

**Enabling Organisational Knowledge
Through
Action Learning: An Epistemological Study**

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DECLARATION OF ORIGINALITY

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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ABSTRACT

Key words: Organisational knowledge, pluralistic epistemology, action learning, systems theory, structuration theory, organisational learning, knowledge management.

In today's competitive environment the value and importance of knowledge as an organisational resource is considered to be a key element and source of power. Knowledge is regarded as the single most important source of core competence to ensure competitiveness and long term sustainability. The value of most products and services now depends on knowledge-based intangibles and many organisational theorists argue that strategy formulations should be built on a resource-based theory. The challenge for many organisations is therefore how to enable organisational knowledge and how to increase their organisational learning capacity and performance.

Following a multi-disciplinary approach, this study critically evaluates and interprets existing theories on action and systems thinking. The traditional positivist paradigm no longer answers to the needs of a post-modern paradigm and corporate epistemologists and practitioners alike are in search of a new paradigm on how to construct organisational knowledge. Drawing on Habermasian theory of communicative action, as well as Parsons' general theory of action and Giddens' structuration theory, I argue that the construction of knowledge happens in a pluralistic manner, in contrast with traditional approaches which support a paradigm informed by a singular epistemology. A pluralistic approach to the development of knowledge, in relation to a Habermasian theory of communicative action which emphasises the importance of communication and which integrates action and systems theory, is therefore proposed. Constitutive features of organisational knowledge, such as deliberation, knowledge leadership, organisational culture and technology, are identified and analysed.

Action learning has been adopted by a number of leading international companies as a learning methodology. However, action learning has seemingly not been grounded in a defensible epistemological framework. In redescribing action learning, this study explores epistemological foundations of action learning in an attempt to provide corporate epistemologists with a defensible epistemological framework which promotes pluralism and constitutive features of organisational knowledge.

A framework for organisational learning and knowledge construction, the Pluralistic Action Learning Systems theory (PALS), is suggested as an improved model of organisational learning suitable for implementation in a post-modern era. This framework incorporates the primary "technical" elements of the learning process, namely problem identification, collection of information, analysis and interpretation, application/use and reflection, as well as organisational enablers inherent in

collaborative learning. Organisational knowledge is therefore seen as the outcome of a learning process which occurs at the individual, social and organisational system levels. Organisational knowledge is also constituted by features such as communication, knowledge leadership and trust which are essential in a collaborative learning environment. Knowledge is therefore not constructed through a single paradigm, but socially constructed through a pluralistic epistemology. Organisational knowledge is the outcome of organisational learning and such an organisational learning process is enabled by an action learning approach.

An empirical study is conducted which is based on a forty-point questionnaire. The sample size is 120 part-time MBA students who are enrolled for an action learning management development programme and who have all been theoretically and practically exposed to an action learning programme. The findings of the empirical study conclude that the construction of knowledge happens in a pluralistic manner and that an organisational epistemology should be shaped by a pluralistic framework if it were to be successful in a post-modern business environment. It proposes that action learning, which is shaped by a pluralistic epistemology grounded in the Habermasian theory of communicative action, provides a defensible framework to enhance organisational knowledge through a collaborative learning approach fostering values such as deliberation, trust and openness.

SAMEVATTING

Sleutel woorde: Organisasiekennis, pluralistiese epistemologie, aksieleer, stelsedenke, strukturasie teorie, organisasieleer, kennisbestuur.

Die waarde en belangrikheid van kennis in vandag se vinnige veranderende wêreld word beskou as van kritiese waarde en as die enkele mees belangrike element van kompetisie om lang termyn volhoubaarheid te bewerkstellig. In die hedendaagse korporatiewe omgewing word die waarde van die meeste produkte en dienste gebaseer op ontasbare elemente soos onder andere kennis. Korporatiewe strategieë argumenteer derhalwe dat korporatiewe strategie gevolglik op 'n vermoëns-strategie gebaseer moet word. Vir baie maatskappye is die uitdaging dus hoe kennis konstrueer moet word en hoe maatskappye hulle vermoëns moet verbeter om kennisorganisasies te word.

Hierdie studie volg 'n multi-disiplinêre benadering wat bestaande aksie- en stelsedenke teorieë krities evalueer en interpreteer. Die tradisionele positivistiese raamwerk beantwoord nie aan die vereistes van 'n post-moderne paradigma nie en beide korporatiewe epistemoloë en praktisyns is op soek na nuwe wyses hoe om organisasiekennis te konstrueer. Deur gebruik te maak van Parsons se algemene aksie teorie, en in besonder Habermas se teorie van kommunikatiewe aksie en Giddens se strukturasieteorie, argumenteer ek dat die konstruksie van kennis op 'n veeldoelige wyse plaasvind, in teenstelling met die tradisionele benadering wat 'n raamwerk aanbeveel wat op 'n enkelvoudige teorie van kennis gebaseer is. 'n Pluralistiese benadering met betrekking tot die ontwikkeling van kennis, in ooreenstemming met Habermas se teorie van kommunikatiewe aksie en gesteun deur aksie- en stelsels teorie, word derhalwe aanbeveel. Kenmerkende eienskappe van organisasie kennis soos, uitgebreide dialoog, kennisleierskap, organisasiekultuur en tegnologie word ook geïdentifiseer en ontleed.

Aksieleer is deur verskeie toonaangewende internasionale maatskappye aanvaar as 'n leer metodologie. Dit wil egter voorkom asof aksieleer nie in 'n epistemologiese raamwerk gegrond is nie. Deur aksieleer te herbeskryf ondersoek hierdie studie epistemologiese gronde van aksieleer in 'n poging om korporatiewe epistemoloë met 'n verdigbare teoretiese kennisraamwerk toe te rus.

'n Raamwerk vir organisasie leer en die konstruksie van kennis, die Pluralistiese Aksieleer Stelsels (PALS) raamwerk, word derhalwe aanbeveel as 'n verdedigbare model wat aan die eise van 'n post-moderne samelewing beantwoord. Hierdie raamwerk sluit die primêre tegniese elemente van die leerproses in, te wete: probleem identifisering, die inwin van informasie, analisering en interpretasie van informasie, aanwending en gebruik van informasie en refleksie. Hierdie proses word verder ondersteun deur aspekte wat organisasieleer vergemaklik binne spanverband. Organisasieleer word dus beskou as

die uitkoms van 'n leerproses wat bogenoemde elemente bevat en wat gebaseer is op 'n leeromgewing wat samewerking bevorder. Organisasiekennis word derhalwe gesien as die uitkoms van 'n leerproses wat op die individuele, sosiale en organisasie vlakke geskied. So 'n leerproses word bevorder en vergemaklik deur 'n aksieleer proses. Organisasiekennis word ook gekenmerk deur eienskappe soos kommunikasie en kennisleierskap wat binne 'n saamwerk leeromgewing as noodsaaklik geag word. Kennis word dus nie deur 'n enkelvoudige raamwerk konstrueer nie, maar word ondersteun deur 'n veelvoudige epistemologie.

Die empiriese studie is gebaseer op 'n veertigpunt vraelys. Die ondersoekgroep is 120 MBA studente wat vir 'n aksieleer bestuursontwikkelingsprogram ingeskryf is en wat beide teoreties en prakties aan aksieleer blootgestel is. Die bevindings van die studie dui daarop dat kennis nie op 'n enkelvoudige wyse geskep word nie, maar wel deur van verskeie teorieë van kennis gebruik te maak. Die bevindings van die studie beveel aan dat aksieleer, as 'n pluralistiese teorie van kennis gegrond in die denke van Habermas, 'n verdedigbare raamwerk verskaf wat organisasieleer en die konstruksie van kennis bevorder deur 'n leeromgewing waarin waardes soos vertrouwe, openlikheid en kommunikasie bevorder word.

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This study has also touched me in a personal way. For me, the nature of knowledge is best reflected by the immortal words of TS Eliot:

We shall not cease from exploration
and the end of all our exploring,
will be to arrive where we started
and know the place for the first time.
(Four Quartets)

In conclusion I should like to thank my Creator who gave me the strength, ability and health to complete this study. May His love be experienced by all humankind.

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Epistemology and its Challenges for Business in the Knowledge Society

Chapter

1

1.1 Introduction: Background to the Research Problem

The twilight years of the 20th century experienced some dramatic and profound changes in areas such as communications, transport, commerce and organisational development. These changes are almost similar in scope to the changes that occurred at the turn of the 19th century with the arrival of the automobile, which replaced the horse as the major form of transport, and the telephone and radio, which forever changed the nature of global communications. The coming into maturity of the World Wide Web (www) and the advancements in modern information technology and communications (ITC) can be similarly equated to the changes of the early 1900s. Like the changes of a century ago, these current changes are also affecting all spheres of our lives, ranging from politics and religion to the way humankind is doing and thinking about business, giving birth to an economy with three distinctive features which Castells (2000: 77) describes as informational, global and networked.

The impact of change on business science and management is as profound as in other domains. Developments in management disciplines, such as organisational behaviour, e-commerce and information technology, are determining the direction of organisational development into the uncharted waters of the 21st century. The impact of information technology, especially, is changing the way in which organisations function. The technological paradigm is indeed a force that penetrates the core of life and mind and “its actual deployment in the realm of conscious social action, and the complex matrix of interaction between the technological forces unleashed by our species, and the species itself, are matters of inquiry” (Castells 2000: 76). It is estimated that the world’s knowledge base is now doubling every eighteen months and organisations are faced with the challenge of how to handle this information overload. The world is moving with an ever-increasing pace from an industrial-based economy to a knowledge-based economy where the emphasis is no longer on the production of tangible and material things, but on the centrality of information and knowledge production in economic and social processes. This has led to the realisation that knowledge cannot just be treated as another commodity, but that it is the most valuable asset of the modern company. The power of the modern-day worker is truly back where it belongs – with the knowledge worker.

The quest for knowledge is an ancient one and this renewed focus on the nature of knowledge and knowledge production is therefore not entirely novel. Knowledge production has been evident since creation and was in many cases a source of both conflict and peace. Adam and Eve’s search for knowledge from the Tree of Good and Evil (wisdom) led to their fall from grace in Paradise.

Knowledge, in its form of 'Intelligence', has been the source of both the prevention and start of conflicts such as Pearl Harbour (Davenport 1997: 7), the 1962 Bay of Pigs incident in Cuba and the Gulf War in 1991 (Friedman, Friedman, Chapman & Baker 1998: 200). Knowledge of and information about market trends and rival companies are the basis for many corporate expansions and hostile takeovers. With the realisation that the world is moving from an industrial-based to a knowledge-based economy, the interest in treating knowledge as a significant organisational resource has concomitantly grown in importance and today occupies centre stage in the strategic planning of many national and international companies. It might even be the most important resource of an organisation if one accepts the physicist John Archibald Wheeler's theory that information is the basic ingredient of the universe (Wheatley 1999: 165). Knowledge is power and in a new kind of war companies worldwide are competing for the human capital of employees, which many corporate strategists see as the next battleground in achieving a competitive advantage (Horibe 1999: 5).

These developments resulted in the emergence of many new business concepts. A key result of the transition to the new economy is that real value is increasingly generated from intangible assets and their associated intellectual processes. Therefore, managing notions such as learning, knowledge processes and intellectual capital is becoming increasingly critical. In fact, for many business models, a resource-based¹ approach to strategy is really what business strategy in the new economy is all about. This explains the renewed interest in organisational learning and the prominence knowledge management has attained in the last ten years and some leading experts now regard the latter as a business discipline in its own right (Stankosky 2001: 1).

Within the context of the resource-based approach to strategy, organisational strategists and epistemologists are now faced with how to respond to these challenges in the production of organisational knowledge. A number of theories of organisational knowledge have emerged and although the positivist epistemology² is still very dominant within organisational science, there is a realisation that organisations are in need of new way(s) in which to develop and manage their knowledge (Spender 1996: 64; Cook & Brown 1999: 383; Nodoushani 2000: 71). A popular alternative which is emerging holds that knowledge is associated with a perspective which underlies actions and that knowledge has only meaning in the context of a process or capacity to act. The importance of knowledge can be evidenced by its association with actions and its source can be found in a combination of information, social interaction and contextual situations which affect the process of knowledge construction at both individual and organisational levels (Gore & Gore 1999: 554; Sveiby 2000a: 1).

¹ According to the resource-based approach to strategy, organisations are seen as a bundle of resources which fall into the general categories of (1) financial resources; (2) physical resources such as equipment and location; (3) human resources, which pertain to the skills, background and training of managers and employees; (4) organisational knowledge and learning, and; (5) general organisational resources such as brand names, firm reputation, patents, etc. (Harrison 2003: 9).

² A philosophy that aims to solve a special set of problems arising out of the activity and claims of the natural sciences by analysing concepts, propositions and scientific sciences to develop a transparent linguistic framework modelled on formal logic (Schwandt 1997: 86).

The development and management of knowledge strategies and learning processes is therefore a key challenge for organisations today. The role and importance of social or human action³ in constructing organisational knowledge, and how the latter is shaped by action learning, will thus be a primary focus of this dissertation.

1.1.1 Identification of the research problem

For many organisations the source of productivity and sustainable competitive advantage lies in knowledge generation, information processing and communication. Knowledge and information are critical elements in developing organisations, since the process of production is always based on some level of knowledge and in the processing of information. What is, however, of specific importance, is the action of knowledge upon knowledge itself as the main source of productivity (Castells 2000: 17). The challenge for organisations is therefore not only to generate knowledge, but also to take effective and purposive action on what they know.

Traditional approaches in organisational context to the production of knowledge, such as the dominant logical positivist epistemology, are no longer effective and do not meet the challenges of the new paradigm of the 21st century. Marquardt and Kearsley (1999: xiii) underscore this, and although they focus on other influencing factors, namely technology, they contend that the old, traditional ways of learning and working in the workplace have become irrelevant, both in their methods and their very purposes. The changing paradigm of knowledge and the views of knowledgeable experts such as Davenport and Prusak (1998: 6), Malhotra (1998: 1), Sveiby (2000a: 3) and others necessitate organisational efforts to focus on the production of knowledge and the importance of epistemology in a way which emphasises the relevance of action.

Action learning, and its importance in constructing and enabling organisational knowledge, will be the focus point of this dissertation, which will attempt to explore and examine action concepts and how they shape organisational knowledge. A parallel objective of this dissertation is to determine an epistemological framework for action learning and how this informs organisational knowledge. Action learning has been promoted as an approach to develop both individuals and learning organisations, but empirical evidence is lacking on how effective action learning is in this regard. Furthermore, action learning has not been grounded in an epistemological framework and I contend the absence of such an epistemological framework will limit its usefulness in developing learning organisations. In this way I hope to establish links between theories of knowledge and action learning that help to constitute organisational knowledge and how it could contribute or relate to a theory of organisational learning and knowledge management.

³ The study of meaningful social 'action' as opposed to human or social 'behaviour'. It reflects two important ideas, namely that the individual's behaviour is a subjective, intentional and goal-directed act. Secondly, understanding subjective meaning requires understanding not simply individual beliefs, attitudes, values and the like, but also shared or intersubjective meanings and values that interpenetrate individual thought and action (Schwandt 1997: 65).

1.1.2 Research design and methodology

The aim of this study is to explore (1) the role and relevance of action learning in the construction of organisational knowledge, (2) how action learning as an epistemology informs organisational learning and knowledge management models, and (3) how effective action learning is in constructing organisational knowledge at individual, team, and organisational system levels.

The target group was 350 MBA students who participated in an action learning management development programme. A stratified sample comprising 130 students was used. A three-part survey based on a five-point Likert scale was constructed to measure the construction of knowledge at individual, team and organisational system levels. This approach also provides an opportunity to determine the impact of action learning, as well as the variables impacting on an epistemological framework for action learning.

1.1.3 Contribution of the study

Various leading experts on action learning have expressed a number of concerns about the appropriateness and application of action learning. Spence (1998: 3) has expressed concern about the misinterpretation of action learning and whether it actually increases performance, while De Loo and Versteegen (2001: 229) suggest there is a gap between the theory and practice of action learning. Wallace (1990: 90) observes that action learning “has rarely been examined for the coherence of its principles, rigorously evaluated, or compared with evidence from elsewhere about how professionals learn to improve their job performance”.

This dissertation will provide empirical evidence of the effectiveness of action learning in enabling organisational knowledge through increasing individual and team performance, using action learning as a problem-solving technique and as a way to promote life-long learning. In analogy to Rorty (1989: 9), I shall also attempt to redescribe⁴ action learning in providing an alternative view on action learning. This view is in opposition to current thinking, namely that action learning is primarily learning by doing. In contrast to this I will argue that action learning is constituted by a multitude of variants and is rather shaped by a pluralistic epistemology. In this way I hope to clear some of the misinterpretations that exist about action learning.

This dissertation will therefore:

(1) Contribute to an improved understanding and advanced interpretation of action learning by claiming that action learning should be described as a pluralistic epistemology, and;

⁴ Redescription refers to “a talent for speaking differently, rather than for arguing well” (Rorty 1989: 7).

