CHAPTER 4

COMMUNITIES OF PRACTICE

4.1   INTRODUCTION

The idea of an informal network of people sharing a common practice is not a totally new concept, but has been in existence since the first civilisations appeared. The concept of a Community of Practice (CoP) however was only formulated in recent years. The purpose of this chapter is to investigate and discuss this concept in order to gain a better understanding of it.

As a starting point, the origin of the concept of a Community of Practice and how it developed into the concept as we know it today, is investigated. Next, the meaning of the concept is explored at the hand of definitions and characteristics as found in literature. As a third point of discussion, an overview of the relationships between teams, Communities of Practice and Communities of Interest are provided. This is followed by an investigation on why Communities of Practice are important to organisations by looking at the values they have for the organisation, the Community and the individual members of these Communities. Next follows a description of techniques that inspire participation in Communities of Practice and a discussion of the development stages of a Community of Practice. After this, a short description of the possible interactions taking place in an operational Community of Practice is given. This is followed by a discussion on the critical factors that contribute to the success of Communities of Practice. Next, the techniques for sharing/transfer of knowledge is discussed, followed by a discussion of those factors that enhance or hinder knowledge transfer in Communities of Practice. Thereafter, the idea of managing knowledge through Communities of Practice in learning organisations is addressed at the hand of discussions on the relationship of Communities of Practice and learning organisations, the management of knowledge through Communities of Practice, management of knowledge through Communities of Practice in academic libraries, as well as the role of the information professional in Communities of Practice.

4.2   THE ORIGIN OF COMMUNITIES OF PRACTICE

Man is in essence a social creature, and from the beginning of time, man has been organizing himself in social groups. In Ancient Greece, male **drinking clubs** played an important role in society (Black 1984: 3). The Roman **Collegia**, from which we inherited the word college, included social clubs, burial societies and cultic groups (Duff 1938: 113). During the Middle Ages, the **guild** came to the fore. A guild was a group bound together by ties of rite and friendship, offering mutual support to its members upon payment of their entry (Black 1984: 3). The early social guild formed the basis for the later craft-guild, groups originally general and identical in function, that gradually assumed specialized and differentiated roles in particular branches of economic life. Another example is that of the **caste system** in India, which functioned partly as a craft group (Black 1984: 3). All of these groups were artificial "families" that differentiated themselves from the outside world through their own special ethos.

In the modern world, groups like **regiments**, **schools**, **old-boy-networks**, **peer-groups** and even **gangs** bind people together as select groups with common interests, practices and ethos (Black 1984: 4).

In the academic world, the idea of collaboration in research is nothing new. The scientific paper developed in the 17th Century with the express purpose of finding out *"what was being done, and by whom, rather than a scholarly one of publishing new knowledge"* (Price 1963: 63). This however changed over time, as more and more scientists published their research findings in these papers. The original purpose of the scientific paper was thus a *"social device rather than a technique for cumulating"* data or information (Price 1963: 65). The motive was the establishment and maintenance of intellectual property, in other words researchers used papers *"to lay claim to newly won knowledge as their own"* (Price 1963: 65).

Scientific papers were published in scientific journals, but as time progressed, the number of journals multiplied to thousands. It became difficult to keep track of everything published. Scientists then formed groups like the Royal Society and the American Philosophical Society. As the needs of researchers grew, these groups were split into specialist societies that focus on specific disciplines/fields (Price 1963: 74). But there is a limit to the useful size of the membership of these groups. Societies that

were too big resulted in the formation of unofficial subgroups of really knowledgeable researchers. These groups are described by Price (1963: 85) as "invisible colleges".

It was found that meeting together once a year at conferences were not enough. There was a need for a more continuous means of close contact to others in the same field (Price 1963: 84). These groups devise mechanisms for day-to-day communication. They send out reprints of publications, preprints and pre-preprints of work in progress and results about to be achieved. Members of these groups are invited from time to time to *"centres where they can work along with several members of the group for a short time"* (Price 1963: 85). When they've done this, they *"move onto the next centre and other members"*, and then they return to their home base. What is interesting to note is that *"their allegiance is to the group rather than to the institution which supports them"* (Price 1963: 85). For each group there exists a type of *"commuting circuit"* of research centres, and summer schools and institutions that gives them an opportunity to meet, so that over an interval of a few years everyone *"working in the same field has worked with everyone"* (Price 1963: 85).

In the early 1980's, **Xerox** was looking for ways to boost the productivity of its field service staff. They sent out a work practices team to travel with a group of technical reps to observe how they actually performed their jobs; not how they described what they did, or what management assumed they did. Included in the work practices team was an anthropologist from the Xerox Palo Alto Research Centre (PARC). What they saw brought about a total revolution in the company. It was found that technical reps often made a point to spend time with each other in common areas like the local parts warehouse or hang around the coffee pot and exchange stories from the field (Brown and Gray 1995: 78). As it turned out, these gatherings were not just social activities, but a **community of professionals (technical reps**) coming together with the purpose of sharing and co-producing insights about how to repair machines better. In other words, it was through these informal conversations that knowledge transfer took place. So, rather than eliminating these informal conversations in pursuit of corporate efficiency, the company decided to expand them as part of their learning and innovation process (Brown and Gray 1995: 78).

The idea of a community of professionals sharing insights and practices was further taken up by Jean Lave and Etienne Wenger in a book they wrote in 1991, entitled

Situated learning: legitimate peripheral participation. In this book, they coined the term "Communities of Practice", which took the business community by storm.

In 2002, James van der Westhuizen introduced a new viewpoint on the concept of Communities of Practice. According to him, organisations in the new knowledge-focused-era have moved from structure to process. This, together with business process re-engineering, implementation of Enterprise Resource Planning (ERP) systems, Customer Relationship Management (CRM) systems, electronic (e) -procurement systems, etc. led to organisations characterised by horizontal hierarchy (Van der Westhuizen 2002: 93). According to Van der Westhuizen (2002: 93), most organisations have "*horizontalised everything, except governance, and that represents the single most significant challenge to the implementation of true knowledge management*". Because the building of horizontal governance is no easy task, Van der Westhuizen (2002: 93) proposes starting with a role change for strategic technical experts, and the use of Communities of Practice to create horizontal performance contexts for them. He sees Communities of Practice as *"knowledge management's one true deliverable"*, which not only integrates people, processes and technology, but also as the beginning of a *"framework for the measurement of success of a knowledge management initiative"* (Van der Westhuizen 2002: 93-94).

The forerunners of Communities of Practice each had very important aspects that were incorporated in the concept. Some might say that these Communities are nothing else but "invisible colleges", and looking at the academic world they may be partly correct, but the concept has a wider meaning to it. The idea of a guild or apprenticeship has also been incorporated in the concept, as members belonging to it learn from one another, and share and acquire the necessary skills and knowledge needed to make a success of their practice. Other aspects that are included are the idea of a social grouping, peer groups and belonging. Communities of Practice can also be used as mechanisms to measure the success of knowledge management in an organisation and can help to ensure a horizontal hierarchy. Communities of Practice can be formed across organisational boundaries or boundaries of different organisational units (called **External Communities of Practice** for the sake of this study) and can thus include professionals sharing the same domain, but working in different organisations or organisational units. An example of this could be researchers at different institutions working on the same field like HIV/Aids, water, etc. Communities of Practice can also exist internally between

colleagues in an organisation, focussing on the internal work processes and practices of the organisation, and normally operate in organisational units in the same organisation (for the sake of this study called **Internal Communities of Practice**).

Internal and external Communities can both be virtual[1] and face-to-face[2], but in order to give people a sense of being part of a Community, it is essential that people meet face-to-face in an infrequent manner.

Having discussed the development of the idea of a Community of Practice, it is important to have a look at what exactly is meant by this concept. In the next section, the researcher addressed this by looking at definitions and characteristics found in literature.

4.3   DEFINITIONS AND CHARACTERISTICS OF COMMUNITIES OF PRACTICE

A wide variety of definitions of Communities of Practice can be found in literature, but only those that are relevant to this study have been included. These definitions serve as helpful indicators of the characteristics of Communities of Practice.

4.3.1 DEFINITIONS OF COMMUNITIES OF PRACTICE

When defining the concept Communities of Practice, it is imperative to understand what is meant by *practice* and what is meant by *community*.

According to Lesser and Prusak (2000: 252), the term *practice* implies *"knowledge in action". Practice* also refers to the *"dynamic process through which individuals learn how to do their jobs by actually performing tasks and interacting with others performing similar tasks"* (Lesser and Prusak 2000: 252). The term *community* emphasizes *"the personal basis on which relationships are formed"* (Lesser and Prusak 2000: 252).

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1.   These are meetings between people who are not present at the same physical geographical location at the same time, and are held via electronic media, i.e. telephone, interactive television, Internet virtual workspaces e.g. Yahoo Groups, etc.
2.   These are meetings where attendees are all present in the same physical geographical location at the same time.

