mouton (2001:261) asserted that the response rate of 50% is adequate for analysis while responses of 60% and 70% are good and very good, respectively.

The response rate of the present study was very low; the researcher anticipated 100 or more returned questionnaires. However, only 90 out of the 276 (32%) questionnaires distributed were returned. The response rate for UKZN was 26%, as 52 questionnaires out of 196 questionnaires were returned. From Unizul, 38 (47%) questionnaires out of 80 questionnaires were returned. This low rate of response can be attributed to the fact that academics suffered from response fatigue. They received four sets of questionnaires on the same subject at almost the same time. To encourage response, after two weeks a reminding letter was sent to all recipients, thanking those who had returned the questionnaire and asking those who had not returned the questionnaires to do so. According to Babbie and Mouton (2001:260), receiving a follow-up letter encourages respondents to look for the original questionnaire. Taking a cue from Shipman (1997), the data was analysed, as the response rate was over 20%.

3.5.2 Focus groups

A focus group is described by Brewerton and Millard (2001:80) as a discussion-based interview that provides a particular type of qualitative data. Focus group interviews are also described as group in-depth interviews. A focus group discussion was based on the findings of the survey to explore issues in more depth. Krueger (1994:19) pointed out that focus groups produce qualitative data that provides insights, perceptions and opinions of participants. Focus groups interviews were considered important for this study, in the sense that participants shared issues related to communities of practice, their formation and the way they are understood in academia.

There were two focus groups interviews at Unizul. Information was relatively equivalent, so there was no need to have more focus group discussions. Eight focus group discussions were envisaged for the University of KwaZulu-Natal, that is, two groups at each of four campuses (Edgewood, Howard College, Pietermaritzburg and Westville). Invitations for the focus group interviews were sent a month in advance and reminders were dispatched a week before the time of the interviews (See Appendices 2 and for the interview guide and letter of invitation, respectively). Focus group interviews were only conducted at Pietermaritzburg, as the attendance was at an acceptable level. Perhaps the lack of attendance could be contributed to staff commitment as result of end of the semester activities (see letter from one of the prospective participants in Appendix 5).

3.5.2.1 Selection of people in focus groups

Focus groups consist of a small number of individuals or interviewees that are drawn together for the purpose of expressing their opinions on a specific set of open questions (Welman, Kruger and Mitchell 2005:201). Different authors do not agree on the size of the focus group interviews. Bless and Higson-Smith (2001:110) recommended a size of between four and eight. Bloor *et al.* (2001:26) recommended a size of five to twelve participants. The researcher should use an appropriate sample, usually purposive or snowball, consisting of not more than twelve and not fewer than six participants (Welman, Kruger and Mitchell 2005:201). Focus group participants were the key informants purposely selected based on their experiences and involvement in communities of practice. Two focus group interviews were conducted, on the Pietermaritzburg campus and at Unizul. The final number of interviews was determined by the variability of the data gathered from each group. Morgan (1988) cited in (Mosia and Ngulube 2005:178) observed that one group is never enough. For that reason, the present study had four different discussions, with groups made up of six to ten participants. The sizes of the groups were dictated by logistical consideration and the willingness of participants to be involved.

3.5.2.2 Advantages and disadvantages of focus groups

Welman, Kruger and Mitchell (2005:203-204) provide several advantages of using focus groups. The primary advantage is that focus groups provide sources of information that can be obtained rapidly and at a low cost. They can be conducted within a wide range of settings and a vast range of respondents can be selected. Since the researcher communicates directly with the respondents, he or she can easily clarify some aspects of questions put to the respondents. Furthermore, the focus group interviews can be conducted with people who are not able to complete questionnaires. According to Outreach Resources (2005), interviews of focus groups provide an opportunity to explore new or unique perspectives. Interviews of focus groups are useful to identify participants' needs and for assessing programme effectiveness.

The disadvantage of a focus group, compared to an individual interview, is that it often inhibits the responses of participants. Some respondents are not able to express their feelings freely because they are intimidated by the presence of others in the group (Welman, Kruger and Mitchell 2005:204). Furthermore, a focus group interview requires a trained facilitator and the quality of the discussion depends on the skills of the facilitator. Outspoken individuals may dominate the discussion if the facilitator does not know how to control the outspoken participants. The biggest disadvantage of focus group interviews is that they generate a large quantity of qualitative data that may be difficult to analyse (Outreach Resources 2005).

3.5.2.3 Focus group discussion procedure

Focus groups work best when run by two facilitators, the moderator and the note-taker (Bertram 2004:47). In the present study the focus groups were conducted by three people, the moderator, the note taker and the person who was responsible for tape recording. The moderator was responsible for leading the group discussion and covering critical questions from the discussion guide. The focus group discussions lasted about two hours. They occurred in a relaxed, comfortable setting.

3.6 Semi-structured interviews

Interviews are one method by which a phenomenon can be studied. Interviews can be used for verifying, amending and extending data and gathering facts and explanations (Ngulube 2003:222). There are varieties of interviews and the actual number depends on the source that one reads (Cohen, Manion and Morrison 2000:270). For instance, Sapsford and Jupp (2006:93-4) give four types: face-to-face interviews, the telephone interview, postal questionnaires and face-to-face interviews in a free format. Sarantokos (2005:268) identified three types: structured interviews, unstructured interviews and semi-structured interviews. Semi-structured interviews lie somewhere between the structured and unstructured interviews. They contain elements of both, with some being closer to structured interviews and some closer to unstructured ones. The degree to which interviews are structured depends on the research topic and purpose (Sarantokos 2005:269).

In the present study a semi-structured interview was conducted with the Deputy Vice-Chancellor (DVC) for Research, Knowledge Production and Partnerships at UKZN, to get his views on communities of practice in institutions of higher learning. Initially the researcher targeted the DVC at UKZN and the Research Officer at Unizul, but the interview was not done with the Research Director at Unizul because she was on sabbatical leave.

3.6.1 Advantages and disadvantages of semi-structured interviews

Semi-structured interviews are best used after the questionnaire has been collected and analysed. It allows the researcher to obtain an elaboration on important points arising from the questionnaire. It even allows the researcher to cover the points that he/she did not manage to cover in the questionnaire (Crompton 1999). However, semi-structured interviews have been criticized for taking much time to arrange and conduct the interviews. They have the potential of collecting too much data and some of it may be unwanted (Welman, Kruger and Mitchell 2005:201). Lastly, analyzing the data may be difficult (Crompton 1999). In addition, Welman, Kruger and Mitchell (2005:201) pointed out that the researcher is directly involved in the interview and in

control of the respondents. The researcher may therefore display bias in the interview situation.

3.6.2 Administering interviews

It has been argued that validity is the persistent problem in interviews (Cohen, Manion and Morrison 2000:120). For instance, validity can be compromised by asking leading questions and if there is bias on the part of the researcher and the respondents. In the present study, leading questions were avoided, because they tend to influence the answers of the respondents.

3.7 Data analysis procedures

According to Kerlinger (1986), cited in Ngulube (2005b:138), data analysis involves categorising, ordering, manipulating and summarizing data to find answers to the research question. After data has been collected it should be checked for completeness, comprehensiveness, consistency and reliability. This process is called data cleaning (Powell 1997:63). It can be done before or after the data has been collected. Data coding was done after the data was cleaned. Coding means "systematically reorganizing raw data into a format that is machine readable" (Neuman 2000:314). According to Durrheim (1999b:98), coding involves applying a set of rules to the data to transform information from one form to another. It is often a straight-forward clerical task that involves transforming the information provided on a questionnaire into meaningful numerical format (Neuman 2000:314).

Coding can be very difficult when open-ended questions are coded (Neuman 2000:314). Since the questionnaire included both open and closed-ended questions, responses to open-ended questions were first content analysed before they were coded. According to Aleck and Settle (1995:271 cited in Ngulube 2003:229) content analysis is collecting and organizing information systematically in a standard format that allows analysts to draw conclusions about the characteristics and meaning of recorded material.

After the data has been cleaned it is entered into the computer in a format that is machine readable. This process is called entering data (Durrheim 2006:191). Data was entered into a computer program called SPSS. Descriptive statistics were employed to determine the significant similarities and differences in response.

Data collected from focus groups tend to be qualitative in nature. Focus groups were conducted to obtain in-depth information on communities of practice in the institutions of higher learning under study. Data collected from the focus groups and semi-structured interviews were analysed using content analysis. This involves categorizing the information by themes (Durrheim, Kelly and Terre Blanche 2006:323). Once the information was categorized it was coded, checked and interpreted. According to Durrheim, Kelly and Terre Blanche (2006:326) one way of checking interpretation is to discuss it with people who are experts on the topic. The interpretation was checked with Knowledge Management Team members. Presentation of data involved the use of tables and graphs. The results are presented in Chapter Four.

3.8 Evaluation of the research method

Evaluation of the research method is necessary to determine if it measured what it was intended to measure. Evaluation requires assessing the reliability and validity of the research method, as well as the instrumentation. When something is valid, colloquially, it is often meant that it is justifiable. Essentially, this is what is meant if it is said that the research is valid. Is the research sound, justifiable, is it believable, can it be trusted (Bertram 2004:70)? For research to be reliable it must demonstrate that if it was carried out on a similar group of respondents, in a similar context, similar results will be obtained (Bertram 2004:71). The questionnaire was pre-tested to ensure that the content was valid. The questionnaire was properly laid out, to ensure the face validity. According to Babbie and Mouton (2001:239), the format of the questionnaire is just as important as the nature and wording of the questions asked. The questionnaire was spread out and uncluttered. The font size was large and clear enough, so that it was not difficult to read. At the beginning of the questionnaire

there were basic instructions on completing them. The questions were numbered and divided into sections.

To ensure further validity, the researcher used three methods of data collection. These were focus groups, questionnaires and semi-structured interviews. Validity and reliability are continuous concepts. Research is considered to be valid or invalid, or reliable or not reliable. Rather, it is asked to what extent the research is valid or reliable. It is impossible for the research to be 100 percent valid (Bertram 2004:72). That is why the present researcher paid more attention to improving the validity of the study.