(2) Provide empirical evidence of the effectiveness of action learning in enabling individual and organisational knowledge through, *inter alia*, improved problem-solving skills, improved communication, personal development and adoption of principles of life-long learning.

1.1.4 Outline of dissertation

The remainder of this chapter will clarify a number of key concepts related to knowledge which are of importance to this study. This chapter explores specific action concepts such as agency/structure and the links between human action and individual and organisational knowledge to obtain an understanding of where knowledge is located and how it is constructed. In exploring some contemporary epistemologies such as Positivism and Systems Theory, specific reference is made to the work of Parsons (1949) and Habermas (1984, 1989) in determining my own epistemological approach as adopted in this dissertation.

Chapters 2 and 3 will explore key features which comprise organisational knowledge by analysing primary contemporary epistemological frameworks which shape contemporary organisational knowledge and knowledge management theories, as well as some of the enabling features of organisational knowledge.

Chapter 4 explores action learning, and action learning variants which constitute action learning, to firstly provide conceptual clarity about what is meant by action learning, and secondly, through a redescription of action learning, how it can enable organisational knowledge and learning.

The research design and empirical findings are presented in Chapter 5 and the conclusions and possibilities for future research in Chapter 6.

Any study seeking a deeper understanding of how knowledge is constructed and enabled in organisational context will need to clarify a number of key concepts. These include questions such as: What constitute knowledge, epistemology, ontology and paradigms? These concepts are important in our conceptualisation of knowledge and will be explored in more detail in the following section.

1.2 Elucidation of Key Knowledge Concepts

1.2.1 Ontology, epistemology and knowledge

Magee (2001: 7-8) claims that philosophy has developed in such a way that two fundamental questions lie at its heart, namely: (1) "What is the nature of whatever it is that exists?" and (2) "How, if at all, can we know?" Investigation into the first question, about the nature of existence, is known as ontology. Investigation into the second question – about the nature of knowledge – is called epistemology.

Ontology is concerned with understanding the kinds of things that constitute the world and the categorical structure of reality. It is also used to refer to a set of things whose existence is acknowledged by a particular theory or system of thought (Schwandt 1997: 90; Honderich 1995: 634). An example is systems thinking, which perceives reality as a network of relationships which forms an interconnected network of concepts and models in which there are no foundations and where none is more fundamental than the others (Capra 1996: 40).

Epistemology is a branch of philosophy that studies knowledge and is concerned with understanding the origin, nature, scope and validity of knowledge (Von Krogh & Roos 1995b: 7; Honderich 1995: 242; Schwandt 1997: 39). It is derived from the Greek words *episteme*, which means knowledge, and *logos*, which means theory. There are many theories of epistemology, some of which will be explored in this dissertation. Epistemologies provide much of the justification for particular methodologies (that is, the aim, function and assumption of method) (Schwandt 1997: 39). In practice it translates into how one can develop new theories or models that are better than existing ones (Floyd 1995: 1), one of the primary aims of this dissertation.

Others such as Wuketits (1990: 213) and Campbell (1988: 390) apply a broader view of epistemology where it is not only a philosophical discipline, but also a wide field covering different approaches to study activities related to epistemology such as knowledge acquisition and validation. Campbell's (1988: 389) view of epistemology is based on a description of how people go about it when they think they are acquiring knowledge. He subsequently defines descriptive epistemology as the theory of how the knowledge acquisition process could produce truth of useful estimates to knowledge, as reality can never be known for certain in all its detail. This epistemology is thus more concerned with the growth of knowledge.

A number of authors have argued that epistemology should not only be limited to philosophy alone, and that we should draw on a variety of disciplines. In particular, systems theory (Allee 1997: 48), complexity sciences⁵ (Stacey 2001: 69), organisational psychology and action research⁶ (Lewin 1948) have recently attracted attention as frameworks underpinning knowledge.

Knowledge is the principal intellectual attainment studied by epistemology. The study of knowledge has resulted in many different theories, or knowledge paradigms. Some of the major epistemologies which will be addressed in this dissertation, and which are of specific relevance to organisational knowledge, are Positivism, Systems Theory, and Action theory.

⁵ Complex adaptive systems explore the nature of continuous circular processes of interaction between computer programs in the medium of digital symbols.

⁶ Term coined by Kurt Lewin (1948) to describe research that united the experimental approach of social science with programmes of social action to address social problems by developing a model of social inquiry that involved a spiral of interlocking cycles of planning, acting, observing and reflecting. Argyris and Schön (1978) developed a particular form of action research called action science which seeks to advance basic (theoretical) knowledge while it simultaneously aims to solve practical problems in organisations and communities.

Two major different arguments have manifested themselves in the study of knowledge. The one argument, informed by empiricist epistemologies, reflects a foundationalist approach, that is, its proponents seek permanent, indisputable criteria for knowledge. The one finds it in reason, the other in sensory experience. This 'quest for certainty' resulted in and is opposed by two different responses, namely by a pragmatic and fallibilistic approach and one of radical scepticism. The latter abandons the whole idea of epistemology and claims that no interpretations or judgments are decidedly better than others. Fallibilistic approaches such as hermeneutics⁷ and post-structuralism⁸ hold that knowledge is by definition plural and uncertain. Decisions are made on the basis of knowledge that is known at that point in time, acknowledging that it could be proved incorrect in future (Schwandt 1997: 40).

Action learning is generally perceived as a practical approach to organisational and management development and reflects many of the characteristics of a fallibilistic response. I shall subsequently adopt a similar approach in this study.

There are a number of concepts which can be explored when studying knowledge. However, for the purpose of this dissertation, I shall focus on three aspects that are generally considered to be of primary importance. These include justification, scepticism and sources of knowledge. These will now be explored in detail as these concepts are important considerations in epistemology.

1.2.1.1 Justification

The justification of knowledge primarily concerns itself with the epistemic norms (rules describing the circumstances under which it is permissible to hold beliefs). Epistemology was traditionally concerned with how rational cognition works in forming and updating our beliefs about the world. It was almost universally agreed that knowledge was a justified true belief and that there are three conditions for knowledge in this tripartite definition of knowledge, namely:

That a person (S) knows something (P), if and only if:

- (1) He/she believes it.
- (2) It is true.
- (3) The belief is justified (Dancy 1985: 23; Pollock & Cruz 1999: 13; Williamson 2000: 3-4).

In 1963 Gettier showed that justification as reflected by the tripartite definition of knowledge was incorrect. A fourth condition needed to be added to this analysis, a condition that became known as the *Gettier problem* which has fundamentally altered the character of contemporary epistemology (Pollock & Cruz 1999: 13-14). Various philosophers such as Ayer (2000: 7), Goldman (2000: 18) and Lehrer and Paxson (2000: 31) have tried to provide various solutions to the Gettier problem.

⁷ The philosophy of the interpretation of meaning of an object such as human action, the centrality of language, and dialogue to the understanding, and similar objects (Schwandt 1997: 62-63).

⁸ Post-structuralist arguments attempt to destabilise received conceptions of science, order, society and self (Schwandt 1997: 122).

Although this research focuses on a 'meta-epistemology', that is, being more concerned with describing and contrasting kinds of organisational epistemological theories than it is with addressing specific epistemological problems, it will make an attempt to explore the Gettier problem. I contend that within an organisational context the fourth condition needs to be based on action and that a person (S) knows something (P) if, and only if:

S believes it;

it is true;

if the belief is justified; and

if S has acted on it.

1.2.1.2 Foundationalist epistemology and radical scepticism

Contemporary epistemology is characterised by various criticisms that have resulted in two specific directions, the foundationalist and non-foundationalist character of epistemology. Foundationalist epistemologies such as Rationalism and Empiricism seek permanent, indisputable criteria for knowledge (Schwandt 1997: 40).

Non-foundationalist epistemologies, or scepticism, endorse the view that it is possible and legitimate to say one "knows" something without being absolutely sure or without ultimate proof for those knowledge claims (Schwandt 1997: 102; Magee 2001: 231). Non-foundationalist criticism has resulted in two different responses. The pragmatic and fallibilistic view holds that "knowledge is by definition plural and uncertain and the best we can do is making a stand on the basis of (admittedly fallible) human judgment" (Schwandt 1997: 40).

The second response is that of radical scepticism or epistemological nihilism. Sceptics have attacked the right of existence of epistemology. While most philosophers agree to the importance of epistemology, others, such as Heidegger, Wittgenstein and Rorty continued the Cartesian legacy of epistemological scepticism (West 1985: 262; Hanfling 1989: 176; Malachowski 1990: 139). Favourite areas for scepticism are knowledge of the external world, of other minds, of the past, God or moral truths (Dancy 1985: 8-9; Bernecker & Dretske 2000:301). The sceptic does not only question our beliefs, but also questions the cognitive processes by which we arrive at our beliefs (Pollock & Cruz 1999: 6). I agree with Pollock and Cruz (1999: 6), that if we dispense with both our beliefs and cognitive processes, we have nothing to begin with and as will be pointed out later in this chapter as well as in Chapter 2, our cognitive processes as underscored by Lewin's Field Theory, play an important part in constructing organisational knowledge.

This anti-epistemological stance culminates in the post-modern philosophy of Richard Rorty who attempts to "undermine the reader's confidence in 'knowledge' as something about which there ought to be a 'theory' and which has 'foundations'" (Rorty 1979: 7-8). He continues by stating:

If we see knowing not as having an essence, to be described by scientists and philosophers, but rather as a right, by current standards, to believe, then we are well on our way to see *conversation* as the ultimate context within which knowledge is to be understood. Our focus shifts from the relations between human beings and the objects of their inquiry to the relation between alternative standards of justification (Rorty 1979: 389-390, original emphasis).

For Rorty there are thus no foundations for knowledge outside human discourse and no appeals that can be made to an outside Reality. He adopts this position to criticise the analytical method and to show that philosophy and science are merely forms of literature. Rorty's main arguments are his distrust of theory, his preoccupation with linguistics and his opposition to think of knowledge as something which has (or needs) foundations (Malachowski 1990: 140-141).

Despite the fact that most contemporary philosophers reject the anti-epistemological Rortian stance, he succeeded in reviving a renewed interest in pragmatism and in Dewey's pragmatic philosophy. West (1985: 263), Malachowski (1990: 146) and Taylor (1990: 258) have all rejected Rorty's anti-epistemological stance and have pointed out that he himself is actually trapped in a pragmatic and hermeneutic epistemological⁹ worldview, something which is evident by way of Rorty's (1979: 389) own admission that conversation is the ultimate context within which knowledge is to be understood. The role of language in the construction of knowledge will be taken up again in later chapters.

In organisational context the justification of knowledge has received limited attention. Nonaka and Takeuchi (1995: 86) identified justification criteria such as cost, profit margin and the degree to which a product can contribute to the company's future growth. Contemporary thinking on this subject emphasises that the value of knowledge needs to be justified through a Return on Investment (ROI).

Current organisational epistemology¹⁰ is mainly dominated by the logical positivist approach. The impact of the intense foundationalist/non-foundationalist philosophical debate influence has been limited to the more pragmatic organisational approaches such as the action inquiry strategies which "address the unpredictability of business life by enabling managers to develop new knowledge that is sensitive to continually changing and dynamic situations" (Ellis & Kiely 2000: 84). Organisational epistemology has thus been more influenced by the unpredictable character of knowledge than by the Rortian anti-epistemological stance. The challenge for corporate epistemologists is therefore not to change what they are doing, but to get a better understanding of what they are doing. Von Krogh and Roos (1995b: 10) and Sveiby (2001)¹¹ agree that the search for a corporate epistemology is one of the major challenges facing organisations today, refuting Rorty's claim that epistemology has no role to play.

⁹This term refers generally to the art, theory and philosophy of the interpretation of meaning (Schwandt 1997: 62).

¹⁰ For definition and explanation see Chapter 2, page 54.

¹¹ Personal interview with author, 5 May 2001, Cape Town.

I contend that Rorty's views, with particular reference to his linguistic perspective as used by him and by social constructionists, are of relevance to the construction of organisational knowledge and how it is enabled. I am in agreement with Reason (2003: 113) that Rorty's linguistic perspective can focus our attention too much on what we say, rather than what we do. Nevertheless, it shows there are many ways of knowing if we so wish and that different ways of knowing will have their own qualities and criteria for justification, for example, the quality of conversations that are taking place, the kinds of questions that are being asked, etc. Adopting such a pluralistic framework, as I do in this dissertation, is an acceptance of the pluralistic character of knowledge, but it does not imply an anti-epistemological approach. A pluralistic approach therefore acknowledges that there are various theoretical constructs (positivism, empiricism, pragmatism, analytic philosophy, etc.) which find their way into a pluralistic framework.

A third aspect in the study of knowledge focuses on sources of knowledge and where knowledge is located. The first aspect will be addressed in the next section, while the question related to the location of knowledge will be addressed later on in this chapter when agency and structure are explored.

1.2.1.3 Sources of knowledge

Philosophers recognise mainly three kinds of knowledge, namely (1) propositional knowledge,¹² also referred to as 'knowing that' or 'factual knowledge', as well as (2) practical knowledge and (3) knowledge of people, places and things or 'knowledge by acquaintance'. Propositional knowledge is distinguished by inferential knowledge¹³ and non-inferential knowledge. It is this former notion of knowledge that is fundamental to human cognition and is required both for theoretical speculation and practical judgment (Bernecker & Dretske 2000: 3).

Pollock and Cruz (1999: 15) and Bernecker and Dretske (2000: 431-438) have all pointed out that knowledge can be subdivided according to the sources from which it arises. Pollock and Cruz (1999: 15-22) identified the most pertinent areas of knowledge as Perceptual knowledge, *A Priori* knowledge, Moral knowledge, knowledge of other Minds, Memory and Induction, while Bernecker and Dretske (2000: 431) added Introspection, Testimony and Inference to this list. Although knowledge in different areas will share some common features, it will also exhibit important differences and these should not be seen in isolation of each other.

Similarly, organisational knowledge can take many forms such as know-how (practical knowledge), know-why (theoretical knowledge) and know-what (strategic knowledge) (Stonehouse & Pemberton

¹² Propositional knowledge takes the form of 'S knows that P' where P stands for a declarative sentence expressing some proposition.

¹³ Inferential knowledge is to draw a conclusion from a particular premise. Three kinds of rules or procedures for making inference are deductive, inductive and abductive.

1999: 133). McNiff and Whitehead (2000: 40-43) accordingly identify propositional, procedural and personal (tacit) knowledge as the main sources of organisational knowledge.

Propositional knowledge, also referred to as technical rational knowledge, is knowledge about things and facts and is often perceived as eternal truths. This kind of knowledge dominates organisational knowledge and is currently still the prevailing paradigm of knowledge construction in organisational contexts, which sees knowledge as something static and eternal.

Procedural knowledge (know-how) represents a body of knowledge which refers to procedures and capabilities. It regards knowledge as fluid and is often associated with the interpretative paradigm, which emphasises that knowledge is constructed within and through our practices and discourses with ourselves and in company of others (McNiff & Whitehead 2000: 40; Nichols 2000: 16).

In addition to the above-mentioned sources of knowledge, Polanyi's (1958: 264) distinction between tacit (or personal) knowledge and explicit knowledge as the main sources of knowledge remains one of the most important distinctions to be made and it is widely used today. It not only defends the importance of tacit or personal knowing in scientific inquiry and plays a significant role in criticisms of positivism, but also has had a major impact on the construction of knowledge in organisational context. Nonaka and Takeuchi (1995: 63) and Chua (2002: 72) contend that the most fundamental and common classification of organisational knowledge is along the tacit-explicit dimension and that organisational knowledge is also constructed based on an interplay between these two. Nonaka and Takeuchi (1995: 61) have used the tacit-to-explicit conversation of knowledge as the framework for their 'Theory of Organisational Knowledge Creation', a theory that has since made an important contribution to the development of thought in the field of organisational knowledge construction.

Polanyi (1958: 266) contends that all our knowledge (thus both tacit and explicit) operates within a fiduciary¹⁴ framework, and that "tacit assent and intellectual passions, the sharing of an idiom and of cultural heritage, affiliation to a like-minded community: such are the impulses which shape our vision of the nature of things on which we rely for our mastery of things". Tacit knowledge is personal and context-specific and generally associated with experience, the observation of behaviour and subjectivity. Tacit knowledge is knowledge of the way we live our lives and is essentially embodied knowledge which cannot be articulated. Personal knowledge is heavily influenced by our set of values and worldview and new knowledge is constructed through our action and reflection. Explicit knowledge on the other hand refers to knowledge that is objective and transmittable in formal, systematic language (Nonaka & Takeuchi 1995: 60; Dixon 2000: 38; Liebowitz 2000: 4; Stacey 2001: 17).

¹⁴ Something that is given in trust and which depends for its value on public confidence.