The concept of Communities of Practice is defined in literature as:

- *"informal and semi-informal networks of internal employees and external individuals held together by common purpose, by shared concerns and interests, that rely on expertise contained within the group to accomplish their work"* (Malhotra 2000: 13; Marcum 1998: Online);

- *"a set of relations among persons, activity, and the world, over time and in relation with other tangential and overlapping CoPs"* (Lave and Wenger 1991: 98);

- *"peers in the execution of real work, held together by a common sense of purpose and a real need to know what each other knows"* (Brown and Gray 1995: 81);

- *"informal groups of employees who share knowledge and work together to solve problems"* (Lesser and Prusak 2000: 251);

- *"groups of people who share similar goals and interests, and in pursuit of these goals and interests, they employ common practices, work with the same tools and express themselves in a common language. Through such common activity, they come to hold similar beliefs and value systems"* (Co Vis Project: Online);

- *"a group of professionals, informally bound to one another through exposure to a common class of problems, common pursuit of solutions and thereby themselves embodying a store of knowledge"* (Johnson-Lenz and Johnson-Lenz 1999: Online);

- *"groups that learn and emerge of their own accord. Members find themselves socially and professionally drawn to one another. They collaborate directly, use one another as sounding boards and teach each other"* (Stewart 1996: 173);

- *"a diverse group of people engaged in real work over a significant period of time during which they build things, solve problems, learn and invent… in short, they evolve a practice that I highly skilled and highly creative"* (Bauer 1999: Online);

- "*networks that identify issues, share approaches, and make the results available to others*" (Burk 2000: 18);

- "*groups of people informally bound together by shared expertise and passion*" (Wenger and Snyder 2000: 139);

For the purpose of this study, the following definition can be pieced together from the abovementioned definitions: **a Community of Practice is a network of people emerging spontaneously, and held together by informal relationships and common purpose, that share common knowledge or a specific domain, expertise and tools, and learn from one another.**

From these definitions and from the literature, one can compile the following list of characteristics of Communities of Practice:

4.3.2 CHARACTERISTICS OF COMMUNITIES OF PRACTICE

- People belonging to it have a sense of connection (Malhotra 2000: 13; Marcum 1998: Online);
- Members have a common purpose, a shared concern and a shared interest, which can include practical aspects of everyday activities, new developments, new tools, etc. (McDermott 1999a: Online);
- Communities of Practice can function within organizational units, can be cross-divisional, can span geographical boundaries or even span several different companies or organisations (Burk 2000: 19);
- They are driven by the value they provide to the members (McDermott 1999a: Online);
- Communities of Practice can consist of a handful of people, but it can also consist of larger numbers. The larger the group, however, the more difficult it becomes to share knowledge (Burk 2000: 19);
- The energy needed to hold a Community together is provided by the dedication and passion of a core group of participants (Burk 2000: 19);
- They provide a space where people can share their know-how and experience with their peers, in other words they are valuable knowledge-sharing mechanisms

(Burk 2000: 18-19);

- Members are held together by a real need to know what the others know (Brown as cited by Allee 2000: Online);

- Members rely on expertise contained within the group to accomplish their work (Malhotra 2000: 13; Marcum 1998: Online);

- Members share common knowledge, expertise and tools, and learn from one another (Co Vis Project: Online; Lesser and Prusak 2000: 251);

- Communities of Practice are effective mechanisms whereby organisations can continuously learn (Burk 2000: 19).

- *"They form and share knowledge on the basis of pull by individual members, not a centralized push of information"* (Manville and Foote 1996: 80);

- According to Wenger (1998) a typical Community of Practice can be characterized as having 3 dimensions, namely a domain, a community and a practice. He describes these dimensions as follows:

  - **Domain:**
    People organize themselves around a domain of knowledge that gives members a sense of joint enterprise and brings them together. This joint undertaking emerges from a shared understanding of their situation (Wenger 1998: 73, 77).

  - **Community:**
    People function as a community through relationships of mutual engagement that bind members together into a social entity (Wenger 1998: 73). They interact regularly and engage in joint activities that build relationship and trust.

  - **Practice:**
    A community builds capability into its practice by developing a shared repertoire, and resources such as tools, documents, routines, stories, vocabulary, symbols, artefacts etc. that embody the accumulated knowledge of the community. This shared repertoire serves as a foundation for future learning (Wenger 1998: 47-50, 72-73).

Another characteristic of Communities of Practice that Lave and Wenger (1991) identified is legitimate peripheral participation. As this has implications for this study, it was deemed important to elaborate a bit more on this topic.

- **Communities of Practice and legitimate peripheral participation**

Lave and Wenger (1991: 29) regarded Communities of Practice as a place where newcomers learn from old-timers by being allowed to take part in certain jobs relating to the practice of the community. Then, after a period of time, newcomers move from peripheral to full participation in the community. Learning in these communities is seen as *"legitimate peripheral participation"*; *not merely learning "situated in practice"*, but learning as an *"integral aspect of practice"* (Lave and Wenger 1991: 31, 34-35). They state that each of these aspects, i.e. legitimation, peripherality and participation, are indivisible, and cannot be considered in isolation (Lave and Wenger 1991: 35). For analytical reasons, though, Hildreth, Kimble and Wright (2000: 28-29) make a distinction between the three, and describe them as follows:

- **Legitimation**

    This is the dimension of Communities of Practice that is *"concerned with power and authority relations in the group. It can be formal or informal"*.

- **Peripherality**

    "The terms peripheral and full participation are used to denote the degree of engagement with, and participation in the community".

- **Participation**

    "Communities of Practice imply participation in an activity about which all participants have a common understanding on what it is and what it means for their lives and community".

Having discussed the definitions and characteristics of the concept of Communities of Practice, the researcher felt it necessary to indicate the relationships between Communities of Practice, teams and Communities of Interest.

4.3.3 THE RELATIONSHIP BETWEEN TEAMS, COMMUNITIES OF INTEREST AND COMMUNITIES OF PRACTICE

The following table compiled from Allee (2000: Online); Burk (2000: 18); Lesser and Prusak (2000a: 253); Smith and McKeen (2003: 6) and Ward (2000: 4-6) illustrates some of the differences between teams, Communities of Interest and Communities of Practice:

	TEAMS	COMMUNITIES OF INTEREST	CoPS
Membership	Have formal requirements for membership. Members selected on the basis of their ability to contribute to the team's goals; ideally full-time.	Membership is fairly loose and transitory (people come and go).	Have an informal, self-selecting membership that is often fluid in nature. They include part-time and marginal members.
Assignment of membership	Membership is usually assigned or selected by the leader.	Membership is open to any one who shares the interest.	Membership is completely self-selecting and voluntary. People participate because they personally identify with the topic and the enterprise of the community.
Objective	Have a task orientation and are often launched for a specific purpose.	Are defined by shared area of interest.	Are defined by knowledge/ expertise rather than task.
Determination of goals and nature of joint enterprise	Major goals and the basic nature of the joint enterprise are generally predetermined by management.	Major goals and the basic nature of the joint enterprise is determined by the area of interest and negotiated between members.	Major goals and the basic nature of the enterprise are negotiated between members.
Legitimation	Legitimation derived from the formal hierarchy.	Legitimation is more informal and comes about by members earning their status in the community.	Legitimation is more informal and comes about by members earning their status in the community.
Lifespan	Lifespan is determined by purpose, project or task.	Lifespan lasts as long as the interest lasts.	Usually have longer life spans than teams and can last as long as it has value for its members, or can evolve.

Deadlines	Have deadlines to meet.	Have no deadlines to meet.	Have no deadlines to meet.
Accountability	Are responsible to management.	Are responsible mostly to themselves.	Are responsible mostly to themselves.

Table 4.1: **Characteristics of teams, Communities of Interest and Communities of Practice**

From literature, it seems Communities of Interest and Communities of Practice are very closely related. According to Ward (n.d.: Online), Communities of Interest exist in the first stage (Potential stage/Connecting stage) of the life cycle of a Community of Practice (see Section 4.5.2). He regards the second stage (Formation stage/Context stage) as the stage during which Communities of Practice are actually formed. Communities of Interest thus have the potential to develop into Communities of Practice, but not necessarily so. When Communities of Practice become institutionalised and formalised, it can develop into a full-blown team, but then looses some of its vitality. The sharing of tacit knowledge then becomes difficult.

Teams according to McDermott (1999b: Online) are the building blocks of an organisation. They consist of a number of people with a common goal and joint accountability for results; they are tightly integrated units that are driven by deliverables, defined by managerial tasks, and bound together by their members' collective commitment to results. Teams however can become silos where information is hoarded and not shared with other teams. In such a case, they can get isolated and can develop a team myopia where ideas from the outside are rejected, resulting in them losing the ability to generate new ideas. Teams can also easily neglect long-term capacity building.

Communities of Practice on the other hand are driven by the value they have for their members, are defined by knowledge sharing, their members learn together, they create common practices, and they are bound by identity (McDermott 1999b: Online). Communities of Practice compensate for the limitations of teams by linking experts from different teams together, thereby overcoming the isolation of teams. They also provide information on tools, analyses and approaches current in the discipline, and can also be of great help in finding knowledgeable individuals who can help solve specific problems.