It is not good for researchers to give readers the impression that their research is perfect. Errors and limitations need to be acknowledged. The major limitation in the present study was non-response. The response rate in the study was so low that generalisation of results across the whole population was difficult. In addition to probable respondents not returning the questionnaire, there were also non-responses to some of the questions. According to Ngulube (2005b:136), item non-response "results from the respondents failing to answer all the survey questions". This was more prevalent with open-ended questions than with close-ended questions. The latter could be attributed to the fact that the respondents did not have enough time due to the fact that it was towards the end of the semester. They were busy marking and processing students' marks. Fifteen questionnaires from UKZN were returned without being completed. There was no explanation as to why the would-be respondents did not complete the questionnaires.

A high response rate diminishes the chance of non-response bias. A researcher should be aware of the possible sources of bias due to the different characteristics among respondents and non-respondents, that is differences that result from those that respond to the questionnaire and those that do not (Babbie and Mouton 2001: 261). Lower response rates increase the likelihood of biased results.

The reliability of the study could not be ascertained due to the low response rate and the non-response bias. Nonetheless, the results of the study established what the researcher set out to investigate.

3.9 Ethical concerns

Due to the nature of the research questions, confidentiality of the participants' identity was maintained and protected. Ethical clearance was granted by the Faculty of Humanities, Development and Social Studies Research and Ethics Committee. Participation was voluntary. The researcher was objective and adhered to the general code of ethics for social science researchers. Before the interview sessions took place the researcher briefed the participants. Durrheim and Wassennar (1999:67) noted that briefing involves explaining to research participants, at the beginning and conclusion of the study, the nature and purpose of the study. According to Bertram (2004:48) focus groups require special ethical consideration for confidentiality. Before the focus group discussion began and after it ended, participants were reminded to respect each other's privacy.

3.10 Summary of the chapter

In Chapter Three, the choice of research methods was explained. The survey method, the questionnaire and focus group interviews were discussed. The population for the study was explained, as well as the data collection method. The method for pre-testing the survey was discussed, as was the data analysis method.

CHAPTER FOUR: RESULTS OF THE STUDY

4.1 Introduction

Chapter Four presents the results of the study. The study set out to investigate communities of practice in institutions of higher learning, using the humanities at UKZN and Unizul as case studies. Data was collected using a self-administered questionnaire, focus group interviews with academics at UKZN and Unizul and semi-structured interviews with the Deputy Vice Chancellor (DVC) for Research, Knowledge Production and Partnerships at UKZN. Results for each question in the questionnaire and interview schedule are presented. An explanation for the purpose of each question is given. Questionnaire data were analysed quantitatively, using SPSS, while focus groups' data were analyzed qualitatively.[1]

The purpose of this chapter is to present the findings in terms of the objectives. The study set out to fulfil the following objectives:

- To identify existing and evolving communities of practice (existing social interactions and networks).
- To determine how communities of practice are defined and understood by the academic staff.
- To understand the nature of these communities of practice.
- To determine the benefits that members get from existing and evolving communities of practice.
- To establish the role communities of practice can play within faculties and schools in advancing the scholarship of teaching, learning and research.
- To identify the institutional conditions which are most likely to favour or inhibit the emergence of communities of practice.

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[1] Percentages were rounded off to one decimal place. Some questions allowed respondents to indicate more than one response and hence the percentages exceed 100%. N means number of respondents.

1. To recommend how communities of practice can be fostered to encourage learning and sharing of knowledge among academic staff.

4.2 Questionnaire results

The response rate of the present study was very low, as only 90 out of the 276 (32%) questionnaires distributed were returned. The response rate for UKZN was 26%, as 52 questionnaires out of 196 questionnaires were returned. From Unizul 38 (47%) questionnaires out of 80 questionnaires were returned. The questionnaire items were outlined under five sections: general information, nature of communities of practice, role of communities of practice, conditions that favour or inhibit the emergence of communities of practice and ways of fostering communities of practice, to encourage learning and knowledge sharing.

4.3 Characteristics of respondents

This section included gender of respondents, their age category, racial groups that the respondents belonged to, number of years respondents worked for the institution and their position.

4.3.1 Gender of respondents

This question was asked to establish the gender of respondents. The majority of respondents at both institutions were male. At Unizul 24 (63.2%) of the respondents were male, while 14 (36.8%) of the respondents were female. At UKZN 32 (61.5%) of the respondents were male, while 20 (38.5%) of the respondents were female (see Table 5).

Table 5: Gender of respondents

Gender of respondents	Unizul		UKZN	
	Score	%	Score	%
Male	24	63.2	32	61.5
Female	14	36.8	20	38.5

4.3.2 Racial group of respondents

This question was asked to establish the race of respondents. At Unizul the majority, that is 23 (60.5%) of the respondents were Africans. They were followed by 11 (28.9%) who indicated that they were White. Only four (10.5%) of the respondents indicated that they were Indians. Most respondents, 30 (57.7%) at UKZN indicated that they were White, followed by 12 (23.1%) Africans. Eight respondents (15.4%) indicated that they were Indians. Only two (3.8%) respondents indicated that they were Coloured. Results are presented in Table 6.

Table 6: Racial group of respondents

Race of respondents	Unizul		UKZN	
	Score	%	Score	%
Indian	4	10.5	8	15.4
Coloured	-	-	2	3.8
African	23	60.5	12	23.1
White	11	28.9	30	57.7

4.3.3 Age category of respondents

This question asked the respondents which age category they belonged to. The study intended to establish the age of the respondents, which may have an impact on the respondents' involvement in communities of practice. Figure 1 presents the results.

Figure 1: Age of respondents
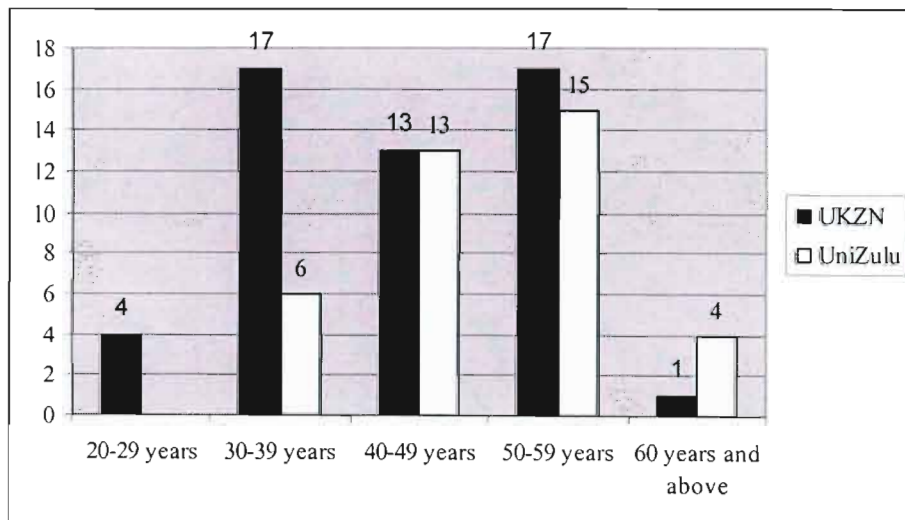
The majority of respondents, 15 (39.5%) at Unizul were within the 50-59 years category, followed by 13 (34.2%) respondents who indicated that they were within the 40-49 year category. Six (15.9%) respondents fell within the 30-39 age category and four respondents indicated that they were above 60. At UKZN 17 (32.7%) respondents indicated that they were within the 30-39 and 50-59 age category. Thirteen 13 (25.0%) respondents fell within the 40-49 age category. Four (7.7%) respondents fell within the 20-29 age category and only one (1.9%) respondent was above 60 years old.

4.3.4 Number of years respondents worked for the institution

In this question respondents were asked to indicate the number of years they had worked for their institution. Responses to this question were to enable the researcher to compare results across the years they have been working for the institution and to ascertain if this had anything to do with their involvement in communities of practice. At Unizul the majority of respondents (34.2%) have worked more that 15 years, followed by 12 (31.6%) respondents who have worked between 11 and15 years. Nine (23.7%) respondents have worked for their institution for 1-5 years and four (10.5%) have worked 6-10 years. At UKZN most respondents have worked for their institution from 1-5 years, followed by 15 (28.8%) respondents who have worked for 6-10 years. Seven (13.5 %) respondents indicated that they have worked 11-15 years for their institution. Six (11.5%) respondents indicated that they have worked more than 15 years and four (7.7%) respondents indicated that they have worked less than one year. Results are summarized in Table 7.

Table 7: Number of years respondents worked for the institution

Number of years respondents worked	Unizul		UKZN	
	Score	%	Score	%
Less than I year	-	-	4	7.7
1-5 years	9	23.7	20	38.5
6-10 years	4	10.5	15	28.8
11-15 years	12	31.6	7	13.5
More than 15 years	13	34.2	6	11.5

4.3.5 Position of respondents

This question was asked to establish the position of respondents. Most respondents in both institutions indicated that they were lecturers and senior lecturers. At Unizul the

majority of respondents 18 (47.4%) indicated that they were senior lecturers and 12 (31.6%) reported that they were lecturers. Four (10.5%) respondents indicated that they were senior professors and two (5.3%) indicated that they were professors and associate professors. At UKZN 22 (42.3%) respondents indicated that they were senior lecturers and lecturers. Three (5.8%) respondents indicated that they were professors and associate professors and two (3.8%) respondents indicated that they were junior lecturers. Figure 2 summarizes the results.

Figure 2: Position of respondents
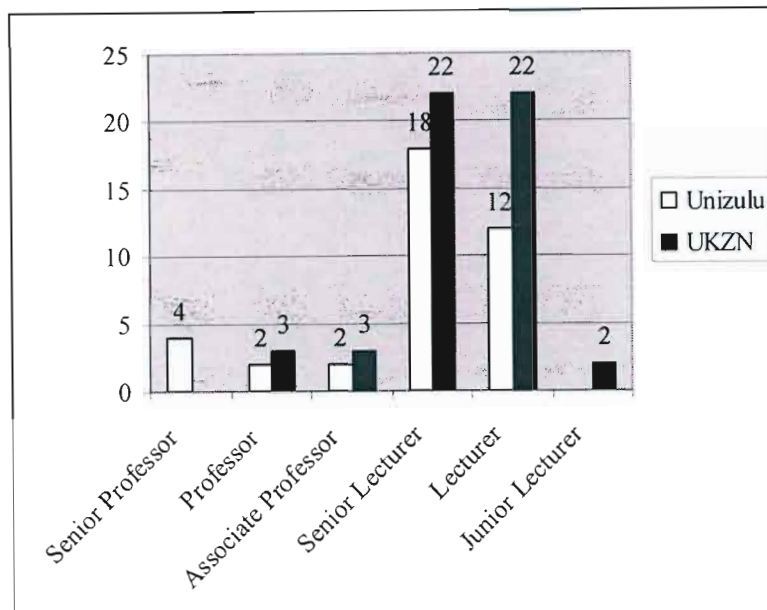
4.4 Nature of communities of practice and factors that influence their emergence

The following section includes the nature of communities of practice, their nature and their role in fostering and encouraging learning and knowledge sharing.