Polanyi (1958: 264) also posits that tacit knowledge cannot be critical, and systemic forms of criticism can only be applied to articulate forms. Tacit acts are judged by other standards and are therefore to be regarded as a-critical. Criticism, or what is being criticised, is always the assertion of an articulate form and it is our own personal acceptance of an articulate form that is judged to have been critical or uncritical. Although he posits that tacit knowledge cannot be critical, Polanyi and Prosch (1975: 63) argue that the inevitable inclusion of personal, tacit assessments and judgments in all aspects of knowledge acquisitions do not necessarily undermine the objectivity of science but rather call for an alternative analysis of scientific objectivity.

This belief that tacit knowledge can thus not be critical, places the importance of explicit, and the interaction between explicit and tacit knowledge, in a different perspective. Tacit knowledge needs explicit knowledge to be critical and the individual thus needs the assistance of the like-minded community to interpret and convert tacit knowledge, through language, to make it critical. I agree therefore with Schwandt (1997: 152) that it seems reasonable to say that tacit or personal knowledge plays an important role in all forms of scientific investigations. The role of tacit and explicit knowledge, as well as that of language, is also of particular importance in exploring organisational knowledge as will be discussed in greater detail later in this chapter. Suffice to say that these observations enforce the duality approach of the agency/structure debate that individuals (actors) need a team (structure) to develop tacit knowledge into explicit knowledge. On the other hand, knowledge obtained from the team (structure) will also influence the individual (agent) in his/her use of that knowledge or insight.

1.2.2 The relevance of paradigms

The previous section highlighted the importance of justification of knowledge, the foundationalist/scepticism divide, and sources of knowledge with their relevance for organisational epistemology. Knowledge has been the property of humankind since its early beginnings, millions of years ago, and developments in epistemology cannot, and should not, be seen independently from developments in philosophy. However, to understand how knowledge has been perceived through the ages, Kuhn (1970: 210) states that knowledge always functions in specific paradigms and that "knowledge is intrinsically the common property of a group or nothing else at all. To understand it we shall need to know the special characteristics of the groups that create and use it".

Schwandt (1997: 108-109) points out that the use of the term paradigm is applied in two ways: Firstly, it refers to a type of cognitive framework which a well-defined group of scientists uses to solve problems by sharing previous examples and solutions. In this sense a paradigm is a problem-solving model which a researcher uses as a reference framework from which he/she conducts his/her research. Such a framework, for example, could be informed by Positivism, Pragmatism, Systems Thinking or other theories of knowledge.

Secondly, others such as Capra (1988: 22) refer to a paradigm as "the totality of thoughts, perceptions, and values that form a particular vision of reality, a vision that is the basis of the way a society organizes itself". In this sense a paradigm reflects a worldview or general perspective as reflected in some leading experts' views on organisational knowledge, such as those of Nonaka and Takeuchi (1995: 9), which regard knowledge as embracing ideals, values and emotion as well as images and symbols.

Following Capra's definition of a paradigm as the totality of thoughts, perceptions, and values that form a particular vision of reality which is the basis of the way a society organises itself, it is understandable that there is a difference in the knowledge concepts from Western, Japanese and African perspectives (Nonaka & Takeuchi 1995: 20; Wiig 1999: 1). In the Western paradigm, knowledge is highly individual, not easily shared and influenced by a positivist framework. In the East, however, knowledge is intuitive, interpretive, ambiguous, non-linear and difficult to reduce to scientific equations. Instead of being constructed through data analysis and interpretation, knowledge grows from the experience and expertise of many people, whose minds are probed for insights. New knowledge is retained and distributed through experience (Movers and Shakers 2003: 132). In the African tradition the prevailing paradigm is best described by the term *ubuntu* which means a person is only a person because of other people. It manifests through the actions of people and one's humanity can only be defined through interaction with others. Although the individual is as important as the group, a person's most effective behaviour is in the group. Collaboration therefore takes preference and unlike the Western model which is focused on the individual, the African tribal model is focused on the group (Boon 1998: 32-34). These different worldviews, or paradigms, will exercise an influence on society and should be considered when determining how knowledge is constructed in different societies.

In order to come to a present-day comprehension of Western knowledge, it is necessary to explore some of the major changes in meanings of knowledge, what main criticisms these meanings have engendered and how they have shaped the notion of organisational epistemology. It is generally accepted that three major epochs in the development of the Western intellectual tradition can be identified, namely the Ancient/Medieval period, the Modern period and the Post-modern period. The first period was influenced by the Greeks and their philosophy; the Modern Period by Newtonian physics; while the Post-Modern period has been particularly influenced by developments in quantum physics and systems theory. Cartesian philosophy, Newtonian physics and Lockean empiricism, as the three pillars of the traditional scientific method, therefore need to be contrasted with current and emergent epistemological formulations, such as systems theory and social constructionism, to determine if a different approach to knowledge construction is required to meet the demands of the business environment of this century.

Kuhn (1970) argued that major changes in scientific knowledge involve radical shifts in paradigms, changes that cannot be understood as dictated by experience because what is experienced is only possible through the paradigms at issue. Humankind's intellectual development is now at one of such classical fault lines in history. Leading experts such as Allee (1997: 5) contend that we are now at such a paradigm shift in history, a shift in thinking that is too powerful to be ignored, while others call this historic moment a parenthesis,¹⁵ a time between eras (Anderson 2001: 1). Allee (ibid) identifies these two paradigms as the Traditional and New Thinking paradigms: a profound shift from the mechanistic worldview of Descartes and Newton to a holistic, ecological view as represented by the Living Systems Theory (Capra 1996: 5; Allee 1997: 5; Wheatley 1999: 38). This shift will, without any doubt, have an impact on all domains of life, also on our understanding of knowledge and how it is produced in this new humanism (Cooper 1998: 37). Capra (1996: 13) contends that even though the paradigm shift in science is still of special interest because it was the first to occur in modern science, physics has now lost its role as the science providing the most fundamental description of reality. The paradigm shift in science therefore implies at its deepest level a shift from physics to the life sciences. In the paradigm of the new science,¹⁶ Wheatley (2000: 4) posits that we [individuals and organisations] interact with something or someone in our environment. We then use who we are, our history, our identity, our values, beliefs and habits [our paradigm] to decide what the information means. Through our construction, information then becomes knowledge. Knowledge is always a reflection of who we are, in all our uniqueness.

Smith and Saint-Onge (1996: 4) argue that the mindset of an organisation is one of the most critical factors and emphasise that all of an organisation's competitive strategies, such as Total Quality Management (TQM), re-engineering, and by implication also knowledge management (KM) and organisational learning, will come to nothing if its managers' business paradigm is not appropriate. Leadership and managerial influences in the knowledge organisation should therefore receive specific attention if knowledge development programmes are to be successfully implemented (Thurbin 1995: 95; Garvin 2000: 187; Holsapple & Joshi 2000: 239). In organisational context it is important to have an understanding of the various theories of knowledge to be able to determine a relevant and sound knowledge vision on which to build a business strategy. Lacking this particular vision, and in our case a particular knowledge vision, organisations will fail to organise and rally themselves around such a knowledge vision. This will ultimately contribute to the failure of knowledge management programmes. The absence of a clearly stated knowledge strategy clearly linked and aligned to the business strategy is indeed one of the aspects why the results of KM initiatives are disappointing (Thurbin 1995: 82; Zack 1999: 125; CIO 2001: 4).

¹⁵ The statement is attributed to John Naisbitt, author of the book series *Megatrends*, who used this expression at the Camden Technology Conference held on 20 October 2001 in Camden, Maine, USA.

¹⁶ An alternative description of systems theory that views the world in a holistic manner where the focus is shifted from the part to the whole (Wheatley 1999: 118).

Knowledge should therefore be understood within a certain context, in the spirit of one's time, our *Zeitgeist*, a way of thinking that characterises a generation or a specific period in history that will colour our thinking about knowledge. Our perceptions and understanding of knowledge are thus shaped by a specific paradigm which prevails at a certain moment in time. It is therefore not only the prevailing paradigm in the context of a worldview, but also the prevailing research paradigm which influences our understanding.

A number of epistemologies played a major role in developing the Western intellectual tradition. Some of them had a bigger impact than others, especially in respect of organisational knowledge. The most important ones will now be explored in a brief overview of developments in the Western intellectual tradition.

1.3 Paradigms in the Development of the Western Intellectual Tradition

1.3.1 Ancient philosophy – the foundations of Western intellectual thought

The early Greek philosophers, Plato and Aristotle's search for the answer to 'What is knowledge' must be viewed against the paradigm of their time and the paradigm shifts that have taken place since then. In Greek philosophy, human thought and activity are closely related to the concept of *logos*. The Greeks used the word *logos* to identify rational thought, but its deeper meaning also includes the semantic field of reasoning, pleading, the reality of being and justice. The concept of *logos* refers, however, not only to human knowledge, but has a much broader meaning: it implies being ethical as much as being knowledgeable and in this context *logos* refers to truth, whether moral or cognitive (Rutgers 1999: 18-21).

The Greeks believed that an unchanging and invisible world existed. Their inherent metaphysical concept of rationality and knowledge remained intact until the Renaissance. To them the earth was flat and the gods lived in a supernatural world somewhere 'above', a belief that deeply impacted on their philosophy. Following his teacher Socrates, Plato believed that there existed a world of unchanging and invisible ideas about which it was possible to have exact and certain knowledge (Floyd 1995: 1). This ideal, static world was not part of their immanent existence and knowledge had a permanent and absolute character, cemented into a fixed reality. Plato's theory of Idea or Form, where the physical world (immanence) was a mere shadow of the perfect world, reflected this transcendental, absolute or 'godly' character of knowledge. For Plato, "human beings aspire toward the eternal, unchanging, and 'perfect ideas' that cannot be known through sensory perception but only pure reason" (Nonaka & Takeuchi 1995: 22). Aristotle agreed with Plato with regard to abstract knowledge as superior to any other, but disagreed with him as to the proper method of achieving it. He placed more emphasis on the logical and empirical methods of producing knowledge, as well as the importance of experience, and paved the way for the later thoughts related to empiricism (Heylighen 1997: 1).

This distinctive division between the immanent and transcendent, and between theory and practice, impacted sharply on the Western intellectual tradition and is still evident today in the Cartesian split between Body and Mind and Theory and Practice. This Platonic view of knowledge as static and passive differs substantially from the post-modern view of knowledge that reflects a more adaptive and active nature. Post-modern thought views knowledge as a continuous process of development in contrast to the ancient Greek philosophers who explained knowledge as 'metaphysical truths'.

The early pre-modern world did not have the advantage of what we know today and although their view of knowledge did not succeed in providing answers, it paved the way for future epistemological debates. It branched out into two major Western dualistic epistemological traditions, namely Rationalism and Empiricism, which became the cornerstones of philosophical activity in modern times.

1.3.2 The Modern period: In search of a synthesis

From the 17th to the late 19th century, the main issue in epistemology was logic versus experience in producing knowledge. These two frameworks of knowledge production, Rationalism and Empiricism, not only played a major role in general Western intellectual development, but also impacted sharply on organisational epistemology and is therefore of particular importance to this dissertation.

1.3.2.1 Rationalism

In contrast to the scientific and philosophical developments in England during the late 17th century, the absolute form of government in France stifled intellectual debate and it only gained momentum from the middle of the 18th century. French thinkers became the intellectual leaders of Europe and carried the ideas of Locke and scientific ideas of Newton beyond developments in England (Bronowski & Mazlish 1986: 216). René Descartes (1596-1650) became the most influential thinker of modern times and did more than any other to permanently revise the Western philosophical outlook (Wilson 1978: xiv). Descartes continued the line of thought of the early Greek philosophers, namely that knowledge has a metaphysical character. His teaching about human knowledge "is to be found in the clear and distinct ideas and truths which a benevolent God has implanted in our brains from birth" (Jolley 1999: 7).

Descartes had a prominent influence on epistemology with the theories he proposed and laid the foundations of the conventional scientific view of reality. Descartes contended that there are three sources of knowledge, and they are obtained intuitively, through scientific means and through empirical data (Descartes 1960: xiii). This corresponds closely with contemporary views on knowledge, which propose propositional knowledge (scientific knowledge), practical knowledge (empirical data) and intuitive knowledge, or knowledge of people and places (Williamson 2000: 18-22).

Descartes' *Four Rules of Logic*¹⁷ placed rational thinking and logical analysis above anything else, but he himself stated that in support of his method of inquiry he "made many observations and acquired much experience which has since aided me [sic] in establishing more certain knowledge" (Descartes 1960: 22). Empirical observation is therefore not completely discarded by Descartes, as some philosophers like to argue, although it remains of secondary importance to him. Although these four rules of scientific inquiry are still relevant today, the philosophy of Descartes raised two important issues particular to epistemology that are still debated today. At the core of this epistemological discourse is Descartes' mind/body dualism. The second aspect is the Cartesian-Lockean-Kantian tradition that has conceived philosophy as a foundational discipline with a quest for certainty, in response to the possibility of Cartesian, that is, sceptical doubt (Bhaskar 1990: 209).

Descartes' famous statement "I think, therefore I am", which suggests that there is an inference from "I think" to "I am", is at the core of the mind/body dualism. By emphasising the primacy of the mind he reduced the human body to a mere mechanical organism. While some scholars believe that it is not an inference, but rather intuition, others such as Kenny (1993: 174-175) point out that his statement is not the first truth that he came across, but was the first truth that asserted that something existed. Doubt, however, still remains whether Descartes offered a solution to the epistemological problem of how the mind knows. On the contrary, he established a sharp dualism between mind and matter, a dualism that still haunts modern thought today. This mechanistic view of Descartes in defining the human body and the cosmos, also extends to organisations, and had a powerful impact on the early development of organisational science with the scientific approach of the early management pioneers such as Taylor and Fayol (Grieves 2000a: 345).

Descartes also introduced the element of scepticism into philosophical discourse and the anti-epistemological position was later strongly advocated by Rorty (1979) in *Philosophy and the Mirror of Nature*. Rorty (1979: 162, 174, 228) follows Dewey, Wittgenstein and Heidegger in opposing the neo-Kantian "notion of 'foundations' of knowledge which is based on an analogy with the compulsion to believe when staring at an object". West (1985: 263), Bhaskar (1990: 209), Malachowski (1990: 140) and others had, however, clearly pointed out that Rorty actually remained entrapped in the epistemological problematic and that epistemology indeed had a claim to make as a foundational discipline.

This traditional view of the nature of thought and knowledge has taken for granted that people know a world and that 'knowledge' lives in the mind and that reality 'exists' in the world (Warmoth 2000: 1). It was not until Kant that we recognised that there is no direct connection between an independent,

¹⁷ The four Cartesian rules of scientific and logical inquiry into the nature of truth are the following: (1) never accept anything as true unless it is recognised to be of such nature; (2) problems are divided into manageable components; (3) bottom-up understanding – from the simplest and smallest to the most complex and the whole; (4) complete specification and review of the problem (Descartes 1960: 15).

objective world and our experience. It was, however, not until the latter half of the 20th century and with the emergence of the 'Living Systems Theory' that philosophers came to an understanding that the cosmos is interconnected and interrelated. In my view, in a 'theory of cosmic totality', the argument should not be about the mind/body dualism, but rather on an emphasis that we are inherently part of the world in which we are living and where even the mind/body is interconnected with all other entities of the cosmos. We live in the temporal world of the immanence and the traditional view of knowledge that it has a transcendental character should, rather, be seen as just an extension of the immanence and not as two separate worlds. As I will show later in this chapter, such a view is in accordance with the Habermasian theory of communicative action and provides us with an improved understanding of reality.

1.3.2.2 Empiricism

At the core of the empiricist strategy is a view of reality as constituted by material things. Knowledge of such reality is seen to be rooted in sensory experience that mediates the relations between the nervous system and events in the physical world. For the empiricist then, experience is based on our senses, and experience therefore provides the sole and secure source of knowledge. In empiricism, science and metaphysics are both connected and disconnected. Empiricist approaches are committed to the existence of an objective material world, external to the human subject. However, this is undercut by the view that knowledge of the world is confined to what is available in experience (Johnson, Dandeker & Ashworth 1984: 30-31).

Thomas Hobbes (1588-1679) and John Locke (1632-1704) were two of the great scientists of the 17th century, but it was as philosophers, incorporating the ideas and methods of scientific development, that they made their mark. Despite criticism from contemporary philosophers of his time such as Hume and Hobbes, Locke's *Essay Concerning Human Understanding* presented the first major modern presentation of the empirical theory of knowledge. Locke's essay is the source of many of the methods, ideas and problems that have prevailed in philosophy, especially in British and American epistemology, ever since its first publication (Aaron 1963: 107; Bronowski & Mazlish 1986: 200; Magill 1990: 263). Locke (1975: 604) opposed Descartes' view by stating that we realise our epistemological potential not by attending to God-given innate ideas, but by perceiving the conceptual connections among ideas which we are forced to construct ourselves through sensation and introspection. The *Essay* contained an attack on the Platonic view that there are innate ideas and that we come into this world with a preconceived idea of those ideas, which we simply rediscover. According to Locke, God did not imprint knowledge, once and for all, on humankind's brain; it was to be rediscovered by experience in the world.