According to Smith and McKeen (2003: 8), Communities of Practice are not regarded as a replacement for more traditional work structures such as teams. On the contrary, they are seen as complementing traditional work structures by adding new dimensions to work and learning, for example they can help teams to disseminate their learnings across the organisation. They describe the traditional organisation as taking *"a vertical view of work"*, (e.g. lines of business, regions, or projects), and a Community of Practice as having a *"horizontal view, which integrates learning and action across vertical boundaries"* (e.g. practices, insights or learning) (Smith and McKeen 2003: 8). Organisations that successfully integrate these two different kinds of structures are described by McDermott (1999b: Online) as   "double-knit" organisations. In other words, teams are woven together through Communities of Practice. *"Teams focus on outputs, products, processes or market segments"*, while *"Communities of Practice focus on learning within functions or disciplines, by sharing information and insight, collaborating on common problems, and stimulating new ideas"* (McDermott 1999b: Online).

This discussion on the relationships between Communities of Practice, Communities of Interest and teams touches on aspects that could indicate their value for organisations, but this is very limited, and does not only focus on Communities of Practice. It was thus deemed necessary to include a discussion of the value of Communities of Practice to organisations in the next section.

4.4   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 a community, but increasingly, organisations are recognizing Communities as valuable organisational assets (Lesser & Storck 2001: 832).

According to Lesser and Storck (2001: 832), Communities of Practice help organisations to *"overcome the inherent problems of a slow-moving traditional hierarchy in a fast-moving virtual economy"*. They are also effective mechanisms whereby unstructured problems can be dealt with. Communities of Practice can also be used to share knowledge outside of the traditional structured boundaries of the organisation. Furthermore, they are seen as mechanisms for the development and maintenance of long-term organisational memory; they can be used to enrich individual members'

learning; and can inspire members to apply what they have learned (Lesser and Storck 2001: 832). For Brown and Gray (1995: 81), the value in Communities of Practice lies in the fact that they can be used to build core competencies, that they can energise and mobilise employees, and that they can shape and enact strategy. According to Burk (2000: 19), new staff and staff in new roles can become productive more quickly through Communities. Members of Communities can also raise each other's competencies through sharing. Burk (2000: 19) further regards a Community of Practice as a mechanism for communicating.

Allee (2000: Online) distinguishes between the value a Community of Practice has for the organisation, the Community and the individual:

- **For the organisation:**
  "They help drive strategy; they support faster problem solving both locally and organisation wide; they aid in the development, recruitment and retainment of talent; they build core capabilities and knowledge competencies; they rapidly diffuse practices for operational excellence; they cross-fertilize ideas and increase opportunities for innovation" (Allee 2000: Online).

- **For the Community:**
  "They help build common language; they embed knowledge and expertise in a larger population; they aid in the retention of knowledge when employees leave the organisation, they increase access to expertise across the organisation; they provide a means to share power and influence with the formal parts of the organisation" (Allee 2000: Online).

- **For the Individual:**
  "They help people to do their jobs; they provide a stable sense of community with other internal colleagues and with the organisation; they foster a learning-focused sense of identity; they help develop individual skills and competencies; they help a knowledge worker stay current; they provide challenges and opportunities to contribute" (Allee 2000: Online).

In other words, by participating in Communities of Practice, individuals can obtain the necessary expertise to do their work effectively, and in so doing increase the

organisations' intellectual capital. This is what gives an organisation the necessary competitive edge in an increasing competitive environment.

If these Communities are so valuable then to people and organizations, it is imperative that organisations develop them, but how? This question is answered in the next section by discussing techniques to develop them, as well as stages of development these Communities go through.

4.5 DEVELOPING A COMMUNITY OF PRACTICE

Different authors identify different phases in the development of a Community of Practice, and participation in these phases can be promoted by using various techniques.

4.5.1 TECHNIQUES TO INSPIRE PARTICIPATION IN COMMUNITIES OF PRACTICE

When developing a Community of Practice, it is important to convince people that participation will be of benefit to them. Hanley and Dawson (2000: 326-328) suggests the following techniques to persuade people to participate in Communities of Practice:
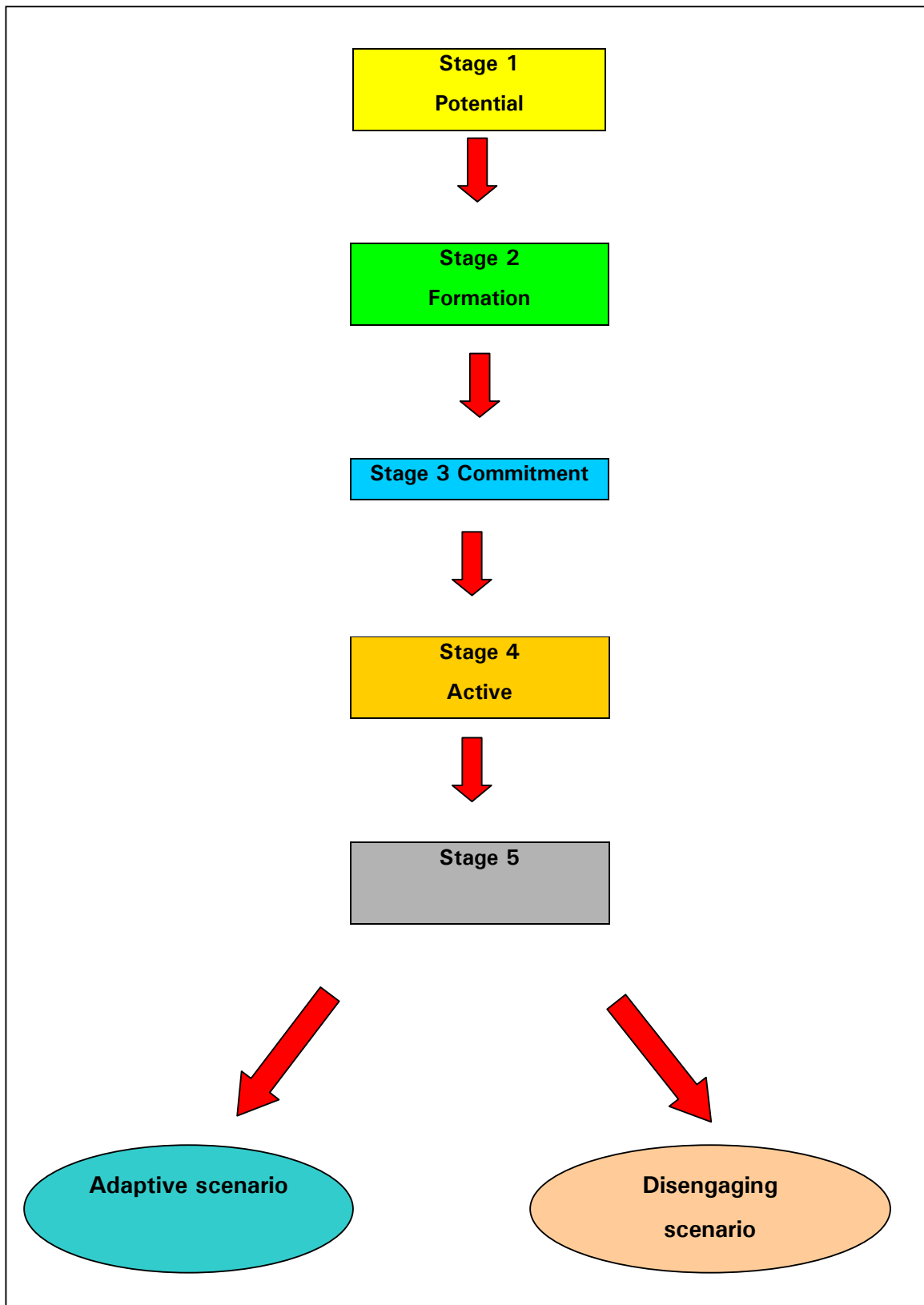
- **Identify/Recognize individual achievement** by inviting suitable candidates to join;
- **Build group identity** through the setting up of a homepage or a workspace on a portal;
- **Motivate and reward participation** by writing participation in Communities of Practice into formal performance objectives/skills development for the year, and linking this to incentives;
- **Celebrate achievements and successes** of members for example by giving out rewards at conferences, by publishing online links to members' papers and by publishing stories on individuals or communities in newsletters or other corporate-wide publications.

4.5.2 LIFE CYCLE OF A COMMUNITY OF PRACTICE

A Community of Practice as a human phenomenon develops in different stages. It has a starting stage and a final stage. According to Richard McDermott, Etienne Wenger and

Bill Snyder in Allee (2000: Online), a Community of Practice develops through the following stages: a potential stage where a network of people with similar issues and needs exist that have the potential to come together and discover common ground, and prepare for a community; a coalescing (formation) stage where people come together and launch a Community of Practice; a maturing (commitment) stage where the Community grows and takes full ownership of its practice; an active stage where the Community is established and goes through cycles of activities; and a final stage where the group dies and its members disperse. In Gongla and Rizzuto (2001: Online), the final stage of a Community of Practice is seen as the adaptive phase where the Community adapts to changes in the environment and keeps on functioning, but in a different way. In other words, the Community of Practice does not die out in the final stage but adapt to the changes and continues to operate. They substitute adaptation for disengagement. According to them, Communities of Practice can die out in the earlier stages of the development process, but dying out in the final stage is not mentioned. The researcher differs from this view and is of the opinion that Communities of Practice can only die out in the final stage. Combining these different viewpoints, it seems that in the final phase of the development process, Communities of Practice can either die (disengage) or can adapt to changes in the environment.