4.4.1 Involvement of respondents in communities of practice

The researcher explained to the respondents what a community of practice was and asked the question to determine if any of the respondents belonged to communities of practice. Most respondents at UKZN and Unizul indicated that they belonged to communities of practice. Twenty seven (71%) respondents at Unizul indicated that they belonged to communities of practice, while 11 (29%) respondents indicated that

they did not belong to any community of practice. In UKZN 44 (85%) respondents indicated that they belonged to communities of practice, while eight indicated that they did not belong to any community of practice. Figure 3 depicts the results.

Figure 3: Members at each institution belonging to a community of practice
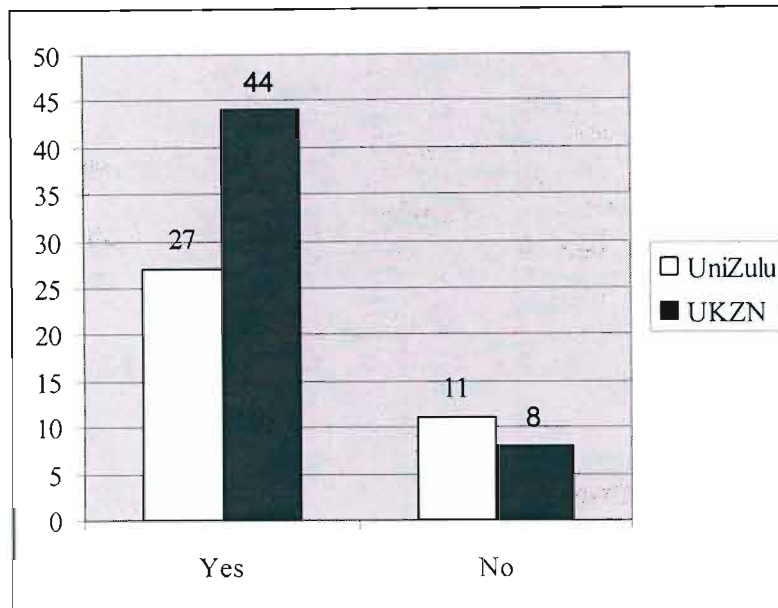
In the rest of the question, the researcher asked the respondents to indicate if they belonged to communities of practice, both within and outside the organisation. Twenty seven (51.95) respondents at UKZN indicated that they belonged to communities of practice within the organisation. Eleven (21.2%) respondents indicated that they belonged to a community of practice outside the organisation, while six (11.5%) indicated that they belonged to communities of practice both within and outside the organisation. At Unizul 13 (34.2%) respondents indicated that they belonged to communities of practice outside the organisation. Eight (21.1%) respondents indicated that they belonged to communities of practice inside the organisation; only six (28.9%) respondents indicated that they belong in both. It must be borne in mind, though, that the population of UKZN was large compared to Unizul.

4.4.2 Understanding of communities of practice by the respondents

This question was asked to determine the respondents' understanding of communities of practice. At Unizul seven (18.4%) understood communities of practice as a group of people with a common interest. Four (10.55%) indicated that they understood

57

communities of practice as support groups. Two (5.3%) respondents indicated that communities of practice were social groups, while one (2.6%) understood a community of practice as a group with respect for each other. The majority of respondents at UKZN indicated that communities of practice were groups of people with common interest, while 11 respondents indicated that they were support groups. Three (5.8%) respondents believed that communities of practice were social groups, while one respondent indicated that communities of practice were groups with respect for each other. Results are presented in Table 8.

Table 8: Definitions of communities of practice by the respondents

Definitions of communities of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Social groups	2	36	3	49
Group of people with a common interest	7	31	24	28
A support group	4	34	11	41
Group with respect for each other	1	37	1	51

4.4.3 Forms of respondents' communities of practice

This question was asked to determine if these groups were communities of practice, teams or just work groups. Most respondents at both institutions indicated that their communities of practice were informal. At Unizul 22 (59.9%) respondents indicated that their communities of practice were informal. Nine (23%) respondents indicated that their communities of practice were formal. At UKZN 29 (55.8%) indicated that the communities of practice they belong to were informal. Fifteen (28.8%) respondents mentioned that their communities of practice were formal. Results are shown in Table 9.

Table 9: Forms of respondents' communities of practice

Forms of communities of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Informal	22	16	29	23
Formal	9	29	15	37

4.4.4 Number of members within a community of practice

This question was asked to establish the number of members within communities of practice. Most members at UKZN 39 (75%) and Unizul 22 (57.9%) indicated that their members numbered less than twenty. Seven (18.4%) respondents at Unizul and five (9.6%) respondents at UKZN indicated that their members numbered between 21 and 50. Two (5.3%) respondents at Unizul indicated that the communities of practice they belonged to had more than 100 members.

Table 10: Number of members within a community of practice

Number of members within each community of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Less than 20	22	16	39	13
Between 21 and 50	7	31	5	47
Between 51 and 100	-	38	-	-
More than 100	2	36	-	-

4.4.5 Forms of participation within a community of practice

This question was asked to determine if participation in these communities of practice was compulsory or voluntary. Most respondents at both institutions, indicated that participation in the communities of practice they belong to was voluntary. At Unizul all 31 (81.6%) respondents who answered this question indicated that participation in their communities of practice was voluntary. At UKZN 42 (80.6%) respondents responded that membership of their communities of practice was voluntary, while two (3.8%) indicted that it was compulsory.

Table 11: Forms of participation within a community of practice

Forms of participation within each community of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Voluntary	31	7	42	10
Compulsory	-	38	2	50

4.4.6 Development of communities of practice

This question was asked to determine the development of these communities of practice. Most respondents at Unizul and UKZN indicated that their communities of

practice had developed spontaneously. Thirty four (65.4%) respondents at UKZN indicated that their communities of practice had developed spontaneously. Seven (13.5%) respondents indicated that their communities of practice were formally established by the faculty, while three (5.8%) indicated that they did not know. Twenty three (60.5%) respondents at Unizul indicated that their communities of practice developed spontaneously. Six (15.8%) respondents indicated that they did not know, while two (5.3%) respondents indicated that their communities of practice were formally established by the faculty. Table 12 presents the results.

Table 12: Development of communities of practice

Development of a community of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
It was formally established by the faculty	2	36	7	45
It developed spontaneously	23	15	34	16
Don't know	6	32	3	47

4.4.7 Meetings of respondents' communities of practice

This question was asked to determine if meetings of the identified communities of practice were regular or from time to time. A majority of respondents at both institutions indicated that they had monthly meetings. Twenty two (42.3%) respondents at UKZN indicated that they had monthly meetings. Fifteen (28.8%) respondents indicated that they had weekly meetings, while four (7.7%) respondents indicated that they met when it was necessary. At Unizul 17 (44.7%) respondents indicated that they had monthly meetings. Ten (26.3%) respondents indicated that they met weekly, while two (5.3%) respondents indicated that they met quarterly, or when there was a need. Results are shown in Table 13.

Table 13: Meetings of respondents' communities of practice

Meetings in communities of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Weekly	10	28	15	35
Monthly	17	21	22	30
Quarterly	2	36	3	47
When necessary	2	36	4	56

4.4.8 Purpose of communities of practice that respondents belonged to

In this question respondents were asked to indicate the purpose(s) of communities of practice they belong to. The researcher wanted to find out if these communities of practice were discussing issues related to work. Respondents could give more than one purpose. At UKZN 24 (46.2%) respondents indicated that the purpose of their communities of practice was to improve the research output, while 20 (38.4%) respondents indicated that the purpose of the communities of practice they belonged to was to share past teaching experiences and learn from them. Fourteen respondents indicated that the purpose of their community of practice was to improve teaching skill. At Unizul 17 (44.7%) indicated that the purpose of communities of practice they belong to was to improve research outputs. Sixteen (42.1%) respondents indicated that their community of practice's purpose was to mentor new academics. Other purposes were to encourage continuous learning and to discuss general issues. Table 14 presents the purposes of communities of practice that the respondents belonged to.

Table 14: Purpose of communities of practice that respondents belonged to

Purpose of a community of practice	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
To mentor new academics	16	22	13	39
To improve the research outputs	17	21	24	28
To improve teaching skills	4	34	14	38
To share past teaching experiences and learn from them	13	25	20	32
To encourage continuous learning	2	36	5	47
To discuss general issues	7	31	10	42

4.4.9 Issues being discussed in communities of practice

This question wanted the respondents to identify the issues that were being discussed in their communities of practice. Most respondents at UKZN 36 (69%) and Unizul 29 (76.3%) indicated that they discussed issues on how to conduct research. At Unizul 26 (68.4%) respondents indicated that they discussed issues related to presentations. Eighteen respondents (47.8%) discussed how to write and publish articles. At the UKZN the second most important issue identified by the respondents was writing and publishing of articles, followed by teaching methods that work. Handling students' concerns was chosen by fewer respondents at both institutions.

Table 15: Issues being discussed in communities of practice

Issues being discussed	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Teaching methods that work	15	23	13	37
Writing and publishing of articles	18	20	26	24
Presentation techniques	26	12	6	44
How to conduct research	29	9	36	14
Handling students concerns	5	33	2	50

4.4.10 Forms of knowledge-sharing within communities of practice

This question was asked to determine the format these meetings took. Most respondents at both institutions indicted that they meet face-to-face. Results are presented in Table 16.