Locke (1975: 530-539) distinguished between three degrees of knowledge, that is, intuitive, demonstrative (rational knowledge) and sensitive knowledge, stating that in "each of these there are

different degrees of evidence and certainty". The third and last degree of knowledge is sensitive knowledge where in actual sense-experience "we are provided with evidence that puts us past doubting" (Locke 1975: 537). The inclusion of this type of knowledge, and the manner of its inclusion, is central to Locke's philosophical position (Ayers 1991: 93). This served as the point of departure for Locke's empiricism. However, in later years, Locke could not justify existential knowledge from this initial theory. He then introduced the distinctions of general and particular knowledge, which led to the conclusion that he could not make his theory of knowledge consistent (Aaron 1963: 239-241; Magill 1990: 265).

Locke's empiricism therefore assumes that thought content is based on sense experience and that sensory and reflective experience (the internal operations of our minds, perceived and reflected by ourselves) is essential if we are to have any knowledge at all (Bronowski & Mazlish 1986: 20; Magill 1990: 265; Ayers 1991: 301). Knowledge thus results from a kind of mapping or reflection of external objects, through our sensory organs, possibly aided by different observation instruments to our brain or mind. In developing an account of human knowledge in terms of how it is derived from experience, what its nature is, and how limited it is, Locke provided the basis of future empirical philosophy. Locke's doctrine of empiricism vindicated the empirical or natural road to all knowledge against the rationalistic or supernatural approach (Bronowski & Mazlish 1986: 200).

Although Locke agrees with the traditional view of his time that knowledge has universal, essential truths, he rejects the elements of metaphysical knowledge (Jolley 1999: 171). Locke (1975: 539) states "from all which is evident, the extent of our Knowledge comes not only short of the reality of Things, but even of the extent of our own Ideas". Knowledge has therefore no *a priori* existence, as in Plato's conception, and has to be developed by observation. It is still absolute, in the sense that any piece of proposed knowledge is supposed to truly correspond to some external reality.

The empiricists dealt with humankind in too a mechanical fashion in the prevailing paradigm of their time where Newtonian physical sciences dominated thought. The emphasis was on experience, and aspects such as values and cultural knowledge did not contribute to their understanding of a broader knowledge paradigm. Locke's contribution to epistemology lies in the importance of his having changed the way in which humankind thought about knowledge. Although his epistemology still displays an absolute character (he was, after all, a child of his times), he was the first philosopher of the modern period to challenge the absolute and transcendental character of knowledge. The empiricist foundations of his epistemology, sensation (experience) and reflection, are still popular to this day and as will be shown later, are clearly evident in some of the modern day organisational epistemologies.

1.3.2.3 An attempt at a synthesis

With the advances in the natural sciences and with Newton uniting the celestial theories of Kepler and the terrestrial mechanics of Galileo, it was probably not unexpected that someone would attempt to unite rationalism and empiricism. Immanuel Kant (1724-1804) attempted to do just that by questioning why metaphysics had not kept pace with mathematics and natural science discoveries of facts about our world (Magill 1990: 327).

Posing the question of how do we know, Kant developed a line of thought inaugurated by Locke, that anything we apprehend – whether it is a perception, feeling or thought – is apprehended through our bodily apparatus, that is, our five senses. Anything this apparatus can deal with is capable of being an experience for us, but anything it cannot deal with can never be experienced and therefore we have no way of apprehending it. This is, however, not to say that nothing else can exist and as far as our knowledge goes, anything else may exist. Kant thus made the distinction between two worlds: the world of things (phenomena) as they appear to us; this is the world of possible knowledge to us. On the other hand, there is a world of things as they are in themselves, but we have no access to this world. Kant called this the transcendental world, by which he meant that it exists but it cannot be registered in experience.

Kant (1998: 136) agreed with the rationalist belief that one can have exact and certain knowledge, but he followed empiricist ideas in saying that such knowledge is more informative about the structure of thought than about the world outside of thought. Kant's epistemology contained two sources of knowledge, namely sensibility and understanding, which function inseparably. Human knowledge depends on some *a priori* conditions and Kant identified space and time as *a priori* foundations of sensibility (Kant 1998: 176-182). All our empirical, descriptive characterisations of perceptible objects take for granted their fundamental nature as objects in space and time. Understanding is based on twelve categories,¹⁸ or inborn cognitive structures. Knowledge results from the organisation of perceptual data on the basis of these inborn cognitive structures or categories which are essential for our having any knowledge whatsoever (Magill 1990: 328-329; Heylighen 1997: 1).

Kant's contribution to the development of Western intellectual thought had a far deeper impact on those who followed him and on other domains such as politics and religion. It is ironic that two opposing groups, Marxist politics and Protestant religion, used elements of Kant's philosophy. Georg Wilhelm Friedrich Hegel used Kant's philosophy to develop his dialectic materialism,¹⁹ which became a cornerstone in Marxist philosophy (Kolakowski 1978: 65). Dooyeweerd also made use of some

¹⁸ Categories are: **Quantity of Judgments** [Universal, Particular, Singular]; **Quality** [Affirmative, Negative, Infinite]; **Relation** [Categorical, Hypothetical, Disjunctive]; **Modality** [Problematic; Assertoric; Apodictic] Kant (1998: 206).

¹⁹ The official name given to Marxist philosophy. It claims that the fundamental question of all philosophy is: "Which is primary, matter or consciousness?" The basic aims of dialectical materialism remain very much in harmony with the fundamental spirit of progressive scientific thought (Honderich 1995: 198-199).

elements of Kant's philosophy to develop his Christian Philosophy of the Cosmologic Idea (Kalsbeek 1975: 60-61).

Kant's contribution to epistemology is equally important and although Rorty (1979: 137-139) advocates a radical shift away from epistemology, he admits that Kant's contribution finally made it possible for epistemology to be a foundational science. Heylighen (1997: 2) states latter-day constructivism also has its roots in Kantian synthesis where it is noted that the knower has no direct access to external reality, and can only develop knowledge by using the fundamental in-built categories to organise experience.

I contend that Kant sowed the seeds for systems thinking and although he argues that transcendental logic is completely separated from experience and everything empirical, Kant (1998: 201) states:

Now this completeness of a science cannot reliably be assumed from a rough calculation of an aggregate put together by mere estimates; hence it is possible only by means of an **idea of the whole** of the *a priori* cognition of the understanding, and through the division of concepts that such an idea determines and that constitutes it, thus only through their **connection in a system**. [Original emphasis].

Despite these fundamental differences between rationalism and empiricism, Western philosophers have generally agreed that knowledge is a 'justified true belief', a concept that was first introduced by Plato (Nonaka & Takeuchi 1995: 21; Pollock & Cruz 1999: 13-14; Bernecker & Dretske 2000: 3; Williamson 2000: 18). In my view, this description still reflects the absolute and static character of knowledge that is maintained by so many people today. Williamson (2000: 184) correctly poses the question: "If you can have justified true beliefs, why bother with knowledge?" This perception that one should know for sure is slowly changing and indicative of the paradigm shift that is taking place. It is clearly reflected in Wilson's (1978: 198) statement that "there is no way of knowing what empirical and conceptual shocks may lie ahead".

Kant's attempts in synthesising rationalism and empiricism were pursued by later philosophers. One such an attempt is pragmatism which not only attempted to bring theory and practice together, but also emphasised the importance of action in the construction of knowledge.

1.3.2.4 Pragmatism

Pragmatism developed in the late 19th and early part of the 20th century. According to pragmatic epistemology, knowledge consists of models that attempt to represent the environment in such a way as to maximally simplify problem solving. "It is assumed that no model can ever hope to capture all relevant information, and even if such a complete model would exist, it would be too complicated to use in any practical way. Therefore we must accept the parallel existence of different models, even though they may seem contradictory" (Heylighen 1997: 1). In contrast with the latter, Schwandt (1997:

123) does not place the emphasis on problem-solving, but sees pragmatism as an instrument or tool for organising experience and is deeply concerned with the union of theory and practice. One of the substantive themes present in pragmatism is the realisation that although one must begin any inquiry with prejudgments and can never call everything into question at once, no belief or thesis, no matter how fundamental, is not open to further interpretation and criticism.

The above theme is clearly present in the works of two of the most influential philosophers of the Pragmatic School, William James (1842-1910) and John Dewey (1859-1952). James's philosophical investigations primarily focused on the religious, moral and ethical dimensions, while Dewey's contribution had a profound influence on education and epistemology. A common spirit among the American thinkers of that time, including James and Dewey, can be found in the belief that thought not only interprets life theoretically, but also directs it practically. This becomes clear in the following paragraph in James's description of pragmatism.

James (1975: 31) describes pragmatism as a philosophy that turns away from abstraction and insufficiency, from bad *a priori* reasons, from fixed principles and pretended absolutes and origins. A pragmatist turns towards concreteness and adequacy, towards facts, action and power. Although the word pragmatism, which is derived from the Greek word *pragma* (which means action), indeed reflects an inclination towards action, James (1975: 267; 277) clearly warns against the misunderstanding that exists that pragmatism is primarily an appeal to action and that it ignores the theoretic interest. James (1975: 268) contends that pragmatism's relationship to action is of secondary importance and that the "pragmatist doctrine, exhibiting our ideas as complementary factors of reality, throws open (since our ideas are instigators of our action) a wide window upon human action, as well as wide licence to originality in thought". In his essay, *The Sentiment of Rationality*, written in 1879, he stated that any adequate philosophy should satisfy two aspects of human activity, the theoretical and the practical. James insisted that philosophising involved a continuous, yet never successful, synthesising of these two desires of mankind (Magill 1990: 445).

John Dewey's (1859-1952) works and contribution had an immense impact on modern Western society, and particularly so in the United States. Historians have claimed that Dewey's pragmatic philosophy laid the foundation of a more effective structure for American social ideals by providing a way to close the gap between scientific knowledge and other ways of knowing.

In *The Quest for Certainty*, Dewey (1929: 84-85) states that an epistemology must be formulated in relation to nature and posits that such an epistemology of experimental inquiry exhibits three pertinent characteristics, namely:

- (1) It must involve the overt act of doing that will bring about a definite change in the environment or in our relation to it.

- (2) Experiment is not a random activity, but it is guided by ideas which have to meet the conditions as demanded by the problem that triggered the active inquiry.
- (3) The outcome of the activity undertaken, which fully includes the first two aspects, is the construction of a new empirical situation in which objects are differently related to one another.

Dewey (1938: 101) regarded knowing of every kind as a human activity first and foremost and from this approach he viewed scientific knowing. He came to the conclusion that science was a highly disciplined and self-critical form of inquiry with a logical structure that could be adapted to other forms of inquiry, though the particular procedures used, types of evidence, and testing procedures would differ in different fields. He strongly believed that criticism played an essential role and viewed it as an inescapable social activity. In his *Logic: Theory of Inquiry*, Dewey (1938: 107-119) described the approach that he came to see as the desirable underlying pattern of all inquiry. Such an inquiry always starts with a formulation of a problem. This methodology describes the use of both reason and observation in problem solving with movement back and forth between the two. This allows for a revision of the theory and gathering of new facts until a conclusion is reached. Dewey (1916: 11) also stressed the importance of communication and states "...education consists primarily in transmission through communication. Communication is a process of sharing experience till it becomes a common possession".

I agree with this approach and as will be elaborated upon in the next chapter, aspects of the action learning process, such as the emphasis on action and communication, can be directly traced to Dewey's epistemology. Dewey's (1916: 102) description of the method of an educative experience closely resembles that of action learning. The identification of a problem as the departure point, the collection of evidence, the identification of possible solutions, testing these ideas in practice and the problem's critical nature are some of the characteristics that link action learning to Dewey's philosophy.

In his *Human Nature and Conduct*, Dewey (1922) stated that to understand others, and ourselves, we should study human nature and the social institutions in which it functions, as both forces work to shape the individual. As will be elaborated later in this chapter when exploring Giddens' structuration theory, this has important consequences for producing organisational knowledge where there is not only intra-action (inside the organisation), but where organisations are also continuously interacting with the external environment in its totality (customers, suppliers, competitors and political and economic regulations).

Aspects that Dewey highlights in the above work include action, reflection and the importance of values in human conduct. For Dewey, learning through action attains future goals and the best course of action requires deliberation. "There is seen to be one issue involved in all reflection upon conduct:

The rectifying of present troubles, the harmonization of present incompatibilities by projecting a course of action which gathers into itself the meaning of them all. Every type of conduct incorporates values and gives for good or bad a meaning of life" (Magill 1990: 524-525).

Dewey's pragmatism represents an important phase in the Western intellectual development. His attempt at a synthesis was, however, disjointed and only partly successful. He is hard to locate and "to each of the competing factions [realists and positivists], whose assumptions he does not share, he appears to be a member of the opposition, but one too clumsy to be worth taking seriously" (Tiles 1988: 7). The vitality and relevancy of Dewey's philosophy reflect his emphasis on the scientific method and its implications for the human generation of meaning, as well as his concerns for human freedom.

Despite the advances made by the pragmatic epistemology, it does not provide a clear answer to the question where knowledge or models come from. There is an implicit assumption that models are built from parts of other models and empirical data on the basis of trial-and-error complemented with some heuristics or intuition (Heylighen 1997: 2). Dewey partly established philosophical foundations for knowledge, but Kurt Lewin, one of the founding fathers of social and organisational psychology and a contemporary of Dewey, gave the answer to how we learn (Lewin 1952: 240). Lewin's Field Theory, the proposition that human behaviour is the function of both the person and the environment, strongly corresponds with Dewey's view on the 'transaction' between the creature and environment, giving credence to Dewey's epistemological claims. Lewin extended Dewey's ideas that all-knowing is a process and provided details of what this process needs to look like.

Within the pragmatic philosophy there is thus no static or permanent truth, but it is rather constantly updated through the process of the mind's working on the ever-increasing store of our experiences. Dewey's philosophy and the message that knowledge is not static, but constantly changing, are echoed by systems theory and evolutionary epistemologies. His epistemology provided the basis for later developments in the social sciences and philosophy as proposed by Habermas, and many of his pragmatic approaches are today present in the action-reflective organisational epistemology as advocated by knowledge practitioners such as Allee (1997: 60), Dixon (2000: 18) and Garvin (2000: 92).

Although Dewey did not completely succeed in integrating his epistemology into a coherent and easily understandable framework, aspects such as action, reflection, values and the integration of theory and practice, which Dewey pointed out in a number of his works, are today the focus points in various organisational learning and knowledge development theories. Garvin (2000: 117) underscores this and although the approach goes by various names – action learning, experiential learning, problem-centred learning – all can be traced back to the writings of John Dewey and his insistence on the intimate and

necessary relation between the processes of actual experience and education. Dewey's emphasis on action, that is, that it must be an intentional act bringing about a change in the environment, is one of the primary characteristics of action learning and will be explored later on in this dissertation.

1.3.2.5 The positivist school

Positivism in its widest sense is not a unified philosophy. The Positivist School is an umbrella term that embraces the different strands of analytical, linguistic and radical empirical philosophy. The native roots of logical positivism can be traced to a group of philosophers known as the Vienna Circle, a revolutionary movement that originated in the 1920s (Ayer 1959: 9). They developed a particular kind of analytic or linguistic philosophy preoccupied with scientific philosophy; that is, it aims to solve a special set of problems arising out of the activity and claims of the natural sciences. The Vienna Circle's approach to positivism was based on a rigorous scientific method, while later followers dealt with philosophical questions in a more unsystematic and illustrative way. Criticism against logical positivism led it to develop into a more moderate philosophy called logical empiricism, which is the basis of contemporary mainstream thinking in the philosophy of the social sciences. These differences resulted in some experts making a sharper distinction between Logical Positivism and Logical Empiricism, while others deal with it less strictly (Ayer 1959: 5; Hanfling 1989: 6; Schwandt 1997: 85-86). I shall, however, use the term positivism to embrace the philosophical movement in a more encompassing manner.

Positivists divided all significant propositions (P) that have meaning into two classes, namely formal propositions and factual propositions. Formal propositions, which philosophers have called *a priori*, and which concern the 'relations of ideas', are those of logic and pure mathematics and are certain only because they are purely analytic. Factual propositions are those concerned with empirical matters of fact and must be empirically verifiable. These two classes were deemed to be exhaustive and if "a sentence succeeded neither in expressing something that was factually true or false, nor in something that could be empirically tested, the view taken was that it did not express any proposition at all" (Ayer 1959: 10).

Positivists thus argue that all genuine questions must be capable of scientific treatment and all general knowledge is part of a single system of science. Their theory rests on the central notion that only two legitimate forms of scientific inquiry, namely logical analysis and empirical research, produce genuine knowledge. Empirical statements are verifiable by observation and these are the main repositories of human knowledge. If they did not state anything that was either true or false, they could consequently contribute nothing to the increase of knowledge (Ayer 1959: 10; Hanfling 1989: 9; Schwandt 1997: 86; Nodoushani 2000: 76).