By integrating all these different viewpoints, a life cycle of a Community of Practice can be constructed, which corresponds with the stages that were identified by McDermott, Wenger and Snyder. This life cycle consists of the following stages: Potential, Formation (which corresponds with Coalescing stage), Commitment (which corresponds with the maturing stage), Active, and Adaptive or Disengaging stages (See Figure 4.1). Each of these stages is described in the form of tables consisting of its definition, fundamental function, and the behaviour of its members and where applicable, the behaviour of the organisation, the supporting processes, as well as enabling technology.

Stage 1
Potential

Stage 2
Formation

Stage 3 Commitment

Stage 4
Active

Stage 5

Adaptive scenario

Disengaging
scenario

Figure 4.1: **Life cycle of a Community of Practice.** (Based on Allee 2000: Online; Gongla and Rizzuto 2001: Online; Hanley and Dawson 2000: 326-328)

STAGE 1	POTENTIAL
Definition	The possibility for the formation of a community exists.
Fundamental function	Connection.
Behaviour of members	Find one another; Find common ground; Link up; Prepare for a community.
Supporting processes	Identify what type of community to build; Identify and locate potential members; Stage awareness campaigns; Facilitate bringing individuals together; Identify the type of knowledge to be shared.
Enabling technology	E-mail, chatrooms, listservs, phonecalls, tele-conferencing; Online forums, Online directories, skill and résumé[3] databases.

Table 4.2:   Stage 1, Potential

STAGE 2	FORMATION
Definition	The members come together, form a community and set out its operating principles.
Fundamental function	Capturing memory, context creation and structuring.
Behaviour of members and organisation	Core Members ▪ Learn about each other; ▪ Share experiences and knowledge; ▪ Build common vocabulary; ▪ Create roles and norms; ▪ Form a group identity; ▪ Begin a formal history and record it; ▪ Start a repertoire of stories; Organization: ▪ Recognize the CoP.
Supporting processes	Classify and store knowledge; Develop ways to support the knowledge life cycle; Plan for community operation; Begin deployment.

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3.   Short summary of a Curriculum Vitae.

Enabling technology	Common repository;
	Initial classification and taxonomy;
	Document and library management systems;
	Collaborative work environment/Virtual workspaces.

Table 4.3:   Stage 2, Formation

STAGE 3	COMMITMENT
Definition	The community executes and improves its processes.
Fundamental function	Access and learning.
Behaviour of members and organisation	Members: ▪ Develop trust and loyalty; ▪ Commit to the community; ▪ Outreach to new members; ▪ Model knowledge sharing behaviour; ▪ Define a learning agenda; ▪ Search and contribute material for knowledge base; ▪ Promote and participate in knowledge sharing; ▪ Develop roles; ▪ Create frameworks and set up standards, guidelines and measures for development; ▪ Recruit and socialize new members. Organisation: ▪ Interacts with CoP and learns of its capabilities.
Supporting processes	Manage workflow; Identify knowledge gaps and fill them; Support tacit knowledge exchange; Develop and disseminate communications; Gather and manage feedback; Re-examining definition and scope; Ensuring self-governance and self-regulation.
Enabling technology	Portals; Expert yellow pages; Language translation capabilities.

Table 4.4:   Stage 3, Commitment

STAGE 4	ACTIVE
Definition	The community understands and demonstrates benefits from knowledge sharing and the collective work of the community.
Fundamental function	Collaboration.
Behaviour of members and organisation	Members: ▪ Goes through cycles of activities; ▪ Engage members to solve problems; ▪ Create focussed workgroups; ▪ Educate novices; ▪ Interact with other communities. Organisation: ▪ Begins to rely on community's knowledge; ▪ Support and measures community work.
Supporting processes	Problem solving; Decision-making; Sensing and assessing the organizational environment; Enhancing learning and feedback processes; Interaction with other communities and processes, projects, research, etc.
Enabling technology	Electronic meetings; Collaboration tools such as virtual workspaces or chat rooms.

Table 4.5:   Stage 4, Active

STAGE 5	SCENARIO 1 – ADAPTIVE
Definition	The community adapts to changes in the environment.
Fundamental function	Innovation and generation.
Behaviour of members	▪ Influences environment (new products, markets, business); ▪ Sponsors new communities; ▪ Focus on innovation
Supporting processes	Adapt responsively to external environment; Mentor new communities.
Enabling technology	Pilot uses of technology, e.g. an on-line electronic trading room, industry association bulletin board to communicate and collaborate with the outside world.

Table 4.6:   Stage 5, Scenario 1 – adaptive

| STAGE 5	SCENARIO 2 - DISENGAGE AND DISPERSE
Definition	The usefulness of the community for its members and supporting organization has been outlived, and its members move on.
Fundamental function	Disengagement.
Behaviour of members	Members: ▪ Members disengage with one another; ▪ Members become involved in other communities; ▪ Reunions are held.
Supporting processes	Directories are maintained; Artefacts, memorabilia and history are maintained.
Enabling technology	Electronic or paper archives.

Table 4.7:   Stage 5, Scenario 2 – Disengage and disperse

The members of a Community of Practice have different roles to play in the different stages of the life cycle of a Community of Practice. The supporting processes and enabling technology also differs in each stage. The above tables were thus an attempt to bring these together in a more visual way. Having tabled the life cycle of a Community of Practice, the possible interactions in an operational Community of Practice are described in the next section.

4.6   INTERACTIONS WITHIN A COMMUNITY OF PRACTICE

Interactions in an operational Community of Practice can, according to Keill and Snyder (2003: EE), be orchestrated according to various rhythms, e.g. listserv announcements can come on a weekly basis, teleconferences can be held on a monthly basis, a virtual space for conversations can be set up, projects can be set up, a website can be developed, visits to members onsite can be done, face-to face meetings can be held once or twice a year or on a more regular basis, and e-mails and phone calls can be sent regularly, etc. Instrumentally, these interactions advance the creation and sharing of knowledge, as well as increase the community's presence in the members' lives, which then reinforces a sense of belonging and identity - a prerequisite for collective learning and collaboration (Keill and Snyder 2003: EE).

This ecology of interactions is illustrated by Keill and Snyder (2003: EE) in the following diagram:
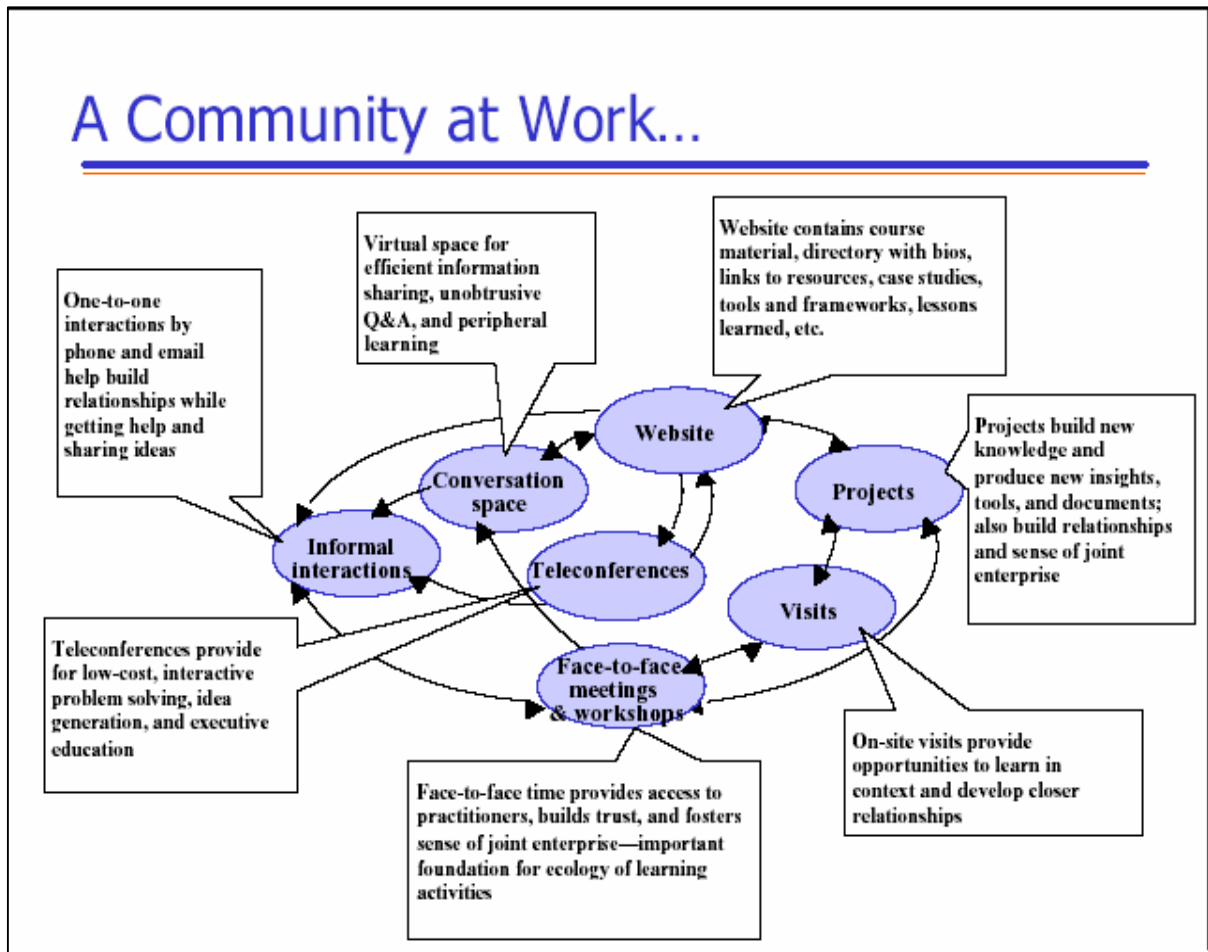
Figure 4.2: **Ecology of interactions in a Community of Practice**