Table 16: Forms of knowledge sharing within communities of practice

Forms of knowledge sharing	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
Face-to-face	24	14	44	6
Email	13	25	18	34
Telephone	4	34	11	41
Conference	11	27	3	47

Twenty four (63.2%) respondents at Unizul indicated that they met face-to-face. Thirteen (34.2%) indicated that they used emails. Eleven (28.9%) respondents indicated that they met in conferences, while four (10.5) communicated by telephone. At UKZN 44 (84.6%) respondents revealed that their meetings were face-to-face, while 18 (34.6%) indicated that they communicated through email, and 11 (21.2%) communicated by telephone. Only three (3.8%) respondents mentioned that they met in conferences.

4.4.11 Role of communities of practice that the respondents belonged to

This question was asked to determine the roles of the communities of practice that the respondents belonged to. Twenty four 63.2%) respondents at Unizul strongly agree that the role of the communities of practice they belonged to was to improve research outputs. Twenty three (60.5%) indicated that the role of their communities of practice was to facilitate knowledge-sharing and collaboration. Twenty two (57.9%)

respondents indicated that the role of their communities of practice was to improve teaching skills, whereas 17 (44.7%) indicated facilitating learning as the role of their communities of practice. At UKZN 32 (61.5%) respondents indicated that the role of their communities of practice was to facilitate knowledge sharing and collaboration. Twenty three (44.2%) respondents indicated their role as improving research outputs. Twenty two (42.3%) respondents indicated that the role of their communities of practice was to facilitate learning, 19 (36.55%) respondents indicated that the role of their communities of practice was to improve teaching skills. The least identified role in both institutions was to facilitate community development. Results are summarized in Table 17.

Table 17: Role of communities of practice that the respondents belonged to

Role of community of practice	Strongly agree		Agree		Neutral	
	Unizul	UKZN	Unizul	UKZN	Unizul	UKZN
Facilitate learning	17	22	18	24	3	-
Improve teaching skills	22	19	15	20	1	7
Improve research outputs	24	23	11	21	3	2
Facilitate knowledge-sharing and collaboration	23	32	15	16	-	-
Facilitate community development	8	2	4	3	1	-

4.5 Benefits that members received from existing and evolving communities of practice

The following sections cover the issues concerning rewarding staff members for belonging to communities of practice.

4.5.1 Rewards for belonging to a community of practice

This question was asked to ascertain the levels in the University that were supportive to the respondents. Most respondents indicated that they were never, rarely or sometimes rewarded for belonging to the community of practice by all three levels. At

UKZN 13 (25%) respondents indicated that they were never supported by the faculty, five (9.6%) indicated that they were never supported by the school and 10 (19.2) respondents indicated that they were never supported by the department. Eighteen (11.5%) respondents indicated that they were always supported by the school and seven (13.5%) indicated that they were always supported by the department. At Unizul 19 (50%) respondents indicated that they were never supported by the school. Sixteen (42.1%) respondents indicated that they were never supported by the faculty, while 13 (34.2%) indicated that they were never supported by the department. Only seven (18.4) respondents at Unizul indicated that they are always rewarded by the department for belonging to communities of practice. Results are shown in Table 18.

Table 18: Rewards for belonging to a community of practice

Rewards per level	Never		Rarely		Sometimes		Often		Always	
	UZ	UK ZN	UZ	UK ZN	UZ	UKZ N	UZ	UKZ N	UZ	UKZ N
Faculty	16	13	6	10	16	13	-	4	-	6
School	19	5	5	8	11	20	-	7	-	8
Department	13	10	9	7	9	13	-	4	7	7

4.5.2 Forms of support that the respondents receive for belonging to communities of practice

Those respondents who indicted that they received support from the different levels of the institution were asked what forms of support they received. This question was asked to identify different forms of support that were made available to academics. Most respondents at both institutions indicated that they received time, emotional support and other facilities such as space, stationery and computers from the department. Financial support was received at almost all levels in both institutions. At Unizul one (2.6%) respondent indicated that he/she received promotion and recognition from the faculty. Results are presented in Table 19.

Table 19: Forms of support that the respondents received for belonging to communities of practice

Form of support	Faculty		School		Department	
	Unizul	UKZN	Unizul	UKZN	Unizul	UKZN
Financial	17	5	-	3	-	4
Time	-	-	-	3	25	17
Emotional	-	-	-	-	14	-
Facilities, e.g. space to meet, computers, stationery, etc.	-	-	5	-	12	18
Recognition and promotion	1	-	-	-	-	-

4.6 Sharing of knowledge gained from communities of practice

The researcher wished to discover if respondents share the knowledge that they gained from participating in communities of practice. Most respondents at both institutions indicated that they shared their knowledge with colleagues who were friends and colleagues who have helped them. Nineteen (36.5%) respondents at UKZN indicated that they shared their knowledge with anyone interested; while at Unizul 15 (39.5%) respondents indicated that they shared their knowledge with anyone interested. Two respondents at both institutions indicated that they shared their knowledge with members of their communities of practice and individuals who were not selfish. Results are summarised in Table 20.

Table 20: Sharing of knowledge gained from communities of practice

Sharing of knowledge gained	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
With colleagues who are friends	29	9	34	18
With colleagues who have helped me	25	13	25	27
With colleagues who can help me	29	9	16	36
Anyone interested	15	23	19	33
Senior students	-	38	2	50
Members of my community of practice	2	36	2	50
People who are not selfish	2	36	2	50

Respondents were asked to list the factors that motivated them to share knowledge. The majority of respondents at both institutions revealed that they shared knowledge because they wanted to help others. If they share, others will gain and they shared for the power that knowledge provides. Eighteen (47.4%) respondents at Unizul indicated that they are motivated to share knowledge because of the prospect of career promotion. The least identified factor at both institutions was monetary incentives. Results are summarized in Table 21.

Table 21: Motivating factors to share knowledge

Motivating factors	Unizul (N=38)		UKZN (N=52)	
	Yes	No	Yes	No
The feeling that I am able to help others	27	11	45	7
The idea that if I share, others will gain	24	14	29	23
The power that knowledge provides	17	21	15	37
The prospect of career promotion	18	20	6	46
Monetary incentives	6	32	7	45

4.7 Factors hindering participation in communities of practice

This question was asked to determine if there were any factors that would have hindered the respondents from participating in communities of practice. Most respondents at UKZN 38 (73.1%) and Unizul 27 (71.1%) indicated that they do not participate in communities of practice because their workloads were too heavy. Thirty four (65.4%) respondents at UKZN indicated that they are not involved in communities of practice because of time constrains. Nineteen (36.5%) respondents indicated that they were hindered by too many family responsibilities, while 18 (34.6%) mentioned lack of support from the department. Only one respondent at UKZN mentioned distance as one of the hindering factors. At Unizul 25 (65.8%) respondents indicated that they were hindered by family responsibilities, while 22 (57.9%) indicated time constrains as one of the hindering factors. Four (10.5%) respondents at Unizul indicated that they are hindered by the distance.

Participant 3

I am also involved in "Gender Task Team". Here we share knowledge as females. There is another one called the Association for Academics.

4.11.1.2 Format of meetings

As a follow up question respondents were asked what format these meetings took. This question was directed at those who indicated that they belonged to communities of practice. They revealed that they interacted face-to-face in the form of meetings and some mentioned that they used the internet and emails to communicate. Some representative statements from the focus groups' transcripts are as follows:

- The Department of Social Work interacts through monthly meetings. We also use internet to share knowledge.
- We use emails to share knowledge, or sometimes meet at the staff cafeteria.

4.11.1.3 Support to participate in communities of practice

During the second session of the discussion the respondents were asked if they received any form of support from the department, school or faculty. This question was asked to find out if these identified communities of practice were supported at any levels, by the institution. Most people indicated that they were supported by the department. Some representative statements from the focus groups transcripts are as follows:

Participant 1

We share knowledge at departmental level and individual level.

Participant 2

In as far as knowledge sharing, in our department we do share knowledge amongst ourselves in the Department of Library and Information Studies, but I think if there is a problem that staff member encounter whatever the nature of the problem, because we have meetings once a month so we are able to communicate but on a broader level there is no platform where we share our knowledge.

Participant 3

We are coming short of something, we usually don't meet faculty staff to socialize and talk about students' problems.

4.11.1.4 Hindering factors

In the last session, academics were asked what hindered them in sharing knowledge. The researcher aimed to find out the reasons for not participating in communities of practice by those who indicated that they do not belong to any community of practice. Most respondents indicated that they are reluctant to share knowledge or to participate in communities of practice because of the system and organizational culture; they indicated that the system promoted individualism. Some representative statements from the focus groups' transcripts are as follows:

- This thing of knowledge sharing is so sensitive because the whole academic work is reward based. So I want to be rewarded I don't want her to know.
- Promotion and reward system hinders us to share knowledge

4.11.2 UKZN focus group results

Two focus groups were conducted with the participants who were purposively selected from the population of academic staff from UKZN. The number per focus group ranged from six to eight.

4.11.2.1 Involvement of respondents in communities of practice

The same strategy that was used at Unizul was also used at UKZN. The reason for doing this was that the researcher wanted to be able to compare the results of UKZN and Unizul focus groups' discussions. In session one, the researcher explained to the respondents the purpose of the study and explained what a community of practice was. She asked the respondents if they belonged to any social networks within or outside their institutions. Some respondents revealed that they were involved in communities of practice. Those who indicated that they were involved in communities

of practice were asked what kinds of ideas they share in their communities. They indicated that they share knowledge on how to conduct research and how to get their articles published. To confirm this, a respondent's statement is quoted from the focus group transcript. "I am involved in the community of practice called WISA. We discuss issues related to research, for instance how to conduct research and publishing of articles".

4.11.2.2 Format of meetings

As a follow-up question those respondents who indicated that they are involved in communities of practice were asked what format their meetings took. Most respondents indicated that their meetings were usually face-to-face, although they used email to communicate with members of their community of practice.

4.11.2.3 Support to participate in communities of practice

In the second session of the discussion, respondents were asked if they received any form of support from the department, school or faculty for belonging to communities of practice. Most respondents who indicated that they were involved in communities of practice revealed that they get support from the department. One respondent pointed out that a community of practice she is involved in is supported by the school, since it involved members from school level. The majority of respondents indicated that they received financial support from the faculty to conduct research. They said that they are given money to conduct research and to attend conferences and present their papers.