The Positivist School distanced themselves totally from metaphysics and concluded that if philosophy wanted to constitute a genuine branch of knowledge, it should emancipate itself from metaphysics. This had a major impact on philosophical thinking, since any sense-experience must inevitably be an experience of the familiar world, as no metaphysical proposition can be verified (Joad 1950: 29). One of the main criticisms against positivist thinking is the absolute denial of non-sensory experience, and by implication, that it cannot be human knowledge. However, there are cases where one can live through an experience that is not sensory. One can, for example, reflect on facts and a particular incident in history where the process of reflecting, calculating and relating occurs introspectively without living through that experience (Joad 1950: 52). Reflecting can therefore be an important element in the construction of knowledge, without one having a specific experience as such. This was ignored by the positivists, which impacted negatively on epistemological thought and inhibited progress in developing theories of knowledge as will be explored in the following chapters of this dissertation.

Positivism did not only place an emphasis on the importance of empirically verifiable facts, but also on the importance of language. The Positivists' originality therefore lay not in making the impossibility of metaphysics depend upon the nature of what could be known, but upon the nature of what can be said. From this, a mode of philosophy, known as linguistic philosophy or linguistic analysis, developed and its criterion was the ordinary use of language. Linguistic analysts criticised logical positivism from the perspective that the latter tried to enforce scientific standards on all forms of speech, while there are many different sorts of discourse that make up human life and each one has its own logic. The task of linguistic analysis is thus to bring hidden implications to light if a form of utterance appropriate to one mode of discourse is mistakenly used in the wrong context (Magee 2001: 201).

Wittgenstein and his concept of language exerted a major influence on positivist thinking and their formulation of these language rules (Ayer 1959: 11). Although strictly speaking not a positivist, Ludwig Wittgenstein's (1889-1951) early work, *Tractatus Logico-Philosophicus* (1921), was used by logical positivists to develop the idea of constructing a logically correct language that would readily distinguish between meaningful and meaningless scientific propositions. Despite the fact that Wittgenstein changed his opinion in his later work, *Philosophical Investigations* (1953), he is still regarded as one of the spiritual fathers of logical positivism or logical empiricism (Von Wright 1982: 108; Schwandt 1997: 86). Bloor (1983: 2-5), on the other hand, argues that the later Wittgenstein provides us with a social theory of knowledge. These contradictory viewpoints reflect the undeniable difficulties which exist with Wittgenstein's work.

Wittgenstein's (1989: 12) approach to the nature of belief, language reasoning and action was to see them as natural phenomena stating that "commanding, questioning, recounting, chatting, are as much part of our natural history as walking, eating, drinking, playing". Seeing action as something natural and

not as a purposive, goal-directed act of the individual, Wittgenstein, on the other hand, was remorseless in stressing the priority of society over the individual. For Wittgenstein knowledge is a collective achievement and our interactions with one another constitute all that we can ever claim by way of knowledge (Bloor 1983: 2-3).

One of the epistemological issues Wittgenstein (1989: 136-137) dealt with in his later philosophy, is the relationship between knowledge and action. This priority of knowledge over action was turned on its head by Wittgenstein (Hanfling 1989: 164). For Wittgenstein (1989: 136) the end-result of justification is experience and it is through experimenting that we know we are doing certain things. Wittgenstein contends that we learn the use and meaning of words in situations in which some action is being performed; and then we learn to justify our actions, or some of them, by reference to knowledge (Hanfling 1989: 165). However, despite Wittgenstein's emphasis of action, the priority which he placed on the importance of language resulted in action being made inferior to the importance of language. Wittgenstein's influence contributed to the idea of action's falling into philosophical disfavour for a time (Mele 1997: 4).

The Positivist School's impact on management research and studies was profound and although it was challenged, contemporary organisational epistemology is still naively positivistic (Spender 1996: 64; Nodoushani 2000: 71). Within the positivist framework, management research has been defined as the formal process of inquiry by an organised quest for principles, theory, and even 'laws of nature'. Organisational studies are thus characterised by careful sampling, precise measurement, and sophisticated design and analysis in the test of hypotheses derived from tentative general laws (Nodoushani 2000: 71). Positivism is, however, increasingly being replaced by Action Research as a mode of inquiry which invites employees to develop their own ideas when jointly diagnosing problems and engaging in action learning (Grieves 2000b: 55).

One of the side effects of positivism on organisational development is that it promoted an individualistic approach to knowing in contrast with the more interpretative and team approaches that are currently favoured. Positivism inhibits the unlocking of tacit knowledge and prevents the sharing and easy transfer of knowledge, which is an important element in fostering organisational knowledge. Positivism undeniably made an important contribution to the development of how we construct knowledge. Although language is indeed important in constructing knowledge, there is a danger that it can lead to reductionism.²⁰ From a pluralistic perspective, other aspects must therefore also be considered. One such element is reflection as a source of knowledge, something which is entirely negated by positivists. There also appear to be contradictions in the positivist approach. While the positivists on the one hand stress an individualistic approach to the construction of knowledge,

²⁰ Describes a way of analysing problems and things by dividing them into simpler parts. It also represents an idea that we can (and ought to) replace one vocabulary by a second vocabulary that is more primary (Schwandt 1997: 135).

Wittgenstein (1989: 12) suggests that knowledge is a collective achievement. I shall explore the relationship between the individual and team/organisation, as well as the importance of language, in the construction of organisational knowledge in more depth in later chapters.

The positivist, scientific world view suggests a fragmented approach to organisational problems. In contrast, a systems approach emphasises a holistic focus and recommends synthetic solutions to organisational problems. Linking action and systems theory appears to have eluded philosophers and social theorists for a long time, something which was achieved by Habermas (1984).

1.3.2.6 Systems theory

Another development that contributed significantly to the changing paradigm of how we perceive knowledge is living systems theories. Biologists, who emphasised the view of living organisms as integrated wholes, pioneered systems theories. The main characteristics of systems thinking emerged simultaneously in disciplines such as organismic biology, quantum physics and ecology (the study of the interlinking relationships on earth) during the 1920s (Capra 1996: 17-32).

Capra (1996: 36-38) identified three key characteristics of systems thinking, namely:

- (1) A shift from the parts to the whole where living systems are integrated wholes whose properties cannot be reduced to smaller parts.
- (2) The ability to shift one's attention back and forth between systems levels. The systemic properties of a particular level are called 'emergent' properties since they emerge at a particular level.
- (3) A shift from objects to relationships where the network of relationships is of primary concern.

Systems thinking had a profound impact on our view of reality. Reality is perceived as a network of relationships, and our descriptions too, form an interconnected network of concepts and models in which there are no foundations and where none is any more fundamental than the others. This new paradigm implies that epistemology – understanding the process of knowing – has to be included explicitly in the description of natural phenomena. Capra (1996: 40) came to the conclusion that “systems thinking involves a shift from objective to ‘epistemic’ science; to a framework in which epistemology – ‘the method of questioning’ – becomes an integral part of scientific theories”.

The use of systems analysis, with its roots in systems thinking, for problem solving in civilian life, emerged in the mid-1950s. Although primarily used in the information and computer industry, it made an early impact on organisational planning where it has been used for long-term corporate strategy and policy making (Optner 1965: 11). As a methodology of problem solving, systems analysis assumes a relationship between interrelated subsystems. These are: the isolation of the problem; the evaluation of

alternative solutions; the design of the selected solution and finally the implementation of the proposed solution. Systems theory postulates that the objects of the system and the ingredients of solution finding are similar for all systems and all problems (Optner 1965: 39). In other words, the system view recommends synthetic solutions to organisational problems, while the scientific/positivist view, based on empirical observation, methodical analysis, and laboratory techniques, emphasises the analytical approach.

The new paradigm of systems thinking recognises that concepts and theories are limited and approximate; knowledge production is not complete with any definitive understanding. In this sense, systems thinking corresponds with the anti-foundational epistemological views expressed by Rorty and others. In my opinion this is not entirely correct, since its interpretation is slightly skewed. Systems thinking is not completely without foundation; the emphasis is rather on the whole and includes a number of sciences where not one has a foundational role, but all of them contribute to its epistemological formulations. In addition, systems thinking focuses on the epistemological process where knowledge is not perceived as a single event, but a process. In my opinion these two observations, as well as the characteristics of a living systems theory, are important aspects that need to be included in any form of organisational epistemology.

Organisational knowledge, similar to Habermas' conception of three worlds (See Figure 1.1), is constructed at individual, social (team), organisational and inter-organisational levels. The relation which systems thinking, organisational learning, and analysis as a problem-solving methodology has with action learning will be explored in subsequent chapters.

1.4 Human Action and the Challenge of Synthesising Action and Systems Theory

Although the notion of action concepts in social-scientific theories of knowledge has for a long time been a matter of discourse and was the focus of discussion for philosophers such as Mead (1934), Parsons (1949) and Habermas (1984), it recently again received the attention of philosophers such as Williamson (2000: 3), who states that "knowledge and action are the central relations between mind and world. In action, world is adapted to mind. In knowledge, mind is adapted to world. When world is maladapted to mind, there is a residue of desire and desire aspires to action". Williamson (2000: 1) concludes that although desire can be satisfied as well by chance, this is no reason to marginalise the category of action in the understanding of the mind and that action is often more highly correlated with belief than with knowledge (Williamson 2000: 86). Polanyi (1958: 268) argues that we must once again recognise belief as the source of all knowledge, and if action is more highly correlated with belief than knowledge, then action will have to be considered as one of the most important sources of knowledge. I therefore agree with Williamson that the importance of action in the understanding of

the mind should not be marginalised. The relevance of human action in constructing organisational knowledge will thus be an important focus point of this dissertation.

The emphasis on action reflects two important ideas, namely (1) that the acting individual attaches subjective meaning to his or her behaviour; in other words, it is a purposive, intentional and goal-directed act, and (2) that understanding subjective meaning requires understanding not simply individual beliefs, attitudes, values and intentions, but intersubjective or shared meanings, values, understanding, and the like that interpenetrate individual action and thought (Schwandt 1997: 65).

In exploring the relevance of action, and its links with systems thinking in constructing knowledge, I shall consider three authors whose work had a major development in the theories of social action, namely, Parsons (1949), Habermas (1984; 1989) and Giddens (1991; 1993).

1.4.1 Talcott Parsons

Habermas (1989: 199) states that Parsons' work "is without equal in its level of abstraction and differentiation, its social-theoretical scope and systematic quality". Despite this acknowledgement the Parsonian project had been severely criticised by numerous leading social theorists, including Habermas (1989: 200) and Menzies (1977: 151) for its failure to integrate human action and systems theory, its inability to integrate choice and constraint into his theory (Johnson, Dandeker & Ashworth 1984: 52-53), its bias towards the notion of an actor's orientation towards a situation, rather than action itself (Black 1961: 274), and that it is "logically and irreparably unsuited to the analysis of social change" (Bailey 1994: 27). Notwithstanding these criticisms, Parson's work represents an attempt to present a general theory of social action and his work had a major impact on theories of human action until the late 1960s. Some of his thoughts are still of relevance for action learning today. I shall now firstly explore the main characteristics of his general theory of social action, before addressing some of its criticisms and relevance for action learning.

Parsons' main work, *The Structure of Social Action* (1949), is a critical orientation towards the work of three principal authors, namely Pareto, Durkheim and Weber, in an attempt to present a single body of systematic theoretical reasoning. Through a critical analysis of the contribution of these authors, as well as positivism and empiricism, Parsons (1949: 757) adopted a position of analytical realism in which his theory of social action is grounded. His significance for action learning, and how it enables organisational learning, lies in this attempt to synthesise different social theories. This convergence finds expression in what Parsons calls "action frame of reference". Parsons (1949: 43-45) argues that any theory of social action involves a common structure of conceptual elements, namely the action frame of reference. The basic unit in this common structure is the unit act, which provides the basic coinage of any theory of action. It comprises the following:

- An actor.
- An end goal or future state of affairs towards which the actor orients his efforts.
- The situation in which the actor is located, which may itself be subdivided into those elements that the actor cannot change, but which none the less condition the action, and those that the actor may use to manipulate as a means of realising ends.
- Norms which provide the actor with a mechanism of selection in the orientation toward ends and make possible action as an ordered sequence.

The Parsonian theory of action identifies three sets of action elements which are interdependent and irreducible and can be summarised as follows:

The means and conditions of action (those elements in the situation that can be utilised by the actor, as against those that constrain his action).

The element of choice in a means/end schema (that all action involves choices).

The elements concerning ultimate values (that action is goal-orientated or purposeful) (Parsons 1949: 718-719; Johnson, Dandeker & Ashworth 1984: 51).

Parsons (1949: 719) adds a fourth action element, that is effort, which he claims binds together all the other elements of action. It is the actor's effort of energy input that is the source of action. These four action elements as identified by Parsons form the basis of his general theory of action and will be used as the point of departure in determining its relevance for action learning.

In an attempt to integrate action and systems, Parsons shifts his focus from action processes to structure. Parsons and Shils (1951: 7) identify three systems which are described as personality, social system and cultural system, which were later extended to include the organismic (behaviourist). Personality system is defined as the organised system of the orientation and motivation of action of one individual actor. The social system is made up of the relationships of individuals organised around the social interaction of a plurality of actors. Systems of culture have their own forms and problems of integration which are not reducible to those of either personality or social systems or both together. Cultural system "is not in itself organized as a system of action. Therefore, culture as a system is on a different plane from personalities and social systems." However, this analysis does not answer the question how does action take on systemic properties. From this functional analysis of systems Parsons and Shills (1951: 53-109) and Parsons (1977: 244-264) develop the scheme of pattern variables which describe patterns of action and which all groups must have. This is known as the four-function paradigm or AGIL schema, namely Adaptation, Goal attainment, Latency and Integration²¹ and these variables were to be maintained at the four system levels as mentioned earlier.

²¹ For a detailed description refer to: Parsons, T. 1977. *Social systems and the evolution of action theory*. New York: The Free Press.

This attempt by Parsons to integrate action and systems is one of the major points of criticism against his work. Habermas (1989: 200-201) argues that Parsons was unable to connect action theory with a conceptual strategy suggested by the systems model, and that there is an inherent tension between these two paradigms in Parsons' work. Habermas (1989: 201) agrees that the problem for theory construction of how to combine the basic concepts of systems and action theory is a genuine one. However, Parsons does not succeed in achieving this important objective and Habermas fully agrees with interpreters of Parsons' work such as Menzies (1977: 160) who concludes:

At the centre of Parsons' world lies a fundamental confusion. His voluntarism is too eclectic to reconcile positivism and idealism. Running throughout his work are two different programs – a social action one in the idealist tradition and a social systems one in the positivist tradition. The action program focuses on the meaning of an action to an actor, while his social systems program focuses on the consequences of an activity for a system of activity. Parsons does not have an action system, as he claims, but only a behavioural system and a separate action theory.

Habermas' (1989: 203-205) main criticism against Parsons is that the latter felt it necessary to represent complexes of action directly as systems and to convert social theory from the conceptual primacy of action theory to that of systems theory. Furthermore, Parsons did not concern himself with hermeneutics, that is to say, with the problem of gaining access to the object domain of social science through an understanding of meaning. Habermas (1989: 235) is also critical of Parsons' concept of action systems, in which actors disappear as acting subjects. They are abstracted into units to which the decisions, and thus the effects of action, are attributed.

Parsons (1949: 719) claims that the actor's effort, or energy, binds all the other elements of action together. For Habermas (1989: 222), however, the solution lies in the concept of 'communicative action' which "not only provides us with a point of reference for analysing contributions made by culture, society, and personality to the formation of action orientations; this model also enables us to get clear about how culture, society and personality hang together as components of a symbolically structured lifeworld".²² Culture, society and personality are not subsystems, but rather constitute the action system. This is one of the main differences between the Parsonian and Habermasian projects. Similarly, organisations, teams and individuals are not subsystems, but the action system. Parsons' failure to integrate action and systems thinking cohesively is solved by Habermas (1989: 288) through the means of communicative action which is clearly reflected in the following:

This potential [rational potential to action orientated to mutual understanding] gets converted into a rationalisation of the lifeworld of social groups to the extent that language takes over the functions of achieving understanding, coordinating action, and socialising individuals, and thus becomes the medium through which cultural reproduction, social integration, and socialisation takes place.

²² The lifeworld is the taken-for-granted universe of daily social activity. It is the saturation of communicative action by tradition and established ways of things. It is a pre-interpreted set of forms of life, within which everyday conduct unfolds (Giddens 1987: 232).