Having tabled the life cycle of a Community of Practice and looked at the interactions within a Community of Practice, one could ask what ensures the successful development of a Community of Practice? This question is addressed in the next section.

4.7 CRITICAL SUCCESS FACTORS

Boynton and Zmud (1984: 17) defines critical success factors as those few things that must go well to ensure success for a manager or an organisation, and therefore they represent those managerial or enterprise areas that must be given special attention, in order to bring about high performance. Critical success factors include issues that are

vital to an organisation's current operating activities and to its future success (Boynton and Zmud 1984: 17). Some of these factors can be applied to Communities of Practice.

McDermott (1999a: Online) identifies 4 key challenges in creating and supporting Communities of Practice. They are:

- Management challenges: to communicate that the organization truly values sharing knowledge;
- Community challenges: to create real value for community members and ensure that the community shares cutting edge thinking, rather than sophisticated copying;
- Technical challenges: to design human and information systems that not only make information available but help community members think together;
- Personal challenges: to be open to the ideas of others and maintain a thirst for developing the community's practice.

According to McDermott (1999a: Online), these challenges can be further dealt with through ten factors that are critical to the success of Communities of Practice.

4.7.1   MANAGEMENT CHALLENGES

4.7.1.1   Focus on knowledge important to both the business and the community members

Communities must be formed around topics at the heart of the business, where leveraging knowledge will have a significant financial or competitive impact, but it is also important that people feel personally passionate about it.

4.7.1.2   Find a well-respected community member to coordinate the community

"These members are usually senior practitioners, but not usually the world leading experts" (McDermott 1999a: Online). Their main purpose is to connect with community members and link them together. This should at least form part of the coordinator's job. Their role definitely does not just consist of giving answers.

4.7.1.3   Make sure people have time and encouragement to participate

The time people have to participate is one of the great limiting factors of a community's effectiveness at sharing knowledge. *"Sharing ideas and insights is usually less pressing than team and individual responsibilities",* with the result that community participation, even though valuable, can easily be superseded by more urgent matters. Management should support staff by giving them time to attend community meetings, to create community bulletins, to develop a directory of employee skills, and by funding community events (McDermott 1999a: Online). The time invested in the community should also appear in the staff members' performance appraisals.

4.7.1.4   Build on the core values of the organization

According to McDermott (1999a: Online), in order to ensure that sharing knowledge is acceptable and routine, it should match the core cultural values of the organisation instead of trying to change them. Organizational culture is difficult to transform and it rarely yields to efforts to change it. Organisations that are successful at sharing knowledge did not try to change their culture to fit their knowledge management approach, but rather built their knowledge management approach to fit their culture (McDermott 1999a: Online).

4.7.2   COMMUNITY CHALLENGES

4.7.2.1   Get the key thought leaders involved

A way to build energy into the community is to get respected thought leaders involved as soon as possible (McDermott 1999a: Online). When one builds a community, you usually start by finding, nurturing and developing the networks that already exist. In these networks, there are usually key players who either have an important specialized knowledge or are well-connected and influential members of that network. Involving these people in the community legitimises the community, and in so doing draws other members.

4.7.2.2   Create forums for thinking

Opportunities have to be created for the community as a group to share ideas. It is not sufficient just to share ideas through individual meetings and web connections. This can be done by creating events where the members of the community get together in face-to face contact sessions. These events help to build a sense of community and community history, and help the community to keep track of its progress (McDermott 1999a: Online).

4.7.2.3   Maintain personal contact among community members

The coordinators have to build and maintain personal connections in the community, in other words they must *"build the one-on-one relationships among community members strong"* (McDermott 1999a: Online). *"Contact and the social connection and obligation that comes with it are seen as key to ongoing community success"* (McDermott 1999a: Online).

4.7.2.4   Develop an active, passionate core group

Active core group members contribute and help the community to develop, by inviting people they know to participate. These core group members are not necessarily leading experts on the topic, but their caring about the topic and community makes them most valuable. These core groups can be developed by involving them for instance in meeting planning, asking them to lead some meetings, to host subgroups, or organise aspects of the website. It is also important to give them visibility in the community without asking more time of them (McDermott 1999a: Online).

4.7.3   TECHNICAL CHALLENGE

Computer software should make it easy for members of a community to connect with one another. They should also contribute to and use information from the community's knowledge base. In other words, it should be easy to use and it should be integrated with members' daily work, thus familiar to them. This *"reduces friction in connecting the community and its space"* (McDermott 1999a: Online).

4.7.4 PERSONAL CHALLENGE

Relationships are not formed in reports on best practices, but in real dialogue about cutting edge issues. In the beginning stages of community development, community meetings can be orchestrated by having a well-respected community member to ask for assistance. Of course, the request has to be real and the discussion genuine. This will inspire other members to offer some insights and encourage others to start asking for assistance (McDermott 1999a: Online).

By giving attention to these factors, the development and sustainability of a Community of Practice can be ensured. The question one can ask is: how is knowledge shared and captured in a Community of Practice, and what factors can promote or hinder these two processes? Knowledge sharing and capturing is addressed in the next section.

4.8   SHARING/TRANSFERRING KNOWLEDGE IN COMMUNITIES OF PRACTICE

Communities of Practice are described by Burk (2000: 18-19) as valuable knowledge-sharing mechanisms. From the definitions as discussed earlier in this chapter, the sharing of knowledge (know-how, skills etc.) is regarded as one of its primary characteristics. Knowledge, though, can be transferred through various techniques, but can also be hindered and advanced through various factors. The researcher thus felt it essential to include a discussion of some of these techniques and factors in this study.

4.8.1 TECHNIQUES USED WITHIN COMMUNITIES OF PRACTICE FOR SHARING OR CAPTURING OF KNOWLEDGE

People might say that it's all very well to speak about Communities of Practice, but how do we capture the knowledge shared in the Community (i.e. tacit knowledge), and how do we embed it into the memory framework of the organization? There are many techniques mentioned in literature. These can include mentoring, games, role-play/ simulations, knowledge mapping, and storytelling, etc. For the sake of this study, the focus is on role-play/simulations, knowledge mapping and storytelling.

4.8.1.1   Role-play/Simulations

Role-play is a natural, spontaneous method used by people as part of their learning process, and can be described as a technique where people act out new roles in front of each other or simulate/model real-life problem situations (Education in the 80s, 1981: 158; Swink 1993: 91). Through role-play, individuals are given the opportunity to interact with various roles in the organisation to enable them to become more aware of the context in which decisions are made within the organisation (Bell 2001: 252-253). Simulations provide the framework whereby new behaviours and skills can be tested and whereby people can learn the information, knowledge or skills that are needed in a real-life situation (McQuillen and Ivy 1986: 72). Swink (1993: 91) found that people in a work environment (which could include Communities of Practice), might know theories and guidelines, but when confronted with real life issues like angry clients or resolving of disputes, they are unable to deal with these. He proposes role-plays to enable people to practice new skills in order to transfer learning to the real workplace. Role-play with its multisensory approach help integrate new knowledge with on-the-job behaviours (Swink 1993: 91). Role-play is also described by Bell (2001: 251) as a recognized teaching method for developing skills, knowledge and attitudes.