4.11.2.4 Hindering factors

In the last session, the respondents were asked what hindered them in sharing knowledge and being involved in communities of practice. Most respondents answered that they believed in sharing and they thought people can be empowered when knowledge is shared, but sometimes they do not share knowledge because the promotion and reward system hindered them in sharing knowledge. Some representative statements from the focus groups' transcripts are as follows:

- The problem is system, the system is weird. It is difficult to share because the system pushed me to it.
- The culture of this institution in very poor
- My department is very good, in allowing the sharing of knowledge, but I believe that this sharing of knowledge should be from top to down and down to top. There is a big gap between senior and junior lecturers. Also organizational culture rewards is individualism and it is not conducive for knowledge sharing. I believe that there must be sort of reward system that will promote knowledge sharing among academics.

4.12 Summary of focus group results

Most participants answered that they were involved in communities of practice and that their communities of practice meet face-to-face and use emails and the internet to communicate. However, they indicated that there is no platform for knowledge sharing in their institutions, as they are only supported by the department. The results showed that some participants were reluctant to share knowledge because of the organizational culture. They stated that the organizational culture encourages individualism, since people are rewarded individually.

4.13 Results of the interview with the Deputy Vice-Chancellor for Research, Knowledge Production and Partnerships

The Deputy Vice-Chancellor (DVC) for Research, Knowledge Production and Partnerships at UKZN was interviewed using a semi-structured interview schedule. The areas covered were institutional policy on communities of practice, support of academics by the institutions and forms of support, knowledge sharing and means of sharing knowledge made available to academics (see Appendix 6).

4.13.1 Policy on communities of practice

In the first session of the discussion the researcher asked the DVC if the institution had a policy on communities of practice or knowledge management, generally, and

what features the policy covers. The DVC responded that the institution does not have a written policy on communities of practice, but there are some systems in place. He indicated that, although the university does not have a written policy, some of the principles of knowledge management are applied.

4.13.2 Participation in communities of practice

In the second session the DVC was asked if there are any forms of social networks or communities of practice that exist in the institution. He pointed out that there are many of them. Some are in the departments, schools and faculties. He indicated that most of them are research groups.

4.13.3 Form of support that respondents receive from the institution

As a follow-up question the researcher asked the DVC if the university provides any form of support to academics in order for them to engage in communities of practice. The DVC indicated that academics are provided with research funds for research purposes and for the purchase of equipment for research.

4.13.4 Sharing of knowledge

In the last session of the discussion the DVC was asked what means of sharing knowledge is made available to academics. He said that the university has an integrated kind of administrative system; all academics have access to the information that is generated within the university. In addition to that, all academics have telephones, computers and the internet in their offices.

4.14 Summary of the interview results

In summary, the interview showed that the university does not have a policy on communities of practice. However, some of the communities of practice principles are applied. The results showed that there are many social networks that exist in the institution. Some of these social networks are supported by the institution. The form

of support that they received was research funds. In addition, the institution has an integration system, from which all academics may access information.

4.15 Summary of the chapter

Chapter Four presented the results of the study, which investigated communities of practice in institutions of higher learning in the humanities at UKZN and Unizul. The results of the study have sufficiently met the research objectives of the study. Questionnaire results presented the nature of communities of practice, role of communities of practice, conditions that favoured or inhibited the emergence of communities of practice and factors that fostered communities of practice to encourage learning and knowledge sharing. Results of the focus groups and interviews were discussed. Some of the major findings were:

- Most respondents in both institutions were involved in communities of practice and had the understanding of communities of practice.
- Most of the identified communities of practice were informal, the participation within these communities of practice was voluntary and they developed spontaneously.
- Most communities of practice identified by the respondents had less than twenty members and they had weekly and monthly meetings.
- Most respondents indicated that the purpose of the communities of practice they belonged to was to improve research outputs. They also discussed research related topics.
- The meetings of these communities of practice were mostly face-to-face.
- Most respondents indicated that they were never, rarely or sometimes rewarded for belonging to communities of practice.
- Those who indicated that they received support from their institution indicated that they received financial support from the faculty and other forms of support, such as time, emotional support and space from the department.
- Most respondents from both institutions indicated that they shared the knowledge that they gained from participating in communities of practice with

colleagues who were friends, who could help them, those who had helped them and anyone who was interested

- Respondents indicated that they were motivated to share knowledge by the feeling that they were able to help others, the idea that if they shared with others they would gain and by the power that knowledge provided.

- In most cases, respondents were hindered from belonging to communities of practice by time constrains, family responsibilities, heavy workloads and the system and culture of their universities, which they believed encouraged individualism.

- Most respondents felt that communities of practice need to be cultivated and promoted.

- Most respondents at Unizul indicated that communities of practice need to be cultivated by designing a policy on communities of practice. At UKZN most respondents indicated that they believed that the work they were doing need to be valued by the organisation.

- On both campuses most respondents indicated that they had gained new knowledge and new skills by belonging to communities of practice.

- The study established that at UKZN there was no written policy on communities of practice but there were some systems in place.

CHAPTER FIVE: INTERPRETATION OF RESULTS

5.1 Introduction

Chapter Five presents the interpretation of the results. The purpose of this study was to establish the extent to which communities of practice are defined and utilized within higher education institutions to foster learning and facilitate the sharing of knowledge among academic staff, in order to advance the scholarship of teaching and research in the humanities at the University of KwaZulu-Natal (UKZN) and the University of Zululand (Unizul). The results are discussed in relation to the objectives of the study and comparisons are made with the literature reviewed in Chapter Two. The discussion is based on the survey questionnaire results, focus group discussions at UKZN and Unizul and the semi-structured interview results with the Deputy Vice-Chancellor at UKZN. Taking into account the low response rate to the survey, generalizations of the findings to the whole academics population may be difficult.

5.2 Revisiting the objectives of the study

The study set out to achieve the following objectives:

- To determine how communities of practice are defined and understood by the academic staff.
- To identify existing and evolving communities of practice (existing social interactions and networks).
- To understand the nature of these communities of practice
- To determine the benefits that members get from existing and evolving communities of practice.
- To establish the role communities of practice can play within faculties and schools in advancing the scholarship of teaching, learning and research.
- To identify the institutional conditions which are most likely to favour or inhibit the emergence of communities of practice.
- To recommend how communities of practice can be fostered to encourage learning and sharing of knowledge among academic staff.

5.3 Understanding of communities of practice

Table 8 showed that the majority of respondents at UKZN, 24 (46.2%), and Unizul, seven (18.45%), understood a community of practice as a "group of people with common interest". Communities of practice were described in Section 2.2 as a "network of people who share a common interest in a specific area of knowledge or competence and are willing to work and learn together over a period of time to develop and share that knowledge" (Wenger and Snyder 2000:4). The findings of the present study indicated that most academics have an understanding of the term "communities of practice".

5.4 Existing and evolving communities of practice

A number of communities of practice were identified at UKZN and Unizul. Some had names and others did not have names. Most respondents at both institutions indicated that they belonged to communities of practice. At UKZN most respondents 27 (51.9%) indicated that they belonged to communities of practice within their institution; whereas at Unizul most respondents 13 (34.2%) indicated that they belonged to communities of practice outside their organization. Some respondents at both institutions indicated that they belonged to communities of practice both within and outside their organization (see Section 4.2.6). The literature reveals that communities of practice can take different forms. They can function within an organisational unit, can be cross divisional, can span geographical boundaries or even span several different companies or organisations (Wenger 1998a; Van Wyk 2005: 92).

5.5 Nature of communities of practice

A number of questions were asked which helped the researcher to understand the nature of the identified communities of practice. Some of them will be discussed.

79

5.5.1 Forms of respondents' communities of practice

Table 9 showed that the majority of respondents at both institutions revealed that the communities of practice they belonged to were informal. However, some respondents at both institutions indicated that their communities of practice were formal. The literature confirms that communities of practice start as very informal groups, where members share a common interest on which they wish to collaborate. At a later stage they may evolve into more formal groups (Sallis and Jones 2002:26).

5.5.2 Number of members within communities of practice

The researcher asked the respondents how many members each of these communities of practice mentioned by the respondents had. One of the characteristics of a community of practice is that they are small and intimate, involving only a few specialists, while others consist of hundreds of people (see Section 2.3). The question was asked to get an idea of the size of these groups. The responses given in Table 10 showed that most of these groups at both institutions had less than 20 members. This is good, because the literature revealed that the larger the group becomes the more difficult it is to share knowledge. However, two communities of practice at Unizul were said to have more than 100 members, which means that knowledge sharing in these groups might be more difficult than in smaller communities of practice.

5.5.3 Forms of participation within a community of practice

Table 3 illustrated that members in communities of practice were self-selected volunteers, whereas in project teams employees are assigned by the employers. Most respondents at both institutions indicated that their participation in communities of practice was voluntary. Only a small number of respondents indicated that participation in the communities of practice they belonged to was compulsory (see Table 11). This is a good indication that most of the identified groups were really communities of practice.

80

5.5.4 Development of communities of practice

The origin of the group can give a good indication of whether or not these groups were communities of practice or just interest groups or teams. In order to find out if these identified groups were really communities of practice the researcher asked the respondents to indicate how the communities of practice they belonged to developed. The majority of the respondents at both institutions indicated that the communities of practice they belonged to developed spontaneously. Fewer respondents indicated that their communities of practice were formally established by the department. Table 3 outlined the differences between communities of practice and teams. It was mentioned that communities of practice develop on their own, whereas teams and workgroups are convened by the organisation. It seems therefore that formal groups could be transformed to communities of practice. Even those who indicated that they were formally established by the faculty mentioned that they focused on the sharing of expertise (see Table 12). The origin and the evolvement of these groups showed that the majority of these groups could be viewed as communities of practice.

5.5.5 Meetings of respondents' communities of practice

In order to find out more about these communities of practice the researcher asked the respondents how many times these communities of practice met. This question was asked to determine if communities of practice only existed virtually, or if they held face-to-face meetings. The majority of respondents indicated that they met monthly or weekly (see Table 13). The literature reveals that it is essential that people meet face-to-face in an infrequent manner. According to Snyder and de Souza Briggs (2003:16), personal relationships weave the community together and help to build trust and mutual commitments (see Section 2.3.2.2). Looking at the results it is evident that most communities of practice that were identified gathered face-to-face. A few respondents indicated that their communities of practice assembled quarterly or when necessary. This could be a good indication that the few identified communities of practice were online networks.