Despite many shortcomings and criticism the Parsonian project raises important questions, suggests new ideas and provides leads for further investigation. Its importance lies in that it represents early attempts to synthesise various strands of thinking in social theory. In Parsons' theory of action the point of reference of all terms is the action of an individual actor or of a collectivity of actors. The main interest of the theory of action is directed to the organisation of the actor's orientation to a situation. Whether the acting unit is an individual or a collectivity, it is referred to as the actor's orientation of action when the action is described (Parsons & Shils 1951: 4). This means that a team or group is also reduced to a unit act. This approach constantly forces Parsons into analyses that reduce social system processes to complicated sequences of unit acts and have subsequently attracted severe criticism. Firstly, Parsons is not addressing action, but rather the actor's orientation to a situation. This has the result that action is not primarily addressed. Secondly, the individual and group (which are at different system levels) are reduced to one and the same unit act, thereby equating society with the actor and reducing system to actor (Menzies 1977: 151-153; Johnson, Dandeker & Ashworth 1984: 58-59).

In addition to the above criticism as it relates to a general theory of action, Parsons' work contributed little towards a better understanding of organisational theory. Whyte (1961: 250) states that three main difficulties are evident with Parsons' work as it relates to organisation theory, namely: (1) Parsons is primarily concerned with relations between organisations and society and gives little attention to organisational behaviour, (2) his concepts do not link up with observable data and (3) he omits a number of elements, such as organisational structure, that are essential for building organisational theory.

Despite these criticisms there are a number of observations of Parsons' theory which are of relevance to action learning. These are mainly related to his earlier work on action theory and not related to attempts to integrate action and systems. These can be summarised as:

- All action is directed towards goals.
- All human action involves selection between alternative orientations and responses.
- Selection involves the use of standards (decision-making criteria).

However, this poses another difficulty for action theory, namely is human action voluntary or is it determined by conditions outside the free will of the actor? Although Parsons (1949: 384) made it clear that although voluntary capacities are essential to the theory of action, this by no means implies that the human individual is autonomous and independent of any conditional requirements. The dilemma resides in that all action is determined by goals, but the actor has the voluntary choice how to select the correct course of action to solve the problem. The answer to this problematic, namely the interaction

between actor and structure, is provided by Giddens with his concept of structuration theory which I shall explore later in this chapter.

In Chapters 4 and 5 I shall show how action learning is also based on the premise of a specific purpose or goal, namely the solution of a specific business/learning problem or challenge, and the importance of linking business objectives to organisational learning and knowledge construction. In solving this problem, various alternatives are considered and in selecting a solution use is made of decision-making criteria, in other words, what standards are used to make the correct selection.

Although there is some similarity between Parsons and Habermas in identifying systems of action, Parsons does not succeed in integrating these systems and attempts to integrate them through pattern variables which were to be maintained at the four system levels. Habermas (1984; 1987), on the other hand, successfully integrates the subjective, social and objective worlds through the use of language, thereby avoiding reducing his critical theory to structural-functionalism²³ as Parsons did. I shall now critically explore Habermas' 'Theory of Communicative Action' to determine its relevance for action learning.

1.4.2 The Habermasian Theory of Communicative Action

One of the most influential contemporary theories to emerge from social constructivism epistemology is the Habermasian concept of rationality as embodied in his 'Theory of Communicative Action'. His work *The Theory of Communicative Action* represents a major achievement and Giddens (1987: 252) states that "all of us working in social theory will be using it as a resource years after most of the current literature in the social sciences has been forgotten". His ideas have sparked controversies and debates throughout various disciplines such as political science and adult education and resonated with new forms of political action and thinking in our post-modern society (Welton 2001: 20). Habermas offers a comprehensive new social theory that encompasses a far wider field than merely social philosophy. His contributions to epistemology and communication have been extensive and his ideas have recently also started to influence management science. Management academics such as Bolan (1999: 76) and O'Donnell *et al.* (2000: 187) used the theory of communicative action as conceptual frameworks in the development of management theories. The latter used communicative action as an analogy for intellectual capital creation as a dynamic process of collective knowing capable of being leveraged into market value. Bolan (1999: 76) based his synthetic model of adaptive rationality on the Habermasian theory of communicative action to develop a model for management planning within complex multi-organisational systems.

For the purpose of this study I shall explore two pertinent questions, namely:

²³ Functionalism is a macrosociological approach emphasising the notion of a system and its parts, such as institutions (e.g. the family, educational system, etc) to discover what function is served for the functioning of the whole society (Bailey 1994: 27).

- (1) Does the 'Theory of Communicative Action', have practical relevance for management science, and more specifically, can it provide a conceptual framework for the development and construction of organisational knowledge?
- (2) Can the 'Theory of Communicative Action' contribute to clarify, or as stated earlier in this chapter, assist in redescribing action learning?

In *Knowledge and Human Interests* (1972), Habermas explained his own epistemological position by answering the question that reliable knowledge is only possible when science assumes its proper, subordinate place as one of the accomplishments of reason (Habermas 1972: 1-3). His epistemology is a direct attack on modern positivism and seeks to show how positivism has mutilated our reason and reduced it to a limited theory and practice of science (Roderick 1986: 9; Pusey 1987: 22; Rutgers 1999: 25; O'Donnell *et al.* 2000: 191). In direct contrast to positivism, which tries to sharply separate the knower (subject) from the knowing world (object), Habermas believes that we are inextricably part of this world and that in the context of communicative action, language and experience are not subject to the transcendental conditions of action itself. He continues to state "the grammar of language games links symbols, actions and expressions. It establishes schemata of world interpretation and interaction. Grammatical rules establish the ground of an open intersubjectivity among socialised individuals. And we can only tread this ground to the extent that we internalise these rules – as socialised participants and not as impartial observers. Reality is constituted in a framework that is the form of life of communicating groups and is organised through ordinary language" (Habermas 1972: 192).

Habermas contends that one of the principal aims of critical theory is to inform the practice of those involved in struggles for emancipation and social transformation. This has a close affinity with action learning, which aims to bring about a change in the current state of affairs through a process of continuous learning and improvement, a process that can be equated with emancipation. Habermas (1973: 39) furthermore argues that a critical theory should provide knowledge upon which participants in discourse can draw to assist them in the process of reaching understandings among themselves about their common situation. As will be pointed out in Chapter 4, this is precisely what action learning aims to achieve. I shall therefore argue that action learning has the necessary elements and qualities to act as a critical learning theory to enable organisational knowledge.

Parkin (1996: 425) argues that the theory of communicative action has far too often been understood as predominantly – and typically – meta-theoretical, having little to do with empirical cases, thereby defeating the objective of a critical theory. Habermas (1984: xli) himself underscores this and points out that "the theory of communicative action is not a meta theory, but the beginning of a social theory concerned to validate its own critical standards". Building on the work of Mead and Durkheim, Habermas (1989: 1) shows how the paradigm shift from purposive activity to communicative action took place. He develops the theory of communicative action into the concept of 'communicative

rationality' which serves as a link connecting the notions of communication and action at the meta-theoretical, methodological and empirical levels, thereby succeeding in integrating action and systems, something which Parsons failed to achieve. At a meta-theoretical level, Habermas makes an attempt to show that every comprehensive understanding of communication and action must refer to the theme of rationality, while at the methodological level the approach is based on an interpretative understanding. At the empirical-theoretical level discussions on the modernisation of societies show that this process can adequately be understood only as a process of rationalisation (Habermas 1984: 7; Schnädelbach 1991: 9). This theory of rationality, which is expected to provide 'critical standards' of social theory, occupies centre stage in the Habermasian epistemology and is essential for an understanding of his epistemology. His epistemology is based on knowledge derived from certain action-concepts and the actor's relation to these action concepts as embedded in the three worlds Habermas identifies which constitute reality, namely the objective, social and subjective worlds (see Figure 1.1).

Habermas (1984: 85) contends that action-concepts employed in social-scientific theories can be reduced in essence to four basic, analytically distinguishable concepts, namely teleological action (which can be expanded into strategic action), normatively regulated action, dramaturgical action and communicative action. An actor stands in a specific relationship to each of these actions and each of these action concepts will hence be discussed independently.

Teleological action has been at the centre of the philosophical theory of action. The actor considers how to successfully achieve or bring about a change to his or her satisfaction (brings about the occurrence of a desired state) by choosing means that have promise of being successful in the given situation. For Habermas (1984: 85), the central concept "is that of a decision among alternative courses of action, with a view to the realisation of an end, guided by maxims, and based on interpretations of the situation". As will be pointed out in Chapter 3, this is what action learning intends to achieve: on the basis of theoretical and practical knowledge obtained by the knower, he/she must generate alternative options, decide which option by properly substantiating that choice based on interpretation of the situation, and then finally take action to come to a resolution of the problem. The ontological nature of action learning is based on some of the elements of the action learning process, namely the consideration of alternatives which will result in improvement. In this way it corresponds with the Habermasian view of teleological action that presupposes an understanding of the objective world.

At first glance it appears that only the teleological concept of action seems to open up an aspect of rationality of action. This is, however, deceiving, and Habermas (1984: 87-94) points out that these four action concepts are not only increasingly complex, but also reveal stronger implications for rationality.

With the teleological concept of action, the actor forms beliefs about existing states of affairs through the medium of perception, as well as developing intentions with the aim of bringing desired states of affairs into existence. With regard to ontological presuppositions, teleological action can be classified as a concept that presupposes one world, namely the objective world (as the totality of all entities about which true statements are possible). By contrast, the concept of a normatively regulated world presupposes relations between an actor and two worlds, the objective world of an existing state of affairs and a social world (as the totality of all legitimately regulated interpersonal relations) to which the actor belongs as a role-playing subject. In the social world members can then expect of one another that in corresponding situations each of them will orient his/her action to values normatively prescribed for all concerned. The social world is thus used to interpret and construct information and this model of action is connected with a learning model of value internalisation (Habermas 1984: 89). In dramaturgical action the actor, in presenting a view to himself / herself, has to behave towards his/her own subjective world. Habermas (1984: 91) defines this subjective world “as the totality of subjective experiences to which the actor, in relation to others, has a privileged access”.

These three worlds form the basic point of departure for the Habermasian model of the way in which reality is constituted. In Chapter 3 I shall use the concept of the three worlds as an analogy for individual, team and organisational learning to develop a framework for organisational learning and knowledge construction. For Habermas (1979: 67; 1984: 99-101), the spectrum of rationality resides in the actor’s relationship to these three worlds and language is the medium through which participants can unlock and realise their rational potential. In the concept of communicative action, relations of the actor are ascribed to the perspective of the speakers and hearers themselves who seek consensus and measure it against truth, rightness and sincerity through their utterances and in relation to these three worlds. In developing the theory of communicative action, Habermas (1979: 65-68) called it a model of linguistic communication. This model forms the framework for the theory of communicative action and provides clarity how language can be conceived as the medium of interrelating three worlds as for every successful communicative action there exists a threefold relation between these three “worlds.”

The model is summarised as follow:

Domains of Reality	Modes of Communication Basic Attitudes	Validity Claims	General Functions of Speech
“The” World of External Nature	Cognitive: Objectivating attitude	Truth	Representation of Facts
“Our” World of Society	Interactive: Conformative attitude	Rightness	Establishment of Legitimate Interpersonal Relations
“My” World of Internal Nature	Expressive: Expressive attitude	Truthfulness	Disclosure of Speaker’s Subjectivity
Language	---	Comprehensibility	---

Table 1.1: Model of Linguistic Communication (Habermas 1979: 68).

Habermas (1972: 191-193) identifies three primary generic cognitive domains, namely the technical, practical and emancipatory, which are all respectively embedded in the objective, social and subjective worlds. These three cognitive interests develop and are grounded in different aspects of social existence, namely work, interaction and power. These three cognitive domains are termed the 'knowledge constitute', and determine the mode of constructing knowledge and whether knowledge claims can be warranted (MacIsaac 1996: 1). These are the conditions for the possibility of three sciences: the empirical-analytic, hermeneutic and critical. The role of these three sciences is to systematize and formalise the procedures for basic human activities (that is, controlling external conditions, communicating and reflecting) necessary for the functioning of the human species (Roderick 1986: 53).

The basis of the Habermasian theory of rationality could be presented graphically as follow:

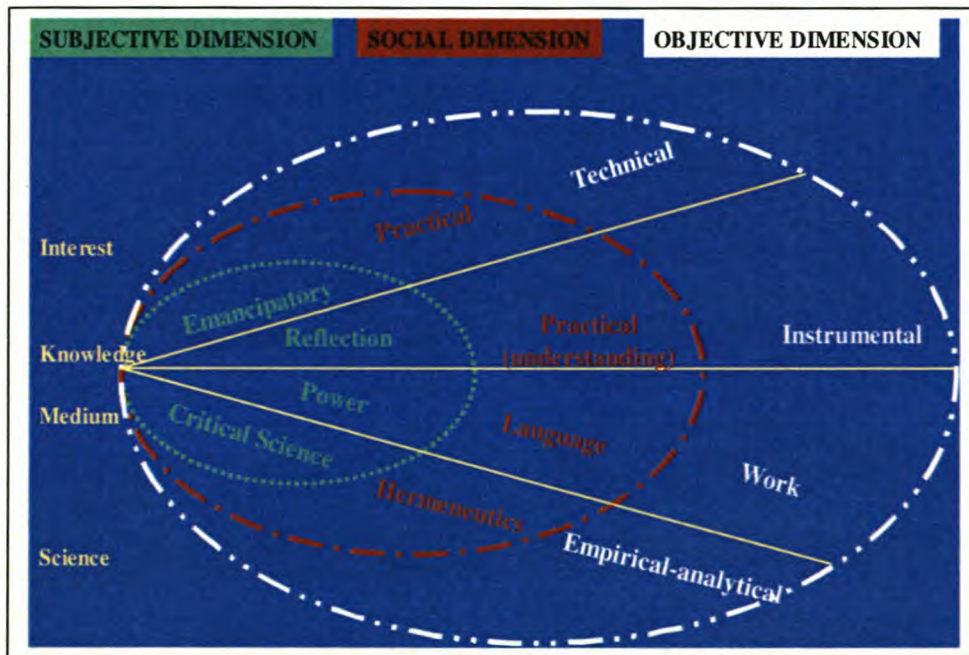


Figure 1.1: Habermasian Theory of Communicative Action

Building onto his concept of rationality as detailed above, Habermas (1984: 6) develops his theory of communicative action by expanding upon Weber’s hierarchy of concepts of action which is designed with an eye to the type of purposive-rational action so that all other actions can be classified as deviations from this type. Habermas (1984: 294) develops the concept of ‘communicative action’, defined as “the type of interaction in which all participants harmonise their individual plans of action with one another and thus pursue their illocutionary aims without reservation”. Communicative action is the verbal or non-verbal interaction between two or more actors who “seek to reach an understanding about their action situation and their plans of action in order to coordinate their actions by way of agreement” (Habermas 1984: 86). The role of language stands central in the ‘Theory of Communicative Action.’ Habermas (1984: 95) argues that communicative action represents a higher form of rationality in that “only the communicative model of action presupposes language as a

medium of uncurtailed communication whereby speakers and hearers, out of the context of their pre-interpreted life-world, refer simultaneously to things in the objective, social and subjective worlds in order to negotiate common definitions of the situation”.

The centrality of language in the theory of communicative action, interlinked with the three types of knowledge Habermas identifies, form the basis of the Habermasian ‘Theory of Communicative Action.’ I shall subsequently draw on this conceptualisation in determining an epistemological framework for action learning.

In addition to the above, and in the context of social action, it is also important to explore how Habermas treats the actor/object relationship. The human interaction between the subject and the object forms the basic outline of Habermasian epistemology and can be schematically illustrated as follows:

Subject		Action (Social world)	Object	
Inter-subjective world	I	Think	it	Objective world
	I	Know	it	
	I	Perceive	it	
	I	Understand	it	
	I	Interpret	it	
	I	Posit	it	

Table 1.2: Habermasian concept of communicative action (adapted from Pusey 1987: 21).

It might appear in the tradition of Wittgenstein that Habermas’ emphasis on the interaction between the knower and the knowing world favours the linguistic act of speech while neglecting the physical act of doing. However, Habermas (1984: 101) states that to avoid misunderstanding “the communicative model of action does not equate action with communication. Language is a medium of communication that serves understanding”. In his later work, *Theory of Communicative Action, Volume 1*, Habermas (1984: 241) makes it clear that “for the actor, the aims of action orientated toward success and reaching understanding are situated on different levels: either in the objective world or, beyond all entities, in the linguistically constituted lifeworld. I do not mean to say that speech is a self-satisfying action that bears its purpose within it and is to be distinguished from such actions as are aimed at purposes external to them”. These thoughts make it clear that the theory of communicative action conceives of communication and action as constituting a unity, without reducing the one to the other.