Swink (1993: 91) proposes that facilitators use a format that follows three phases, namely warm-up, action and closure. The warm-up phase prepares the group for the action phase. During the warm-up phase, the facilitator establishes rapport with the group (Community of Practice) and creates an environment in which members of the group interact with one another and the facilitator. Information is rather given to the group in a discussion format than in a lecture format. In the action phase, the first step is to choose a protagonist from the group, who refines old roles or are learning new roles as the main character in the role-play (Swink 1993: 92). The protagonist takes the role of him-/herself in a *simulated* work situation, played out before the group, and acts as the group's learning vehicle. It is thus essential that the protagonist be excellent in communication skills. The next step is to choose an auxiliary from the members of the group who plays the role of the person whom the protagonist is learning to interact with more effectively (Swink 1993: 92). Once the protagonist and auxiliary have been chosen, the facilitator guides the group in establishing the setting in which the interaction takes place. The group should feel that they are in a real situation (Swink 1993: 93). Once the scene is set, the interaction begins. At timely moments, also called

optimal learning points, the facilitator can freeze the action and ask the protagonist to critique his/her action, and suggest other possible strategies. The rest of the group is given opportunity to provide input. After the group has given input, the facilitator can give feedback on what was said. Protagonists can also be rotated by asking another member of the group to step into the scene (Swink 1993: 93-95). In the closure phase. learning that took place during the action phase is reinforced and members of the group are focused on how it will be integrated into workplace situations. This is done by a quick review of what the protagonist, auxiliary and group have learned. Then the group discuss how the *simulated* experience is similar to situations they face every day at work, and how they can apply what they have learned (Swink 1993: 97).

Through these role-play/simulations, members of a Community of Practice can learn from one another and knowledge can thus be embedded or internalised in the group.

4.8.1.2   Knowledge mapping

In knowledge mapping, perceived regularities in events or objects are defined as concepts and then labelled. Relationships between them are represented by maps that describe the nature of the relationships (Gross, Hanes and Ayres 2003: Online). Through knowledge mapping, one can determine who knows what, what are the relationships between stocks of knowledge, and how and where the information is stored, etc. (Fahey et al. 2001: 891). *"Knowledge maps can include descriptions of the nature and qualities of the relationships (know-what) between internal units of an organisation who are involved in executing adjacent tasks"* (Fahey et al. 2001: 900). They can *"also describe the history (know-what), nature (know-how), and rationales (know-why) for the interactions between"* organisational subunits and clients and other entities (Fahey et al. 2001: 900). Knowledge mapping can also be used to develop a high-level description or overview of an expert's valuable knowledge (Gross, Hanes and Ayres 2003: Online). Knowledge maps can furthermore help Communities of Practice to determine the nature of relationships between pieces of knowledge in the group; it can be used to determine the expertise available to members in the group and can help to capture this tacit knowledge in a visual form.

4.8.1.3   Storytelling

Stories, according to Gill (2001: Online), are narrative frameworks humans create to make sense of the world, to share our experiences, to convey meaning and to pass on what we know. Denning (2001: xiv) views storytelling as the method that "*enables the individuals in an organization to see themselves and the organization in a different light, and accordingly take decisions and change their behaviour in accordance with these new perceptions, insights, and identities.*" Storytelling is also used to help people understand relationships between complex issues and things. It furthermore helps people understand the interrelatedness of things in the world and assists them in connecting these things in new ways (Denning 2001: xvi-xvii).

Stories can be found in all organisations and form an integral part in defining an organisation (Gill 2001: Online). Stories can be powerful and valuable tools to use in organisations. The advantages they have for organisations as derived from Gill (2001: Online) and from Denning (2001: xv, xviii) can be listed as follows:

- They are natural, easy, entertaining and energizing;
- They help people understand complexity;
- They are easy to remember and thus help to capture knowledge;
- They can enhance or change perceptions;
- They are inherently non-adversarial and non-hierarchical;
- They bypass normal defence mechanisms and engage people's feelings;
- They pass on values and principles from one generation to another;
- They disseminate information very quickly;
- They can convey meaning at a high level of understanding because they are told in context;
- They show how previous generations dealt with difficult situations;
- They bring people with common perspective together;
- They stretch everyone's capacity to emphasize with others and to share experience;
- Stories can be proliferated, in other words multiplied throughout the organisation;
- They can foster change in the organisation.

Many types of organisational stories can be found in literature, for example anecdotes, myths, fables and metaphors.

Storytelling can be of great value in Communities of Practice, in that they can be launched and nurtured through storytelling (Denning n.d.: Online). Storytelling can build the necessary trust and mutual understanding in which Communities of Practice can operate. Storytelling also generates curiosity, feelings, interest, anger and amusement; in other words, passion. Wenger and Snyder (2000: 139) describe Communities of Practice as *"groups of people informally bound together by shared expertise and passion"* (See 4.3.1). Communities of Practice thus flourish when their members are *passionately* committed to a common purpose. Storytelling helps to unlock the necessary passion to nurture these Communities of Practice. Storytelling is also *"inherently collaborative, with the storyteller and listener collaborating to create the story"* (Denning n.d.: Online). Storytelling can thus convey knowledge in a non-hierarchical fashion, which is typical of a Community of Practice.

Role-play/simulations, knowledge mapping and storytelling can thus all be used with great success in Communities of Practice to capture the tacit knowledge that flows between members. The successful transference of knowledge and sometimes the failure thereof are influenced by a number of factors.

4.8.2 FACTORS INFLUENCING KNOWLEDGE TRANSFER IN COMMUNITIES OF PRACTICE

In Section 2.2.5.2, it was indicated that knowledge can flow or be transferred through four processes, namely socialisation, externalisation, combination and internalisation. The previous section touched on the methods, which can be used to share/capture knowledge, but transference of knowledge, however, is highly dependent on the existence of the necessary trust, space, timeliness, the right people and organisational culture. These factors must be taken into consideration and understood when sharing knowledge. A discussion of each of these factors has been of great value.

4.8.2.1   Trust

People tend to share their knowledge and experience only with those they trust. In a Community of Practice, trust forms the cement that binds the members of a community together. Without trust, the members will hoard their knowledge and experience, and will not go through the process of sharing and learning from others (Nichani and Hung 2002: 51).

The type of organisational trust that exists further determines the amount of trust within Communities of Practice. This view is held by Cohen and Prusak (2001: 36-37) and is further expanded upon when they distinguish between higher trust organisations and lower trust organisations. Higher trust organisations are characterised by a smoother flow of knowledge through their networks or communities, resulting in the development of a learning organisation. Lower trust organisations are characterised by the cutting off of knowledge flow, resulting in independent islands of knowledge, and fragmented knowledge networks in the organisation. Trust is something that does not happen overnight, but it needs room and time to grow and develop.

4.8.2.2   Space and Time to Connect

Gladwell (2000b: Online) found that the provision by organizations of social spaces for their employees to connect, increased social capital and led to greater innovation. Brown and Duguid (2000: 72) found that when people have a static personal place, they build relationships with other people over a period of time in that space. This in turn broadens the environment and encourages incidental learning. People also need to have a social space where they can come together to discuss and share stories (Nichani and Hung 2002: 52). Social space on the other hand is not sufficient on its own, but has to be complemented by social time. People need sufficient social time for relationships to grow in these social spaces (Nichani and Hung 2002: 52).

4.8.2.3   People who make the Communities of Practice work

Gladwell (2000a) differentiates between the following types of people who make Communities of Practice work:

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a) Connectors

Connectors know many other people, and are able to make friends and acquaintances. They move in several social circles and have the ability to span several worlds. They are thus of great advantage to Communities of Practice (Gladwell 2000a: 49; Nichani and Hung 2002: 53).

b) Mavens

Mavens connect others with information. In other words, they play the role of information specialists or information stewards. They are obsessed with collecting information and with the idea to help others, which enables them to get people's attention. Mavens are essential in Communities of Practice to connect people to the knowledge that flows in such a Community (Gladwell 2000a: 67; Nichani and Hung 2002: 53).

c) Salesmen

Salesmen are good at persuading others to make decisions, to accept change, or to try something new. Because they are good at expressing emotions and feelings, their enthusiasm is emotionally contagious. These characteristics are essential in a Community of Practice to enthuse others in the Community to participate and to share (Gladwell 2000a: 85; Nichani and Hung 2002: 53).

Connectors, mavens and salesmen play a strategic role in Communities of Practice. In order for an idea, concept, process, etc. to disperse through a network, these people are the ones that can make it happen. Without these people in the Community, it is *"hard to get the kind of reach and commitment that is necessary for the Community to grow and thrive"* (Nichani and Hung 2002: 53).

d) Organisational Culture

As discussed in Section 2.2.4, every organisation has its own organisational and cultural knowledge that is developed over a period of time and is held in processes of social interaction. When new employees start in an organisation, it is often difficult for

them to internalise the cultural knowledge of the organisation, as these are *"sets of commonly held cognitions that are held with some emotional investment and integrated into a logical system or cognitive maps"* (Sackman 1991: 34). Organisational culture can thus have an effect on the transfer or flow of knowledge in Communities of Practice.

This section included an overview of role-play/simulations, knowledge mapping and storytelling as knowledge sharing techniques, as well a discussion of factors that influence knowledge sharing, namely trust, people who make the Communities work, space and time to connect, and organisational culture. However, no indication was given of how knowledge is managed through Communities of Practice in learning organisations. This will be addressed in the next section.