5.6 Value of communities of practice

In Section 2.5 of this study it was shown that communities of practice provide value for the organisation in which they operate, the community and the individuals that are part of them. The researcher wanted to discover what value or purposes these communities had for the two universities under study, the respondents and the communities they belonged to. In order to identify these values, respondents were asked if they had benefited from belonging to a community of practice.

Most respondents at both institutions indicated that they gained new knowledge and new skills from belonging to communities of practice. Seven (13.5%) respondents at UKZN indicated that they were exposed to new ideas and four (10.5%) respondents at Unizul. Two respondents at both institutions indicated that they gained a sense of belonging by being involved in communities of practice. The literature revealed that the benefit of communities of practice was to bridge formal organisational boundaries in order to increase collective knowledge, skills and reciprocity of the practitioners who serve in the organisation (see Section 2.5). In other words, the skills that individuals gain from participating in communities of practice can help them to perform the organisational tasks more easily and enjoyably and they can be useful in the communities they belong to.

Respondents were asked what issues were being discussed in their communities of practice. Most respondents at UKZN 36 (69%) and Unizul 29 (76.3%) indicated that they discussed issues relating to how to conduct research and how to improve research outputs (see Table 15). This confirms that although they only indicated the individual's benefits, the institutions were also benefiting from their involvement in communities of practice.

5.7 Conditions that influence the emergence of communities of practice

The literature revealed that many elements in the organisation can foster or inhibit communities of practice. These elements include management interests, rewards systems, work processes, corporate culture and company policies (Wenger 1998a).

These factors determine whether people form communities of practice. They can facilitate or hinder participation (see Section 2.10.4).

5.7.1 Conditions that favoured emergence of communities of practice

The researcher asked the respondents if they were rewarded for belonging to communities of practice. This question was asked to determine factors that favoured the emergence of communities of practice at the institutions under study. Most respondents indicated that they were never, rarely or sometimes rewarded for belonging to the community of practice by all three levels, namely faculty, school and department. At UKZN, 13 (25%) respondents indicated that they were never supported by the faculty, while five (9.6%) respondents indicated that they were never supported by school and 10 (19.2) respondents indicated that they were never supported by the department. Eighteen (11.5%) respondents indicated that they were always supported by the school and seven (13.5%) indicated that they were always supported by the department. At Unizul, 19 (50%) respondents indicated that they were never supported by the school. Sixteen (42.1%) respondents indicated that they were never supported by the faculty, while 13 (34.2%) indicated that they were never supported by the department. Seven (18.4%) respondents at Unizul indicated that they were always rewarded by the department for belonging to communities of practice (see Table 18).

Those respondents who indicated that they did receive support from the different levels of the institution were asked what forms of support they received. Most respondents at both institutions indicated that they receive time, emotional support and other facilities such as space, stationery and computers from their departments. Financial support was received at almost all levels at both institutions. At Unizul only one (2.6%) respondent indicated that he/she received promotion and recognition from the faculty (see Table 19). This is confirmed by the focus group results. Most respondents on both campuses indicated that they received support from the department levels. They also indicated that the form of support they receive is funds for conducting research and for buying research equipment.

5.7.2 Conditions that inhibited emergence of communities of practice

The researcher wanted to determine if there were any factors that would have hindered the respondents from participating in communities of practice. Most respondents at UKZN 38 (73.1%) and Unizul 27 (71.1%) indicated that they do not participate in communities of practice because their workloads were too heavy. Thirty four (65.4%) respondents at UKZN indicated that they are not involved in communities of practice because of time constraints. Nineteen (36.5%) respondents said that they were hindered by too many family responsibilities, while 18 (34.6%) respondents mentioned lack of support from the department. Only one respondent at UKZN mentioned distance as one of the hindering factors. At Unizul 25 (65.8%) respondents indicated that they were hindered by family responsibilities, while 22 (57.9%) respondents raised time constraints as one of the hindering factors. Four (10.5%) respondents at Unizul indicated that they are hindered by the distance.

In the focus group results most respondents at both institutions revealed that they believed in sharing and they thought people can be empowered when knowledge is shared. However, they were reluctant to share knowledge, or to participate in communities of practice, because of the system and organizational culture. They indicated that the system promoted individualism. This was confirmed by the literature. According to the literature, people issues are closely aligned to corporate culture. The ways individuals respond to change reflect their past experiences (Abell and Oxbrow 2001:40). People are reluctant to share knowledge for many reasons. They tend to ask questions such as:

- What's in it for me?
- What recognition will I get?
- If I share will others abuse it?
- Can I trust knowledge that others share?
- Will I lose control/power? (Montano 2005:310).

Montano (2005:310) stressed that viewing knowledge as a source of power encourages holding onto it. This negatively affects the organisation. If a person has knowledge that others do not have he/she may feel more important than the others who do not possess that knowledge. The organisation's responsibility is to encourage

84

employees to share knowledge. According to McDermott and O'Dell (2001:76), organisational culture is often seen as the key inhibitor of effective knowledge sharing. Organisational culture, performance measurements, reward systems, human resource policies and communication style are fundamental to the success of KM efforts.

5.8 Fostering communities of practice to encourage learning and sharing of knowledge

A question was asked to determine respondents' opinions about cultivating and promoting communities of practice. Almost all respondents at UKZN 50 (96.1%) and Unizul 37 (97.4%) felt that communities of practice need to be cultivated and promoted. The researcher asked the respondents to suggest ways that they thought the institutions could adapt to foster communities of practice and encourage learning and sharing of knowledge. Most respondents at Unizul felt that communities of practice could be fostered if the institution can designs a policy. At UKZN most respondents indicated that the work that communities of practice are doing needs to be valued by the organization. Surprisingly, not a single respondent at UKZN indicated that the institution needs to design a policy on communities of practice. It was highlighted from the interview with the DVC at UKZN that the institution does not have a written policy on communities of practice.

5.9 Summary of the chapter

The results of the study were discussed in this chapter. The discussions were relevant to the research objectives that the study aimed to achieve. The objectives were stated earlier in the chapter. It is evident that most respondents at UKZN and Unizul were involved in communities of practice and they had an understanding of the term "communities of practice".

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

In Chapter Six conclusions and recommendations are made, on the basis of the analysis of the data and the interpretation of the results in Chapters Four and Five.

6.2 Revisiting the purpose and the objectives of the study

The purpose of this study was to establish the extent to which communities of practice are defined and utilized within higher education institutions to foster learning and facilitation of the sharing of knowledge among academic staff, in order to advance the scholarship of teaching and research in the humanities at the University of KwaZulu-Natal and University of Zululand. The objectives of the study were:

- To determine how communities of practice are defined and understood by the academic staff.
- To identify existing and evolving communities of practice (existing social interactions and networks).
- To understand the nature of these communities of practice.
- To determine the benefits that members get from existing and evolving communities of practice.
- To establish the role communities of practice can play within faculties and schools in advancing the scholarship of teaching, learning and research.
- To identify the institutional conditions which are most likely to favour or inhibit the emergence of communities of practice.
- To recommend how communities of practice can be fostered to encourage learning and sharing of knowledge among academic staff.

6.3 Conclusions of the study

The survey of academic staff in the humanities at UKZN and Unizul and the interviews with the DVC at UKZN resulted in several significant findings.

6.3.1 Understanding of communities of practice

The majority of respondents at UKZN and Unizul understood a community of practice as a "group of people with a common interest". The findings of this study were that most academics had an understanding of the term "communities of practice".

6.3.2 Existing and evolving communities of practice

Communities of practice at UKZN and Unizul existed internally and externally. This correlates with the literature, which stated that communities of practice in an organization can take different forms. They can function within an organizational unit, can be cross-divisional and can span geographical boundaries or even several companies or organizations (Wenger 1998a; Van Wyk 2005:42). At UKZN the majority of respondents belonged to communities of practice within their institution, whereas at Unizul most respondents belonged to communities of practice outside their institution. A small number of respondents belonged to communities of practice both within and outside the organization.

6.3.3 Nature of communities of practice

During the empirical study it was found that most of the communities of practice that the respondents belonged to were informal and very few, in both institutions, were formal. This concurs with the literature, which demonstrated that communities of practice start as very informal groups in which members share interests they wish to collaborate on. At a later stage they may evolve into more formal groups. It is also possible that even those communities of practice which indicated that they were formal started as being very informal.

The empirical study found that participation in most of the identified communities of practice was voluntary. Very few respondents indicated that participation in the communities of practice they belonged to was compulsory. The literature confirmed that members of communities of practice are self-selected volunteers.

The results of the study were that most of the communities of practice that the respondents belonged to developed spontaneously. Fewer, at both institutions, indicated that the communities of practice they belonged to were established by the faculty. This agrees with the literature, that communities of practice develop on their own.

During the empirical study it was found that communities of practice could be in virtual or face-to-face format. At both institutions it was found that most communities of practice met face-to-face. The literature indicated that communities of practice in face-to-face format provide people with a sense of belonging, while communities of practice that met virtually could experience problems in creating a sense of belonging.

6.3.4 Value of communities of practice

Most respondents at both institutions indicated that they gained new knowledge and new skills by belonging to communities of practice. Some indicated that they were exposed to new ideas and gained some sense of belonging by participating in communities of practice. The literature reveals that newly gained skills can assist individuals to do their work with ease in the organization and in their communities.

6.3.5 Conditions that favoured or inhibited the emergence of communities of practice

Most respondents at both institutions indicated that they received time, emotional support and other facilities such as space, stationery and computers from their departments. Financial support was received at almost all levels at both institutions. At Unizul only one (2.6%) respondent indicated that he/she received promotion and recognition from the faculty. Finally, the major problems facing academics at UKZN and Unizul were that their workloads were too heavy, family responsibilities, lack

support from the institution, time constraints, and the absence of policy on communities of practice and the organizational culture.