The concepts of communicative action and communicative rationality, with the former internally linked to the notion of reason embedded in communicative rationality, stood central in the Habermasian epistemology. Communicative rationality is an attempt to provide a normative foundation for critical social theory (Roderick 1986: 111). It comprises three aims:

- (1) To explain that knowledge is necessarily defined both by the objects of experience and by *a priori* categories and concepts that the knowing subject brings to every act of thought and perception. This is achieved by reaching an understanding which is a normative concept.
- (2) That the knowing subject is also social and dynamic and that all knowledge is mediated by social experience.
- (3) To establish the validity of reflection and to show that the power of reason is grounded in a process of reflection, which is a vehicle to find new knowledge to correct the knowledge that is now in doubt. With this approach Habermas counters the traditional empiricist view that reflection is just illusory introspection (Habermas 1972: 309-311; Habermas 1973: 17; Pusey 1987: 22).

One should thus not be misguided by the notion ‘communicative rationality’. It is an inclusive notion which does not solely focus on rational thought, but also includes aspects such as interaction and reflection. As will be expounded upon in Chapter 3, I contend this centrality of the Habermasian epistemology provides an analogy and framework for a post-modern organisational epistemology which will hopefully be able to meet the demands of the complex adaptive business environment of the 21st century.

The following aspects of ‘Critical Theory’ are of specific importance to this dissertation. At an ontological level Habermas rejects the traditional view of the transcendental nature of knowledge and “holds to the view that knowledge, language, action and society must be comprehended in their development” (Pusey 1987: 18). This is especially evident in Habermas’ interest in social development, rationalisation and learning processes. Rooting his theory in the cosmic totality places his views in line with the post-modern evolutionary epistemological view which allows for a merging of the self (inner world), the immanent (present world) and transcendent world in one cosmic ‘system’. I prefer to use the word ‘domain’ instead of ‘world’, as the latter indicates a sharp split between the three. Figure 1.1, which illustrates Habermasian theory, distinguishes three worlds, but does not separate them. It presents a unified view of the cosmos and this view prevents the traditional separation between the ideal world and the temporal world, while at the same time emphasises the union of body and mind, and theory and practice.

This approach is of significance to one of the major criticisms against social constructionists,²⁴ namely the “assumption that the individual and the social are systems at separate levels of being or explanation” (Stacey 2001: 38). My interpretation of Habermas counters this criticism against social constructionists. For Habermas, there is no split between the social and the individual and the dual causality that goes with it. The individual and social are also not separate levels, but as I have shown earlier, rather an extension of the same level that extends from the individual domain into the social and objective domains with language (communicative action) cohesively linking these three domains. Habermas’ approach not only allows us to critically interpret our objective, social and subjective worlds, but also provides some essential guidelines for changing these worlds.

Secondly, and most importantly, at an epistemological level, Habermas attempts not only to synthesize the rational and empirical approaches, but expands these notions by including critical questioning and reflection. It is, in fact, this combination of conceptual and empirical analysis that distinguishes the disciplines, which now lay claim to the heritage of philosophy as a theory of rationality (Habermas 1984: xv). By making use of theories (both empirical and *a priori*) developed in different and insulated areas, he is able to check them for coherence against each other. This allows for the creation of options that can be selected and discarded as the theory grows. This corresponds closely with evolutionary epistemology with the only difference that creation of options is a willful act and not based on the ‘blind-variation-and-selective-retention’ principle as advocated by evolutionary epistemology. Developing in this synthetic [and iterative and evolutionary] way, it allows that the theory becomes more encompassing and powerful (Pusey 1987: 19). Habermas also includes in his epistemology the aspects of the individual’s interaction as part of a social group and that of reflection. These aspects all stand central in the Habermasian epistemology. I contend that the Habermasian theory of communicative action could also be described as a ‘systems theory’ which integrates parts of the whole into one. It should therefore be viewed as a pluralistic epistemology, which, as will be discussed in the next chapter, is also the basis for an action learning epistemology.

For Habermas (1973: 18), the justification of knowledge is based on discourse where participants search for arguments. Habermas provides, although against the framework of political action, an overview of the organisation of action that corresponds closely with elements of action learning. “Decisions ... cannot at the outset be justified theoretically and then be carried out organisationally. The sole possible justification at this level is consensus, aimed at in practical discourse, among the participants, who, in the consciousness of their common interests and their knowledge of the circumstances, of the predictable and secondary consequences, are the only ones who can know what risks they are willing to undergo, and with what expectations” (Habermas 1973: 33). This is also

²⁴ Social constructivism argues that the authority of knowledge ultimately derives from a ‘knowledge community’ of people who agree about something being true. Knowledge is not what individuals construct, but rather what social groups, or knowledge communities, construct (Warmoth 2000: 1).

underscored by Polanyi (1958: 264) who contends that tacit (personal) knowledge cannot be critical. The importance of deliberation in action learning and Habermas' views on the force of the best argument will be explored in the following chapters.

Social constructionism is not without its critics and not all agree that the constructionist approach provides a clear explanation of epistemology. Heylighen (1997: 2) contends that although there is more emphasis on the changing and relative character of knowledge, the constructivist approaches are still absolutist in the primacy they give to both social consensus and internal coherence, thereby reducing knowledge to merely its social nature. On the contrary, Habermas (1972: 198-199) argues that theory and practice are linked in the process of self-reflection and that the emancipatory interest is the guiding interest of a critical theory and of all systematic reflection. O'Donnell (1999: 253) supports this and argues that Habermas' reconceptualisation of action and rationalisation allows us to view rational action as a potentially liberating rather than imprisoning or purely oppressive force. Despite criticism against Habermas that he has failed to specify any revolutionary agent or subject to whom his critical theory might be addressed, Parkin (1996: 424) concludes the following:

Indeed, closer examination reveals that a number of social researchers are finding that Habermas's critical theory provides a useful theoretical resource upon which to draw when attempting to understand and critique a number of different developments and situations that obtain in advanced capitalist societies.

I contend that Habermas does attempt to give equal importance to the various elements of his epistemology, that is, *a priori* knowledge and empirical observation as well as critical questioning and reflection. However, although Habermas places importance on the communicative aspect of action, I contend that not enough emphasis is placed on the physical action required to implement the communicative actions of thinking, knowing, interpreting, etc. Implementing actions is what is required in effective management and reflecting critically on those actions will result in constructing more knowledge. It is this aspect that is emphasised by action learning, without neglecting the importance of *a priori* knowledge, empirical investigation and reflection.

Habermasian 'Theory of Communicative Action' has made an important contribution to critical social theory by underscoring the importance of philosophy of language and expanding the concept of reason to include 'communicative rationality'. As will be argued for in this dissertation, drawing on Habermasian theory of communicative action will not only strengthen action learning, but will also provide a framework for a pluralistic epistemology. Synthesising logical empiricism, critical thinking, human action, reflection and language (communication) in a cohesive framework results in a pluralistic epistemology, personifying features which constitute action learning. Similar to TCA, action learning succeeds in fusing different epistemological approaches into a pluralistic theory of knowledge which leads to a redescription of action learning as I shall show in Chapter 4.

Parsons (1949) gave us a basic framework for a general theory of social action. However, his theory had many shortcomings of which his failure to integrate action and structure stands out clearly. Habermas (1984; 1987) has shown us how language (communicative action) plays a central role in our conceptualisation of rationality and how language links the subjective, social and objective worlds or systems. Similar to Habermas and Parsons, Giddens (1993: 88-92) also attempts a theoretical synthesis by bringing three related strands together, namely: phenomenology²⁵, the philosophy of Wittgenstein and hermeneutics (Johnson, Dandeker & Ashworth 1984: 205). In an attempt to generate a genuine synthesis, Giddens (1993: 122-123) develops a number of concepts of which the 'duality of structure' is perhaps the most synthetic of all his concepts. This concept is of particular relevance to organisational knowledge and will be explored in the following section.

1.4.3 Agency and structure: Giddens' structuration theory

In his criticism of both interpretative traditions of thought, where action and meaning are accorded primacy, and structuralism where structure has primacy over action, Giddens (1993: 89) argues that the differences between these perspectives are often taken as epistemological, whereas they are in fact also ontological. Giddens (1991: 201) furthermore states that his concern with structuration theory is to "develop an ontological framework for the study of human social activities. By ontology I [Giddens] mean a conceptual investigation of the nature of human action, social institutions and the interrelations between action and institutions". From this perspective structuration theory offers particular ontological insights in exploring action concepts related to learning and knowledge construction in organisational contexts.

Similar to Habermas' (1984) hermeneutics, language occupies an important position in Giddens' approach to social theory. Human beings, through language, are able to reflect upon, and monitor, their own actions and those of others. They are able continually to alter the criteria by which they recognise the world, so producing new meanings within it. Society, is, then, a changing nexus of interaction between human agents. Actors produce themselves and others, and, are in turn, produced by others with the self-same productive capacities (Johnson, Dandeker & Ashworth 1984: 206).

This repetitive and changing interactive process is what Giddens refers to as 'duality of structure'. Structuration theory offers a conceptual scheme that allows one to understand both how actors are at the same time the creators of social systems, yet created by them. Giddens (1993: 122) states that the concept of structuration involves that of the duality of structure, which relates to the fundamentally recursive character of social life, and expresses the mutual dependence of structure and agency. Giddens (1991: 204) posits that critics, who argue either that structuration theory provides too little space for free action, or alternatively, underestimates the influence of structural constraint, are missing

²⁵ Phenomenology, as a theory of knowledge, states that our knowledge of things divides into direct and indirect knowledge, that is, into direct knowledge and knowledge through aspects. For a detailed explanation see Honderich (1995: 659).

the point. Rather, structuration theory “is an attempt to provide the conceptual means of analysing the often delicate and subtle interlacings of reflexively organised action and institutional constraint” (Giddens 1991: 204). This is a central issue that will be explored in this dissertation in determining how organisational knowledge is constructed.

The debate about agency and structure is an important one in exploring the relationship between the individual, team/group and organisation in constructing organisational knowledge. It raises a fundamental question: Are we free to act as we please, or are we shaped and governed by structures? This issue has also been explored by Parsons (1949:448), who concluded that actions are voluntary and not deterministic. There are, then, two opposing sides in the agency-structure debate: some claim that individuals create forms of society, whereas others contend that forms of society create individuals (Sibeon 1999: 139). The question of a voluntaristic theory of action could best be explored by drawing on the concepts of ‘agency and structure’ which are borrowed from social sciences.

Giddens (1987: 59-61) argues that the nature of human action has to be understood in the context of a traditional division in social theory, namely a dichotomy between objectivism and subjectivism. However, “we may agree, in the sense that every process of action is a production of something new, a fresh act; but at the same time all action exists in continuity with the past, which supplies the means of its initiation. Structure thus is not to be conceptualised as a barrier to action, but as essentially involved in its production” (Giddens 1993: 123). For Giddens, structure as a social object is thus not external to the subject, it is rather inseparable from the agent’s conduct. In consequence, there is no dualism but duality. The theorem of the duality of structure occupies a central place in structuration theory because it encapsulates the recursive elements of social life so fundamental to social organisation and change. Duality is set out as an alternative to dualism and aims to transcend old dualistic approaches that usually endorsed a structural view and left hardly any leeway for individual agency. Duality requires that we look at both the concepts of structure and action. Action has an essential temporality and structure is both the medium and outcome of the human activities which it recursively organises. Given also that Giddens’ structures are not ‘external’ limitations, but an element inherently shaping the actors’ conduct, they are not only constraining but also enabling (Giddens 1987: 60-61; Mouzelis 1995: 118).

A duality, therefore, resembles a dualism in that it retains two essential elements, but, unlike a dualism, the two elements are interdependent and no longer separate or opposed, even though they are conceptually distinct, otherwise the duality will be a unity (Jackson 1999: 549). This is an important distinction, as I shall elaborate on later in this section.

Alternative views to Giddens’ structuration theory have also been offered by Bourdieu (1977: 82). The latter addressed the agency/structure debate based on the idea of ‘habitus’, defined as the individual’s stock of accumulated social knowledge and experience. This approach claims to study individual agents

while giving due attention to their social surroundings, thereby avoiding the agency/structure dualism (Jackson 1999: 549).

The central argument of critics is that in curtailing the role of social structure, duality-based approaches go too far in the other direction and end up with social theory dominated by individual agency. Others, such as Mouzelis (1995: 119), suggest that dualism and duality can coexist and that neither on its own suffices as the basis for social theorising. From this perspective, people in different social locations experience different relations between agency and structure. People in authority are likely to experience a duality: they have a personal involvement in formulating policy, and their individual and collective agency is closely tied to the production and reproduction of the social institutions around them. On the other hand, people at the bottom of the hierarchy are likely to experience a dualism: they do not identify with the institutions around them, have little influence in the formation of policy, and feel constrained by the social environment in which they have to live and work. Duality and dualism may therefore be relevant in different circumstances, and the social theorist should be free to invoke either according to the object of study (Jackson 1999: 550).

Stacey (2001: 64) identifies three main criticisms against structuration, namely: (1) structuration theory does not pay attention to the biological body of individuals; (2) it pays little attention to the material context in which people live; and (3) the social is stored as memory traces in individuals and ends up regarding individuals (agency) as more important than structure. Drawing on complex adaptive systems, Stacey (2001: 197) rather advances the idea that attention must be given to building and expanding the relations between actors and structure. I shall explore this concept in more detail in Chapter 2 where this notion is incorporated into the construction of organisational knowledge.

Although the concept of duality has recently partly been incorporated by Stacey (2001: 61-64) into conceptualising organisational learning, duality has not yet been fully explored in organisational learning and knowledge construction. Despite this apparent lack of interest from corporate epistemologists about duality, these debates on duality are important in constructing organisational knowledge and should be considered in developing improved ways of enabling organisational knowledge.

1.5 Summary and Conclusion: Pluralism as a Post-Modern Response to Epistemology

Tracing Western epistemology has shown a deep divide that obscured our thoughts for centuries. The Greek philosophers initiated the 'quest for certainty' in an attempt to find security from the hazards of the temporal world, by going beyond this world. Since this initial quest for certainty, the knowledge paradigm has changed substantially. It changed from the absolute and transcendental character of knowledge, which introduced the split between theory and practice, to various attempts of a synthesis,

to the current paradigm which views knowledge as dynamic, iterative and evolutionary. One of the central themes of the paradigm shift that is taking place is that the world is essentially interconnected and interdependent, a view which is also advocated by systems theories and which offers new insights in the construction of knowledge in general and organisational knowledge in particular. The quest for certainty has been replaced with an awareness that one does not need to know for certain. Knowledge is to be held as a justified true belief only in a certain context and certain time with the realisation that new insights might change our beliefs.

The logical positivist theory indeed appears to be losing its pervasive position and is being seriously challenged by the modern social and behavioural science paradigms (Nodoushani 2000: 71). In close correspondence with evolutionary epistemology, humankind needs to adapt continuously its beliefs in order to grow and survive. This could present a dichotomy that needs to be explained. While I held in foundational fashion epistemology as a primary consideration to enable organisational knowledge, it is also acknowledged that it could be required of me to adapt my position. This in turn might lead to scepticism, which contrasts with the foundational view I explained earlier. This presents a dichotomy, as these two notions are not complementary. While on the one hand I propose a foundational approach, my position also reflects some elements of the sceptical relativist position that knowledge is only true in a given time and a given context, believing that it might be refuted one day in future. Davidson's coherence theory (2000: 420) points out that this is not a unique dilemma. It is absurd to look for a justifying ground for the totality of our beliefs. What is needed to answer the sceptic is that someone with a (more or less) coherent set of beliefs has a reason to suppose his beliefs are not mistaken in the main. This is the position that I shall adopt and explore in this dissertation. This view is also aligned with systems thinking where epistemology is not based on one single aspect, but rather on the web of interdependent relationships.

The status of epistemological debate in the Western intellectual tradition is one still characterised by divergent views, not only in terms of what kind of epistemology, but also if epistemology has a right to exist at all. This ambivalence and tug-of-war between empiricism and rationalism did not contribute to a better understanding of epistemology. It led to a sharp distinction between theory and practice. The quest for a synthesis of various intellectual strands of thought in the Western intellectual tradition has been evident since Kant's attempt to synthesize rationalism and empiricism. Similar attempts, although from different theoretical perspectives, have also been made by Parsons (1949), Habermas (1984) and Giddens (1991). In this dissertation I also pursue a similar quest for synthesis and drawing from various epistemologies and disciplines, conclude that such a synthesis is possible through a pluralistic framework.

The impact of the rationalism/empiricism debate in philosophy also left its mark during the century-long history of management studies, which was influenced by the scientific, rational approach at its

outset. Developments in organisational science had traditionally modelled those as dictated by developments in the scientific field. The rational scientific approaches to management that began early in the 20th century were heavily influenced by Taylor's (1911) scientific management, the Gilbreths' (1911) motion studies, Gantt's (1929) task scheduling and Fayol's (1946) principles of management (Nonaka & Takeuchi 1995: 35-39; Grieves 2000a: 346). This period was characterised by the mechanistic and scientific approach to organisational and management development with a focus on the production of material and not on intangible aspects such as knowledge. The major theme, which emerged during the early years of organisational development, was the attempt to rationalise the way work was done and the way the work force was utilised to increase the output. Organisational knowledge was mainly based on individual, technical knowledge that was required to make the employee an efficient worker to be maximally productive.