4.9   COMMUNITIES OF PRACTICE AND THE MANAGEMENT OF KNOWLEDGE IN LEARNING ORGANISATIONS

4.9.1 THE RELATIONSHIP BETWEEN COMMUNITIES OF PRACTICE AND LEARNING ORGANISATIONS

Learning plays a very important role in Communities of Practice. This was made clear by the researcher's own definition of the concept in Section 4.3.1, namely *a network of people emerging spontaneously, and held together by informal relationships, that share common knowledge, expertise and tools, and **learn** from one another.*

In Section 4.3.2, Communities of Practice were characterised as mechanisms whereby people can share their know-how, experience, expertise, and tools, and *learn* from one another by interacting with others. It was also shown that "Practice" implies knowledge in action, in other words a process through which individuals *learn* from others on how to do their jobs. *Learning* has also been described by Wenger (1997: 39) as the engine of "practice", and "practice" as the history of that *learning*. *Learning* is also the process through which newcomers in these Communities moves from peripheral participation to full participation (see Section 4.3.2). *Learning* thus forms an integral part of "practice".

The five disciplines that were discussed in terms of the learning organisation in Section 3.3.3 as main components of the learning environment, can also be applied with great

success in Communities of Practice. In a Community of Practice, individual members can build a shared vision (see Section 3.3.3.2) of the future through interaction. Individual members of a Community's mental models (see Section 3.3.3.3) can be brought to the fore and changed through meaningful conversations and reflection between members. Communities of Practice practice team learning (see Section 3.3.3.4) in that their members think together, enter into discussion and dialogue with one another, reach joint insights, and by doing so create the results each of the members truly desire. Because reality is much more complex than the traditional view of an organisation, Communities of Practice are ideal mechanisms to connect the different nodes or systems in an organisation. They help their members to practice systems thinking, in other words to see the world as a whole (interconnected) and not just as a series of happenings. These disciplines, which are the main components in the learning environment of a learning organisation, can thus be applied successfully in Communities of Practice. One can therefore assume that Communities of Practice can function successfully in learning organisations.

Some of the stages in the development of a learning organisation (see Section 3.4.2) also correspond with the stages in the development of a Community of Practice (see Section 4.5.2). In Section 4.5.2, the first stage in a Community of Practice was shown to be the potential stage where the potential for the formation of a Community of Practice exists. One could assume that the potential for a Learning Organisation exists in the same manner, though Mohr and Dichter (2001: 744-747) did not mention a potential stage. The Honeymoon Stage of a Learning Organisation (see Section 3.4.2.1) corresponds with the Formation stage of a Community of Practice (see Section 4.5.2), while the Confusion, Messy and Scary Stages of a Learning Organisation (see Sections 3.4.2.3 – 3.4.2.5) collectively correspond with the Commitment stage of the Community of Practice (see Section 4.5.2). The development stages of a learning organisation are ended with the Mature Group Stage (see Section 3.4.2.6), which corresponds to the Active stage of a Community of Practice (see Section 4.5.2). No further development stages are mentioned as in the case of Communities of Practice. The mature group stage is supposed to lead to the birth of an active learning community, which is expected to continue indefinitely. Learning that takes place in the community/organisation could however lead to adjustments in the organisation, which means that the learning organisation then moves into an adaptive stage that corresponds with the final stage of development of a Community of Practice (see

Section 4.5.2). The corresponding stages can be illustrated in the following table:

COMMUNITY OF PRACTICE	LEARNING ORGANISATION
Potential stage	Potential exist
Formation stage	Honeymoon stage
Commitment stage	Confusion stage Messy stage Scary stage
Active stage	Mature Group stage
Adaptive or Disengagement stage	Possible Adaptive stage

Table 4.8   Development stages

These corresponding stages of development therefore suggest a relationship between Learning Organisations and Communities of Practice.

The definition of Communities of Practice, their characteristics, the organisational disciplines, and the corresponding stages in the development of learning organisations and Communities of Practice all indicate that Communities of Practice will be present in learning organisations, but also that Communities of Practice can lead to the development of learning organisations. A clear relationship between learning organisations and Communities of Practice therefore exists.

In Section 3.6, the relationship between learning organisations and knowledge management were pointed out. The next section will investigate how knowledge can be managed in learning organisations by utilising Communities of Practice.

4.9.2 MANAGING KNOWLEDGE THROUGH COMMUNITIES OF PRACTICE

Knowledge, and especially tacit knowledge, is very difficult to manage as it is embedded in the minds of those that possess it. Communities of Practice however provide a means whereby tacit knowledge can be managed in a sense. This is clearly illustrated by some of the definitions of Communities of Practice as found in literature (see Section 4.3.1). Lesser and Prusak (2000: 251) regard Communities of Practice as informal groups of employees who share *knowledge* and work together to solve problems. Johnson-Lenz

and Johnson-Lenz (1999: Online) view them as groups of professionals that embody stores of *knowledge*.

The characteristics of Communities of Practice (see Section 4.3.2) also clearly indicate the relationship between knowledge management and Communities of Practice. They are regarded as mechanisms for communicating *knowledge* (Burk 2000: 252). Members of these Communities share common *knowledge*, expertise and tools, and learn from one another. Even the term "practice", according to Lesser and Prusak (2000: 252), implies *knowledge in action.*

One of the results of ubiquitous computing and increased technological capabilities (see Drivers of Knowledge Management in Section 2.7.2) was the rise in value of *knowledge* that cannot be digitised, codified or distributed, in other words tacit *knowledge* (Prusak 2001: 1002). In order to reveal and transfer this *knowledge*, however, a closer relationship is needed with the one possessing it (see Perspectives on knowledge, Section 2.7.1). This is possible within Communities of Practice. Communities of Practice can also provide the mechanisms for sharing organizational and cultural *knowledge* (see Types of knowledge, Section 2.2.4). In Section 4.8.1, the researcher also indicated that various techniques can be used in Communities of Practice to share or capture (manage) knowledge, and discussed some of the techniques which can be used, namely role-play/simulations, knowledge mapping and storytelling.

The discussion in Section 3.6 showed that a definite link exists between learning organisations and knowledge management, and that learning organisations are characterised by the management of knowledge. The discussion in Section 4.9.1 also revealed that Communities of Practice are found in learning organisations, and can lead to the development of learning organisations. Knowledge managed through Communities of Practice can thus help in the development of learning organisations.

The idea that academic libraries can be learning organisations was addressed in Section 3.5 of this study, and the differences between traditional libraries and libraries as learning organisations were also tabled. As stated in Section 3.5, academic libraries, just like other organisations, face challenges of a fast changing environment, and are compelled to adapt on a continuous basis to these changes. This necessitates them to become learning organisations, and seeing that Communities of Practice are found in

learning organisations, or can lead to the development of learning organisations, academic libraries that are learning organisations will most definitely have Communities of Practice. The next section will focus on the management of knowledge through Communities of Practice in academic libraries.

4.9.3 MANAGING KNOWLEDGE THROUGH COMMUNITIES OF PRACTICE IN ACADEMIC LIBRARIES AS LEARNING ORGANISATIONS

The core business of academic libraries is information and knowledge management. Libraries as organisations are also heavily reliant on knowledge work, which makes knowledge management essential for their effective functioning. Davenport, Jarvenpaa, and Beers (1996: 54) regard knowledge work as the acquisition, creation, packaging, application or re-use of knowledge (see Section 2.2.3). Traditionally, librarians were involved in the acquisition (retrieval), provision, packaging and organising of explicit (recorded) knowledge. The changing organisational environment with its focus on tacit knowledge however brought about a significant change in the profession. Librarians find themselves increasingly involved in the management of tacit knowledge, utilising their skills obtained over the years.

Tacit knowledge is *"knowledge that is in people's minds"*, for example experience and expertise (Choo 2000: 397). People with experience, know-how or expertise (tacit knowledge) are academic organisations like universities' or colleges' most valuable knowledge resources. Academic libraries can play an important role by providing access to, or information about knowledgeable experts in the organisation, just as they provide access to published resources (Choo 2000: 397). One way to do this is to compile an expertise directory (e.g. an electronic yellow pages), with some form of thesaurus to help with alternative descriptions. Information professionals (librarians) themselves possess tacit knowledge (expertise) that are critical to the library or university for whom they work, and they should render their expertise more visible by proactively contributing their expertise where needed (Choo 2000: 397). Valuable skills that librarians possess are: articulating and analysing knowledge needs, evaluating the quality of knowledge, extracting and summarising valuable knowledge, and relating and packaging knowledge found for a specific project or problem. These skills can be utilised effectively in project teams or in Communities of Practice to help with the facilitation or management of knowledge. Librarians can also work together with technology experts

to design and develop workgroup application suites, which can operate as effective platforms for knowledge management (Kim 1999: Online).

But, what are the roles that information professionals can play in Communities of Practice to help manage knowledge in them? This question is answered from literature in the next section, by discussing the role of the information professional in codifying and representing organisational knowledge, the role of the information professional in the life cycle of a Community of Practice, and the role of the information professional in internal and external Communities of Practice.

4.9.4 ROLE OF THE INFORMATION PROFESSIONAL IN A COMMUNITY OF PRACTICE

4.9.4.1 The information professional and organisational knowledge

Choo (2000: 398) identified specific actions that the information specialist can perform in order to codify and represent (transform tacit into explicit knowledge) organisational knowledge for access and re-use. Though he did not identify these in terms of Communities of Practice, these actions could also be applied in Communities of Practice in academic libraries. Table 4.9 gives an overview of these actions.