6.3.6 Fostering communities of practice to encourage learning and sharing of knowledge

Almost all respondents at UKZN 50 (96.1%) and Unizul 37 (97.4%) felt that communities of practice need to be cultivated and promoted. Most respondents 14 (36.8%) at Unizul indicated that communities of practice may be fostered if the institution designed a policy. At UKZN fifteen (28.9%) indicated that the work that communities of practice were doing needed to be valued by the organization.

6.4 Recommendations

The following recommendations relating to communities of practice among academics at UKZN and Unizul are based on the objectives of the study, the findings of the study and the related literature that was reviewed.

6.4.1 Strategies and policies

It was found that the UKZN and Unizul did not have a policy on communities of practice. It is recommended that both institutions should draft a policy on communities of practice.

6.4.2 Rewards for belonging to communities of practice

The study established that academics were not rewarded for belonging to communities of practice. It is recommended that participation in communities of practice by academics at both institutions should be included in their performance evaluation. Staff members should be awarded incentives for participating in communities of practice.

6.4.3 Existence of communities of practice

The study found that most communities of practice existed at departmental level. It is recommended that both institutions should encourage academics to form inter-departmental communities of practice.

6.4.4 Conditions that inhibited emergence of communities of practice

One of the major constraints that inhibited academics from participating in communities of practice was that the system at both universities did not encourage knowledge sharing and collaboration. It is recommended that the university culture and the university system should change and should encourage knowledge-sharing amongst academics at the institutions.

6.5 Suggestions for future research

During this study, certain areas were identified that can provide opportunities for further research:

- Different faculties and different institutions may have different perspectives on communities of practice. It is suggested that research be done on communities of practice at the same institutions, but in different faculties, or communities of practice at other academic institutions.
- The introduction of communities of practice and knowledge sharing in higher education institutions is a relatively recent development. Because of the low response rate in this study it is suggested that a study similar to the present study be done at the same institutions after two or three years have elapsed.

6.6 Summary of the chapter

Conclusions on the major research findings were discussed in Chapter Six. Recommendations were made which could assist in improving communities of practice in the humanities at UKZN and Unizul. Recommendations relating to the development of policy on communities of practice, providing rewards and recognition for participating in communities of practice and changing the culture and system of

the universities were made. Suggestions for further research were discussed in the chapter.

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APPENDICES

Appendix 1: Questionnaire and covering letter for collecting data on communities of practice in institutions of higher learning in the humanities at the University of KwaZulu-Natal and the University of Zululand

Covering letter

Dear Respondent

I am a student doing Masters in Information Studies at the University of KwaZulu-Natal. I am seeking your assistance with my research. You have been randomly selected to be part of this study. I am conducting research on communities of practice in the institutions of higher learning using the University of KwaZulu-Natal and University of Zululand as case studies. In higher education institutions there are many different ways in which knowledge is shared and learnt, both formal and informal, such as conferences, seminars, committees, videoconferences, and tearoom conversations. There is growing interest in 'communities of practice' as a specific means of sharing and disseminating knowledge. The purpose of the study is to establish the extent to which communities of practice, as a specific form of knowledge sharing, are utilized within these two institutions, with a focus on the Humanities.

A community of practice has been defined as self-organizing groups of people connected by a shared interest in a task, problem, job or practice (O'Hara, Alani and Shadbolt 2002). On a slightly different note, Sharp (1997) defines a community of practice as a "special type of informal network that emerges from a desire to work more deeply among members of a particular speciality or work group". Communities of practice start as being informal and over time; they can become more formalised (Sallis and Jones 2002:26).

There are a number of communities of practice that have been formed within the context of higher education. For instance, in the case of South Africa, there is a project called Critical Research and Development. This collaborative project involves the Cape Peninsula University of Technology (CPUT), the Western Cape Education Development (WCED), the University of York (UoY), the University of Cape Town (UCT) and a number of schools in the Cape Town area. The project members formed

a community of practice where educators, curriculum developers, researchers and educator advisors work together to provide educators with the skills and insights necessary for them to develop argumentation for their learners. The focus of this community of practice is the shared responsibilities for the development of learning and teaching material to support critical thinking of educators (Cape Peninsula University of Technology 2006).

In addition, academics at the University of KwaZulu-Natal within the School of Sociology and Social Studies formed what can be referred to as a community of practice - Writing Initiative to Support Academics (WISA). WISA was initiated by the academics in 2005 as an informal community of practice to support each other in terms of writing and publishing research articles. WISA enables academics to share their experiences and ideas on ways to get articles published in reputable journals.

Your participation in this study, by completing the questionnaire will result in a greater understanding of communities of practice to enhance learning and collaboration in the institutions of higher learning. Your participation is voluntary. All replies will be treated in the strictest confidence. No identification of individual responses will occur as responses will be aggregated. The data will only be used to further the purpose of this research.

I realize that there are many other demands on your time, but would be grateful if you could spare a few moments of your time to answer and return this survey questionnaire if possible by the 20 September 2006 to Miss Bongekile Mngadi (200274802@ukzn.ac.za) or Prof Patrick Ngulube, C/o School of Sociology and Social Studies, Information Studies, University of KwaZulu-Natal, Private Bag X01, Scottville, 3209.

If you have any questions regarding the survey, please contact my supervisor: Prof Patrick Ngulube (ngulubep@ukzn.ac.za)

Yours sincerely,

Bongekile Mngadi (Miss)

Survey questionnaire for collecting data on the Communities of practice in institutions of higher learning

Case No: ....

Instructions

- Please answer all questions

- Please tick √ the answer where applicable

- Please use spaces provided to write your answers to the questions. Please print.

- You may complete this questionnaire online and submit it via e-mail

Section A: General Information

Please provide the following information about yourself and your employment history.

1. Indicate the name of the institution at which you are employed   [ ] UKZN
    [ ] Unizul

2. Department ....

3. Indicate your rank/position.
[ ] Senior professor
[ ] Professor
[ ] Associate Professor
[ ] Senior Lecturer
[ ] Lecturer
[ ] Junior Lecturer
[ ] Senior Tutor
[ ] Tutor
[ ] Other, please specify
....
....

4. How many years have you been working for this institution?
[ ] Less than 1 year
[ ] 1-5 years
[ ] 6-10 years
[ ] 11-15 years
[ ] More than 15 years

5. Please indicate the status of your employment.
[ ] Contract less than 2 years
[ ] Contract 2 years and above
[ ] Permanent
[ ] Other, please specify ....

6. Indicate your gender.

[ ] Male

[ ] Female

7. Indicate the racial group you belong to.

[ ] Indian

[ ] Coloured

[ ] African

[ ] White

8. Indicate the age group you belong to?

[ ] 20-29

[ ] 30-39

[ ] 40-49

[ ] 50-59

[ ] 60 and above

9. What made you choose a career in academia?

....

....

Section B: The nature of communities of practice
This section aims at identifying your participation in communities of practice

A community of practice has been defined as self-organising groups of people connected by a shared interest in a task, problem, job or practice (O'Hara, Alani and Shadbolt 2002). On a slightly different note, Sharp (1997) defines a community of practice as a "special type of informal network that emerges from a desire to work more deeply among members of a particular speciality or work group". Communities of practice start as being informal and over time; they can become more formalised (Sallis and Jones 2002:26).

10. Do you belong to a community of practice e.g. self organized group that exists?

[ ] Within your institution

[ ] Outside your organization

[ ] None

11. What is the name of the community of practice (self organized group) you belong to?

[ ] Within your institution ....

[ ] Outside your institution ....

[ ] Other, please specify

....

....

12. Is your community of practice formal or informal?
[ ] Formal
[ ] Informal

13. How many members does your community of practice have?
[ ] Less than 20
[ ] Between 21 and 50
[ ] Between 51 and 100
[ ] More than 100

14. Is participation in a community of practice you belong to?
[ ] Voluntary
[ ] Compulsory
[ ] Other, please specify
....
....

15. How did a community of practice you belong to develop?
[ ] It was formally established by the faculty
[ ] It developed spontaneously on its own
[ ] Don't know

16. How often do you communicate or meet as a group?
[ ] Daily
[ ] Weekly
[ ] Monthly
[ ] Quarterly
[ ] Other, please specify
....
....

17. What would you say is the purpose of a community of practice to which you belong?
[ ] To mentor new academics
[ ] To improve the research outputs of academics in the faculty
[ ] To improve teaching skills of academics in the faculty
[ ] To share past teaching experiences and learn from them
[ ] Other, please specify
....
....

18. What issues are being discussed in these communities of practice?
[ ] Teaching methods that work
[ ] Writing and publishing of articles
[ ] Presentation techniques
[ ] How to conduct research
[ ] Other, please specify
....
....

19. What format do these meetings take?
[ ] Video conferencing
[ ] Face-to-face
[ ] Email
[ ] Other, please specify

....
....

20. How would you define communities of practice?

....
....
....

Section C: Role of communities of practice
This section explores the role of communities of practice within faculties, schools and departments.

21. Do you think it is important to develop these communities of practice? Please tick the appropriate answer.
[ ] Very important
[ ] Important
[ ] No opinion
[ ] Somehow important
[ ] Not important

22. What would you say is the role of a community of practice?

Role of community of practice	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Facilitate learning					
Improve teaching skills					
Improve research outputs					
Facilitate knowledge sharing and collaboration					

Other, please specify

....
....

Section D: Conditions that favours or inhibit the emergence of communities of practice
This section identifies the institutional conditions that are most likely to favour or inhibit the emergence of communities of practice.

23. What hinders your participation in a community of practice?
[ ] Time constraints
[ ] Lack of support from the department
[ ] Family responsibilities
[ ] Too much workload

[ ] Know nothing about communities of practice

24. Do you get support at faculty, school and department level to engage in communities of practice?

Level	Never	Rarely	Sometimes	Often	Always
Faculty					
School					
Department					

25. What forms of support do you receive from department, school and faculty level for belonging to a community of practice?

Form of support	Faculty	School	Department
Financial			
Time			
Emotional			
Facilities e.g. space to meet, computers, stationery			

Other, please specify
....
....

26. Are you rewarded for belonging to a community of practice [ ] Never
                                                              [ ] Rarely
                                                              [ ] Sometimes
                                                              [ ] Often
                                                              [ ] Always

27. If you are rewarded, what is the nature of the reward(s)
....
....

Section E: Fostering communities of practice to encourage learning and knowledge sharing
This section explores the ways in which communities of practice can be fostered to encourage learning and knowledge sharing.