ACTION OF INFORMATION SPECIALIST	DESCRIPTION
Identifying, acquiring and extracting knowledge.	From documents, discussions or interviews.
Refining, writing-up, and editing "raw knowledge" and turning it into "processed knowledge".	Raw knowledge = project files, presentations, e-mail messages. Processed knowledge = lessons learned, best practices, etc.
Organising processed knowledge and making it accessible.	Add index terms, subject headings, cross-reference links and metadata.
Packaging, publishing and disseminating knowledge.	Utilize Intranet Web Pages, CD ROMS, subject orientated pathfinders, knowledge portals that are focussed on particular organisational needs and issues.
Designing and managing overall information architecture.	Consist of a set of well-defined standards and schemes for organising, classifying, publishing and navigating the Community of Practice's know-how.

Table 4.9: **Actions of information specialist to represent and codify organisational knowledge**

As indicated in Section 4.5.2, Communities of Practice go through a life cycle of stages of development, and members in these groups play different roles in each stage. The next section examines what role, if any, information professionals can play in each of these stages.

4.9.4.2   The role of the information professional in the different stages of the life cycle of a Community of Practice

The stages in the life cycle of a Community of Practice were presented in Tables 4.2 to 4.7. To indicate the role of the information specialist in each of these stages, it was decided to table these stages again with the definition and fundamental function repeated, but this time highlighting the role of the information specialist/librarian in each stage as deduced from Allee (2000: Online) and Gongla and Rizzuto (2001: Online). Though these authors did not specifically mention information specialists by name, information specialists, because of their training and expertise, should be able to fulfil these roles.

STAGE 1	POTENTIAL
Definition	The possibility for the formation of a community exists.
Fundamental function	Connection.
Possible role of information specialist/librarian	Identify suitable candidates to join; Market CoP to potential members; Identify existing communities; Sell CoP to management for support; Conduct interviews and facilitate group dialogue; Act as Community Champion or coach a Community champion.

Table 4.10:   Stage 1, Potential

STAGE 2	FORMATION
Definition	The members come together, form a community and set out its operating principles.
Fundamental function	Capturing memory, context creation and structuring.
Possible role of information specialist/librarian	Act as facilitator; Set up, facilitate and document informal meetings; Map knowledge flows and knowledge relationships; Build group identity by setting up a homepage or designing a virtual workspace.

Table 4.11:   Stage 2, Formation

STAGE 3	COMMITMENT
Definition	The community executes and improves its processes.
Fundamental function	Access and learning.
Possible role of information specialist/librarian	Design knowledge capture and documentation systems; Design, convene and facilitate seminars and conferences; Develop support strategies for the group learning agenda.

Table 4.12:   Stage 3, Commitment

STAGE 4	ACTIVE
Definition	The community understands and demonstrates benefits from knowledge management and the collective work of the community.
Fundamental function	Collaboration.
Possible role of information specialist/librarian	Encourage members to stay committed; Make online links to members' papers; Publish stories on individuals or communities in newsletters or other corporate-wide publications; Address organizational issues that are either helping or hindering activity; Help negotiate the role of the CoP in organizational decision-making; Forge linkages with other groups and communities.

Table 4.13:   Stage 4, Active

STAGE 5	SCENARIO 1 - ADAPTIVE
Definition	The community adapts to changes in the environment.
Fundamental function	Innovation and generation.
Possible role of information specialist/librarian	Mentor/teacher; Facilitator; Innovator.

Table 4.14:   Stage 5, Scenario 1 - Adaptive

STAGE 5	SCENARIO 2 - DISENGAGE AND DISPERSE
Definition	The usefulness of the community for its members and supporting organization has been outlived, and its members move on.
Fundamental function	Disengagement.
Possible role of information specialist/librarian	Facilitate; Convene reunions; Maintain directory.

Table 4.15:   Stage 5, Scenario 2 – Disengage and Disperse

Having indicated the possible role of information specialists in Communities of Practice, it is also important to determine what the role of the information specialists are in internal and external Communities of Practice. This is addressed in the next section.

4.9.4.3   The role of information professional in internal and external Communities of Practice in academic libraries

In Section 4.2 of this study, two types of Communities of Practice were identified as occurring in organisations, namely internal and external Communities of Practice.

a) <u>Internal Communities of Practice</u>

According to the description given in Section 4.2, these Communities are formed internally between colleagues in an organisation (which could also be a library), and have as its focus the internal work processes and practices of the organisation. These Communities of Practice normally operate in organisational units in the same organisation. Information professionals working in academic libraries possess tacit knowledge that is critical for the success of their organisations (Choo 2000: 397). They are skilled in identifying, selecting, searching, and organising information sources. Furthermore, they have the ability to articulate and analyse information needs, to evaluate the quality of the information, to extract and summarise important information and to re-package the information found for a specific project or problem (Choo 2000: 397).

This is not only true for subject librarians or information specialists, but Sauperl's (2004: 59) study of 12 cataloguers from American academic libraries performing subject cataloguing showed that cataloguers can also rely on Communities of Practice in their area of expertise. That study showed that *"members of the same cataloguing department tend to know"* one another very well and *"rely on each other's expertise for solving various cases of cataloguing problems as well as learning the new subjects"* (Sauperl 2004: 59). The cataloguers in the study also utilised subject headings from existing catalogue records and associated subject headings, which were created by different cataloguers - some of them from different libraries. Then by observing each other's work they built professional common ground, and shared knowledge for understanding (Sauperl 2004: 61). Utilizing the skills of information professionals in internal Communities of Practice can thus help academic libraries to harvest the valuable knowledge of its staff for the benefit/competitive advantage of the whole organisation.

b) External (cross-organisational) Communities of Practice

Subject information specialists (reference librarians) liaise daily with academic staff of their respective subjects, and many of them enjoy strong intellectual relationships with local scholars. Researchers in different fields often do research on similar topics, without being aware of what their counterparts in other fields are doing. Thus, by *"synthesizing and connecting"* the *"related lines of inquiry among them*, *dynamic interchange, innovative insights, and new programmatic initiatives for the curriculum can be stimulated"* (Marcum 1998: Online). Information specialists could help in this area by creating external (multi-disciplinary) Communities of Practice (see Section 4.2), or by identifying existing Communities of Practice among academics in different fields. This is made possible through their strong relationships with academics.

As said in Section 4.2, these Communities stretch across the organisational boundary of an organisation (also an academic library) and could include, besides information professionals/library staff, members of faculty and even people from other universities or organisations. In these types of Communities, the information specialist could possibly play a valuable role in the setting-up, coordination and facilitation of such a Community of Practice.

The discussions on the relationship between Communities of Practice and learning organisations, the management of knowledge through Communities of Practice in learning organisations (also academic libraries), as well as the role of information professionals in them, showed that Communities of Practice can be used as mechanisms to help manage knowledge in academic libraries that are learning organisations.

The next section will give an overview of all the aspects regarding Communities of Practice that were discussed in this chapter.

4.10   SUMMARY

In this chapter, the concept of a Community of Practice were studied and discussed from a variety of viewpoints. The study showed that a Community of Practice is not a totally new idea, but had its origin in the earliest social groups that man formed. The

concept however was only formulated in 1991. Because a wide variety of definitions of Communities of Practice exist in literature, only some of the most relevant definitions were included in the study, and from these definitions a list of characteristics of Communities of Practice were derived, which included the idea of legitimate peripheral participation in a Community of Practice. Next followed an exposition of the relationships between teams, Communities of Interest and Communities of Practice, followed by a discussion on the value of Communities of Practice in terms of individuals, the community and the organisation. This was followed by an exposition of how Communities of Practice develop, which included techniques that inspire participation in these Communities and the different stages through which Communities of Practice develop. A short description on the possible interactions in a Community of Practice followed.

Factors critical to the success of Communities of Practice were discussed next, and included focussing on knowledge important to both the business and the community members, finding a well-respected community member to coordinate the community, ensuring that people have the time and encouragement to participate, building on the core values of the organisation, getting the key thought leaders involved, creating forums for thinking, maintaining personal contact among community members, developing an active, passionate core group, making it easy to connect to, contribute to and access the community's knowledge and practices, and creating real dialogue about cutting edge issues. This was followed by a description of the techniques relevant to this study that can be used within Communities of Practice to share and capture knowledge, namely role-play/simulations, knowledge mapping and storytelling. A discussion of those factors that influence knowledge transfer in Communities of Practice then followed. These factors included trust, space and time to connect, people who make the Communities work, and organisational culture. After this, the researcher examined how knowledge could be managed through Communities of Practice in learning organisations. This was done by investigating the relationship between Communities of Practice and learning organisations, how knowledge is managed through Communities of Practice, and how knowledge is managed through Communities of Practice in academic libraries that are learning organisations. In focussing on academic libraries, the researcher included sections on the role of the information specialist in the different stages of development of Communities of Practice, as well as his/her role in internal and external Communities of Practice in academic libraries.

The literature study on the idea of managing knowledge through Communities of Practice in a learning organisation showed that it is possible in theory. These ideas however still had to be tested in practice, therefore the researcher included a case study in the next chapter.