28. Do you share knowledge that you gain in a community of practice that you belong to with other colleagues?
   [ ] Yes
   [ ] No

29. Who would you freely share your knowledge with?
   [ ] With colleagues who are friends
   [ ] With colleagues who have helped me
   [ ] With colleagues who can help me
   [ ] Other, please specify
....
....

30. What motivates you to share knowledge? (Tick all that apply)
    [ ] The feeling that I am able to help others
    [ ] The idea that if I share, others will gain
    [ ] The power that knowledge provides
    [ ] The prospect of career promotion
    [ ] Monetary incentives
    [ ] Other, please specify

....
....

31. What would discourage you to share knowledge? (Tick all that apply)
    [ ] Loss of power
    [ ] The feeling that I am forced to share
    [ ] Other, please specify

....
....

32. Which means of sharing knowledge do you use most?
    [ ] Face-to-face meetings
    [ ] Electronic database for storing information
    [ ] Communities of practice
    [ ] Email
    [ ] Intranet
    [ ] Telephone
    [ ] Other, please specify

....
....

33. How often do you access the technological mechanisms provided for sharing knowledge e.g. Internet, groupware, email, weblogs and discussion boards?
    [ ] Never
    [ ] Rarely
    [ ] Sometimes
    [ ] Often
    [ ] Always

34. Do you think communities of practice need to be cultivated and promoted in higher education institutions?
    [ ] Yes
    [ ] No

35. How should they be cultivated or supported?

....
....
....

36. Would you encourage other academic staff to participate in communities of practice?

[ ] Yes
[ ] No

37. Do you think that you have personally benefited from belonging to a community of practice? Please explain your answer.

....
....
....
....
....
....

Thank you for your participation

Appendix 2: Focus group interview schedule and covering letter

Focus Group Interview schedule on communities of practice in institutions of higher learning

Introduction

Good morning ladies and gentleman. My name in Bongekile Mngadi and this is my supervisor Prof Patrick Ngulube. We are based at the University of KwaZulu Natal in Pietermaritzburg. Our project is on communities of practice. Thank you for coming. A focus group is a relaxed discussion. You were chosen to participate because of your active involvement in communities of practice and the interesting answers you provided in the questionnaires.

Purpose

We are here today to talk about communities of practice in the institutions of higher learning. The purpose of this discussion is to get your views on how communities of practice are defined and understood. Thus we want to find out if there are existing and evolving communities of practice (existing social interactions and networks) within your institution. In addition, we want to find out the role communities of practice can play within faculties and schools in advancing the scholarship of teaching, learning and research. Lastly, we will discuss the institutional conditions which are most likely to favour or inhibit the emergence of communities of practice in your organisation or in any other organisation. Your views are what matters. There are no right or wrong answers. You can disagree with each other, and you can change your mind as time goes on. We would like you to feel comfortable saying what you really think and how you really feel.

We hope that the information you will give us and the discussion today, will help all of us including yourselves. We also hope that the experience and knowledge that you have may be shared with others so that we can all understand what communities of practice are and their value to organisations more especially to higher education institutions. We will be taking notes and tape recording the discussion so that we do not miss anything you have to say. Everything you say is confidential. Although we

will ask you to tell us your names so that we can address one another by names, when we write the reports your names will not be included and no one will know who said what. We want this to be a group discussion so feel free to respond to me or to other members of the group. We can appreciate if one speaker can talk at a time. The discussion will take about 1 to 2 hours. There is a lot to discuss, so at times we may go beyond the time limit a bit with your permission of course. You are free to withdraw from the discussion at any point and this will not prejudice you in any way.

Participants introduction (15 Minutes)

Now let us start by everyone sharing their names, their departments, their positions and how long they have been working for this institution.

SESSION 1: (30 Minutes)

Procedure: May one of you write your responses on the card provided and after which we will have an open discussion.

1. Do you belong to a social network?
2. What kind of ideas do you share?
3. What format do these meetings take?

SESSION 2: (30 Minutes)

Procedure: May one of you write your responses on the card provided and after which we will have an open discussion.

4. Do you get support at faculty, school and departmental level to engage in a community of practice?
5. What hinders your participation in a community of practice?

Closure and summary

Does anyone want to add or clarify the point?

Is there other information regarding communities of practice you think will be useful for us to know about?

Thank you very much for coming to this focus group discussion. Your participation is much appreciated and your comments have been very useful.

Appendix 3: Letter reminding the respondents to complete and return the survey questionnaire

2 October 2006

Dear Sir/Madam

On 5 September 2006 I mailed you a questionnaire concerning communities of practice in the institutions of higher learning using the University of KwaZulu-Natal and University of Zululand as case studies. Having failed to get a response by 20 September 2006 I would assume that either you have not received the questionnaire or it was lost. I am therefore, sending a copy of the questionnaire I sent to you a couple of weeks ago. I hope you will receive it and send it back to me before 10 November 2006.

Your involvement and cooperation in this survey research is very important. The utility to society of any research results hinges upon the input and/or lack of it by the major stakeholders. As one of the major stakeholders in your institution, you can make a difference to the results of this research by telling me what you are doing well, and the problems you are experiencing if there are any. It is important that your views are included in the study if the research is to adequately portray the full picture on communities of practice.

In that light, I am kindly requesting you to spare a moment and complete the questionnaire and send it to me by the deadline stated above. Your participation in this survey is key to the success of my project as well as ensuring the validity and applicability of my research findings. Your assistance is greatly appreciated.

Thank you in anticipation of your cooperation.

Yours faithfully

Bongekile Mngadi (MIS Student: University of KwaZulu-Natal)

Appendix 4: Invitation letter to attend focus group discussions

20 October 2006

Dear Sir/Madam

We are carrying out research on knowledge management in higher education in South Africa using the University of KwaZulu-Natal and the University of Zululand. Knowledge management has not been experimented with in the higher education landscape in South Africa. However evidence from elsewhere demonstrates that knowledge management may increase the research capacity of higher education institutions and enhance their performance. It was in this regard that we decided to carry out this research. The research team comprises Prof Patrick Ngulube, Ms Pearl Maponya, Ms Biziwe Tembe, Ms Lindiwe Magazi, Ms Smangele Moyane and Bongekile Mngadi. Our research project was given ethical clearance by the University of KwaZulu-Natal's Research and Ethics Committee.

The aims of our research are to:

- Determine knowledge transfer practices among academic staff in the humanities in higher education.
- Investigate knowledge sharing and dissemination mechanisms among academic staff in the humanities in higher education.
- Find out how communities of practices are defined and utilised among academic staff in the humanities in higher education.
- Establish the research needs of academic staff in the humanities in higher education.

Our methods of data collection are questionnaires, interviews and focus group discussions. We would like to conduct a focus group discussion with you and your colleagues. Your name was randomly selected from the database of your institution. In this regard, we would like to invite you to talk to us about issues of knowledge management in higher education institutions. The purpose of the discussion is to get your views on how you share your knowledge with others in your discipline, the mechanisms you use to share and disseminate knowledge and the barriers to

knowledge sharing in institutions of higher education. In addition, we want to find out what knowledge and skills you require for your academic activities. The aim will not be to give you answers but rather hear from you. Your views are what matters. There are no right or wrong or desirable or undesirable answers. You can disagree with each other. We hope that the information you will give us during the discussions will help all of us including yourselves to put in place better means and way of using and managing knowledge as a resource that enhances performance.

Date of the proposed meeting: 27 October 2005

Venue: (Depended on campus)

Time: 9.30-11.30

Please, acknowledge receipt giving an indication on whether you will be able to spare a few moments of your time to attend the discussions.

Thank you in anticipation.

Yours faithfully

Bongekile Mngadi

Appendix 5: Letter from one of the prospective focus groups participants

Dear Bongekile

I cannot make that time on Thursday since it is a teaching afternoon. It looks like most of the people you asked to interview are academics with heavy loads as well. Is there any way you can call academics together *after* the teaching ends (Nov 4th)? It seems odd to try to schedule interviews in the last weeks of the academic year when we are all teaching and marking our hearts out! I hope you will forgive me when I tease you (but with a serious undertone) by saying that this shows rather poor "knowledge management" on your part, since this calendar is so well known and in fact THE CORE of our University activities of knowledge management and production!!!

I look forward top hearing from you soon,
Catherine

Appendix 6: Interview schedule for the Research Director

Semi-Structured Interview with the Research Director

Introduction

My name is Bongekile Mngadi. I am a student at the University of KwaZulu-Natal, doing a Master's Degree in Information Studies. My project is on **Communities of practice in institutions of higher learning in the humanities at the University of KwaZulu-Natal and University of Zululand**. Thank you for your co-operation.

I am here today to talk about communities of practice in your institution. A community of practice has been defined as "self-organizing groups of people connected by a shared interest in a task, problem, job or practice" (O'Hara, Alani and Shadbolt 2002). On a slightly different note, Sharp (1997) defines a community of practice as a "special type of informal network that emerges from a desire to work more deeply among members of a particular speciality or work group". Communities of practice start as being informal and over time; they can become more formalised (Sallis and Jones 2002:26).

The purpose of the study is to establish the extent to which communities of practice, as a specific form of knowledge sharing, are utilized within these two institutions, with a focus on the Humanities. The study also aims to find out if there are any knowledge sharing mechanisms that are in place at your university. I will as well be sending a questionnaire to staff in order to gain a holistic picture.

I hope that the information you will provide me with, and the discussion today will help me and yourself to put in place interventions and ways that could possibly encourage academic staff to share knowledge. I will be taking notes and tape recording our discussion so that I do not miss anything you have to say. Everything you say is confidential. The discussion will last approximately 45 minutes.

1. Does your institution have a policy on communities of practice?
2. What are the features of the policy?

3. Does your institution support academic staff to engage in communities of practice?

4. What form of support does the institution provide to academics?

5. Are they encouraged to share their newly gained knowledge?

6. Which means of knowledge sharing is made available to them?

Closure and summary

Is there any other information regarding communities of practice that you think would be useful for me to know?

Thank you for your co-operation