Bronowski and Mazlish (1986: 495) posit that the continued separation between theory and practice is due to a failure to evolve a logical link, *a way of reasoning from motive to action*, which is subtle enough to fit the study of humankind – an issue of relevance to this dissertation. The theoretical/practical split that occurred in philosophy manifested itself on a similar basis within the organisational science with a division between the rational, mechanistic approach and the more humanistic behavioural approach. Similar to Kant, who tried to reach a synthesis, Barnard (1938) attempted the same in organisational behaviour. Although Barnard's treatment of creating knowledge was fairly general, his view on knowledge was based on the following two premises:

- (1) Knowledge consists of both logical, linguistic content and behavioural, non-linguistic content.
- (2) Leaders create values, beliefs and ideas in order to maintain the soundness of the knowledge system (Nonaka & Takeuchi 1995: 36-37).

Although leaders use both scientific knowledge obtained through logical mental processes and behavioural knowledge from the illogical mental processes, Barnard's main emphasis was on the latter. At a time when the dominant positivist school was at its apex, Barnard's attempt to integrate scientific and behavioural knowledge was largely unsuccessful.

Despite attempts by the 'humanistic' school, led by Mayo (1933), the early business sciences remained located within the positivist tradition, which exercised a major influence in the development of management theories. Only during the last two decades did some management researchers begin to question the hegemonic position of the positivist epistemology and methodologically there has been a move away from the inherent positivism of earlier approaches to a humanistic approach (Nonaka & Takeuchi 1995: 35; Grieves 2000a: 348; Nodoushani 2000: 72).

In the previous sections I have analysed some of the more important features of the theories of Parsons (1949), Habermas (1984) and Giddens (1991; 1993) as they relate to social action. From Parsons' general theory of action I have taken that action is goal directed and involves choices. Parsons, as I have showed in this chapter, failed to integrate action and systems successfully, mainly because he never clarified the basic framework of systems theory separately from action theory. Habermas (1984), with his Theory of Communicative Action, succeeds in aligning the subjective, social and objective worlds using communicative action as the unifying strands that link these three systems together. Modern cosmology has proved that the cosmos is in a continuous state of expansion and should not be divided into a here (immanence) and another world above (transcendence). This realisation differs sharply from our traditional understanding which has its roots in the Platonic view of the Ideal world and the world we are living in (Form). I contend that if one views the cosmos as one single unified and interlinked totality, without the immanent/transcendence division, one will realise that theory and practice are totally integrated and that knowledge constitutes an inherent part of the cosmic totality which is in a continuous state of expanding. Although Habermas makes the distinction of the three worlds, that is, objective, social and subjective, they remain rooted in the immanence. I should like to suggest that one does not refer to the Habermasian distinction as three worlds, but rather as three dimensions of reality. This will strengthen the notion that they are not three different and separate worlds, but rather three interrelated and interconnected dimensions of the one world of reality. I agree therefore with Parkin (1996: 422) that Habermasian theory of communicative action as a critical theory "provides a social theoretical framework within which the social pathologies and paradoxes of late modernity can be adequately addressed".

I agree with Habermas (1984: xxxvii) that the discontents of modernity are not so much rooted in rationalisation as such, but rather in the failure to develop and institutionalise all the different dimensions of reason in a balanced way. This failure resulted in reductionism and a dilemma the post-modern world is faced with. I contend that defining knowledge in a new paradigm can therefore not be one-dimensional. McDermott's (1999: 104) description of knowledge and how it differs from information is evidence of how difficult it is to define knowledge. These descriptions are (1) Knowledge is a human act, (2) it is the residue of thinking, (3) created in the present moment, (4) belongs to communities, (5) circulates through communities in many ways, and (6) new knowledge is constructed at the boundaries of the old.

Giddens (1993: 117) offers additional insights into systems theory and argues that "a social system is thus a structured totality". However, from a systems theory perspective the concepts of dualism and duality do not represent a true reflection of reality. From a systems theory perspective, the concept of duality is too restrictive to encompass the complexity and diversity of modern organisations and/or societies. Although Jackson (1999: 545) argues that a concept of duality can provide a superior framework to dualism in dealing with the complexity of economic and social institutions, a concept of

plurality could rather provide alternative ways in exploring organisational knowledge construction. Duality is still informed by only two constructs and we are again falling into a similar trap of the Cartesian mind/body dualism. A pluralistic approach will avoid the dualistic tension and will allow for a multiple interaction of all the important constructs in constructing organisational knowledge which includes people, processes and technology.

The multi-faceted character of knowledge makes it difficult therefore to come to a universal definition of knowledge. Following a social constructionist approach, the *Collins English Dictionary* defines knowledge as the “facts, feelings, or experiences known by a person or group of people”, a view shared by Allee (1997: 27) and Stonehouse and Pemberton (1999: 133). Others, such as Bhatt (2000: 16) and Hall (2001: 21), emphasise the importance of knowledge in context, a view supported by Baker, Barker, Thorne and Dutnell (1997: 64), who state that “knowledge represents an individual’s opinion at a moment in time and that knowledge is created when information is applied in a particular context”. Yet many other recognised experts believe that knowledge is a capacity-to-act (Sveiby 2000a: 2; Hall 2001: 20; Lang 2001: 45). None of these views is incorrect. These experts are all driven by a certain paradigm (social constructionism, evolutionary epistemology, action-reflection) and their views of knowledge are underpinned by that epistemology.

Defining knowledge in general, and specifically in organisational contexts, should not be limited to a one-dimensional understanding (Campbell 1988: 390; Wuketits 1990: 230). The dynamic and evolutionary nature of knowledge emphasises the importance of knowledge construction as a process (Campbell 1988: 389; Blacker 1995: 1021; Capra 1996: 39; Bhatt 2000: 18), rather than something static. This view has important considerations for organisational knowledge. Knowledge, and the construction of knowledge, is not static but continuously evolving. This is the energy that creates innovation and provides companies with the competitive edge. The knowledge paradigm of our time will influence and impact on our perceptions of organisational knowledge and our search for a corporate epistemology. The developments in social psychology (Lewin’s Field Theory and the Gestalt theory), behavioural science (team work and development) and post-modern philosophy (Critical Theory) should all be taken into account to come to an understanding of an organisational epistemology. We should, therefore, be cautious of quickly formulating an absolute or single selection criterion in the production of knowledge. Heylighen (1997: 4) comes to the conclusion that neither correspondence, nor coherence or consensus or action-reflection, and not even survivability are sufficient to ground a theory of knowledge. Our quest should be to construct an epistemology that synthesizes and extends all of the existing epistemologies in a unifying approach. I contend that such an approach is provided by a pluralistic framework which is a possible solution to this problematic. A pluralistic framework offers an advanced approach to the construction of organisational knowledge. Organisational epistemology should therefore be underpinned by a pluralistic approach such as exemplified by an action learning approach.

While most of these epistemological developments are linked to intellectual activity in the Western world, I am also of the opinion that the increasing multi-cultural globalisation of business necessitates that one should also look at epistemological developments in other cultures to determine if there are any interlinking and corresponding strands of thought which could provide a more general epistemological framework. With their exposition of Japanese thought, Nonaka and Takeuchi (1995) made a recognisable contribution to developing organisational epistemology. Africanism and Western thought are the two dominant intellectual powers on the African continent. African epistemology has not been fully explored and could offer something meaningful in the search of an organisational epistemology.

Questions of meaning and humankind's ability to know should thus not be limited to one particular strand of epistemology. There are numerous ways in which we come to know and each approach has something unique and specific to offer. In our quest for knowledge we erred by over-emphasising one particular epistemology, ignoring the contributions of others. To avoid this reductionist tendency the answer for a post-modern organisational epistemology lies in this approach towards a pluralistic epistemology. While some attempts have been made to define a pluralistic epistemology by embracing both positivist and interpretative positions, it is not entirely clear how this is applied within an organisational context (Spender 1996: 66). In contrast to this I shall argue that action learning is shaped by a pluralistic epistemology and that its impact on how individuals and organisations learn can be empirically verified.

In Chapter 2 I shall explore the concept of organisational knowledge and learning. In exploring and developing some models for organisational learning, I shall develop an extended framework for the construction of organisational knowledge. The proposed model is grounded in the Habermasian epistemological principles of the theory of communicative action and shaped by a pluralistic framework as exemplified by action learning. Such a framework provides an improved conceptualisation for both organisational knowledge construction and knowledge management.

Organisational Knowledge, Learning and Knowledge Management: Conceptual Approaches and Frameworks

Chapter

2

2.1 Introduction

In tracing developments in epistemology in the preceding chapter, it became clear that knowledge has a multi-faceted character and that our conceptualisation of knowledge can no longer be based on a one-dimensional view. It has thus become imperative to draw on cross-disciplinary concepts from various disciplines such as organisational development, cognitive sciences, philosophy, sociology and technology, to arrive at an improved understanding of organisational epistemology. Drawing on the theoretical insights of Habermas and Giddens, as well as Polanyi and Parsons, knowledge is essentially collective and evolutionary. Knowledge in all these fields is expanding at a rapid pace and the knowledge era poses very specific challenges to integrate and synthesize the insights offered by each of these disciplines.

The concept of organisational knowledge in business science is a relatively new concept. Although the notion of the learning organisation has received regular attention since the 1970s, it was only during the 1990s that organisational knowledge as a prominent concept emerged in the resource-based approach to strategic management (Narasimha 2000: 124). The importance of organisational knowledge as a source of competitive advantage, and arguably even the most important resource, has been emphasised by various scholars. Corporate strategists such as Drucker (1993: 44-45), consider knowledge to be the key element and source of power, while Bollinger and Smith (2001: 8), McElroy (2000: 195) and Prahalad and Hamel (1990: 79) view knowledge as arguably the single most important source of core competence. This view was extensively discussed in the last decade by others such as Von Krogh and Roos (1995a: 59) and Sveiby (2000a: 2), who argue that strategy formulations should be built on a knowledge-based theory, while Soliman and Spooner (2000: 337) contend that the value of most products and services now depends on “knowledge-based intangibles”. In his resource-based approach to strategy, which views an organisation as a bundle of resources, Harrison (2003: 10) places knowledge and learning as the focus point of organisational resources which include financial resources, human resources, physical resources and general organisational resources.

Organisations today are facing rapidly changing realities and managers are learning to deal with the new business complexities and changes using new approaches to improve and construct organisational knowledge. This new reality dramatically alters the methods by which we must manage, learn, solve problems and act in the post-industrial era. One such emerging approach is knowledge management

(KM) which is part of a much wider debate about the shifting demands of the business environment and the sources of competitive advantage in advanced economies. This debate has raised a number of questions about ways of organising, the management of people and the role of technology (Swan, *et al.* 2002: 181).

Although organisational learning and knowledge management have rapidly gained momentum in the last decade, the majority of companies still need to make a paradigm shift to embrace this new focus on knowledge as a foundation for a successful future. This shift has not yet fully taken place as is evident from various research reports published in the last number of years (Hackett 2000; KPMG Consulting 2000). These new business realities require that knowledge organisations need to manage knowledge as (1) most of our work is information based, (2) organisations compete on the basis of knowledge, (3) products and services are increasingly complex, endowing them with a significant information component, and (4) the need for life-long learning is an inescapable reality (Barclay & Murray 2001: 3).

The strategic imperative of the value of organisational knowledge, underscored by developments in the field of knowledge management, has thus elevated organisational knowledge and the related notions of organisational epistemology and organisational learning to the centre stage in contemporary management literature. Many organisations, and in particular multi-national companies, are currently improving their organisational learning capacity and attempts are being made to practise knowledge management effectively. An overview and descriptive analysis of these efforts by companies most active in the field of knowledge development practices is provided in Chapter 5.

Organisational knowledge, organisational learning and knowledge management concepts are closely related and need to be explored in relation to each other. Wang and Ahmed (2003: 817) have identified knowledge management as one of the five focuses of organisational learning and posit that organisational learning and knowledge management are two parallel-developed concepts in the new economy and often refer to each other in their definitions and practices. Similarly, Hackett (2000: 6) states, “the differences between KM and organisational learning (OL) approaches are converging around common tools and practices. Leading practitioners with expertise in each field are increasing opportunities to make individual experience and lessons learned part of the structural capital of their firms. Prior to the merger with BP, Amoco used the term ‘shared learning’ to portray what many firms are finding – that KM and OL are often two sides of the same coin”. Developments in organisational learning can therefore not be fully appreciated without understanding the developments in KM. Carlile (2002:5) notes that “without a focus on learning, knowledge management is really only information management or management of potential knowledge. In order to truly be knowledge management, the learning segment of the process must take place”. Peters (1997: 14-16) furthermore argues that the benefits of a sound knowledge and information management system promote organisational learning

and render competitive advantage. Many of the key conceptual issues related to knowledge management also have direct relevance to organisational knowledge and learning, and are shaped by the same epistemology. Epistemologies that are of specific interest to KM are a social constructionist approach (McAdam & McCreedy 2000: 155), systems perspective (Goa, Meng Li & Nakamori 2002: 717; Allee 2003: 49) and a complex adaptive systems perspective (Stacey 2001: 70; Snowden 2002: 105; McElroy 2003: 36-40).

Organisational knowledge is an outcome of organisational learning. This chapter will explore how some of the main epistemologies shape organisational knowledge, how they relate to organisational learning processes to become embedded as organisational knowledge, and how knowledge management relates to organisational knowledge.

Before analysing some contemporary and emerging organisational epistemologies to determine what constitutes organisational knowledge, a number of important concepts such as a definition and taxonomy of organisational knowledge require clarification. Secondly, based on a multi-disciplinary approach, I shall explore some key knowledge management concepts to determine what enables organisational knowledge. Finally, the suggestion that the construction of organisational knowledge can be improved based on a pluralistic approach offered by action learning will be then be taken up in Chapters 3 and 4.

2.2 Definition of Organisational Knowledge

The multi-dimensional character of knowledge makes an accurate definition difficult, and even more so to devise a meaningful and all-embracing taxonomy of organisational knowledge. Various definitions of knowledge exist, but many definitions generally follow Capra's definition as stated in Chapter 1. It is agreed that organisational knowledge revolves around ideas, root causes, relationships, customers, products, processes, experiences and culture (Baker *et al.* 1997: 64; Stonehouse & Pemberton 1999: 132; Bhatt 2000: 16; Sveiby 2000a: 3). Knowledge is also context dependent, since it is interpreted in reference to a particular paradigm (Bhatt 2000: 17). Individual learning is dependent upon the organisational context in which it takes place, with the latter accelerating or slowing the learning process (Stonehouse & Pemberton 1999: 134).

Probst, Raub and Romhardt (2000: 24) emphasise the problem-solving nature of knowledge and define knowledge as "the whole body of cognitions and skills which individuals use to solve problems. It includes both theories and practical, everyday rules and instructions for action. Knowledge is based on data and information and is constructed by individuals". Similarly, Davenport and Prusak (1998: 5) provide the following working definition of knowledge:

Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations it often becomes embedded not only in the documents or repositories, but also in organisational routines, processes, practices, and norms.

From these definitions, it appears that organisational knowledge is in a state of being (a process), it must be actionable and it is used to solve problems. In addition, organisational knowledge is the outcome of organisational learning, which raises questions in respect of what constitutes organisational learning. I agree with Tsoukas (2001: 974) that this definition correctly highlights the dynamic character of knowledge, i.e., knowledge is both an outcome or a framework, and a process for “incorporating new experiences and information”. Organisational knowledge can also not be seen independently from organisational learning. The latter is a dynamic and interactive process that comprises acquiring, interpreting and analysing, sharing, applying and storing information. The outcome of this learning process, that is taking action, results in the construction of new knowledge, which is stored in many forms, including organisational culture, routines, documents and data warehouses. In other words, organisational knowledge is the outcome of a dynamic learning process which uses various frameworks to provide actionable information which in turn leads to a new spiral of knowledge construction.

From the literature on the subject it is evident that conceptualising organisational knowledge is influenced by two major paradigms, that is, either a structural-functionalist or process-driven paradigm, or an interpretive approach. Similar differences are apparent in KM literature which will be explored in more detail in the following sections. My own definition of organisational knowledge is informed by social action and systems theory as explored in Chapter 1. This allows for an integrated, pluralistic interaction between the individual, team, organisation (structure), technology and the external environment in dealing with the complexity of organisational situations. Organisational knowledge, therefore, is the totality of human knowledge, tacit and explicit, embedded in the processes, products and stakeholders such as customers and suppliers (internal and external) of an organisation with the aim to continuously improve the operational and strategic effectiveness of an organisation to ensure a competitive advantage.

Organisational knowledge displays a hierarchy, or taxonomy, which partly constitutes organisational knowledge and is associated with a different kind of learning. This requires clarification to improve our understanding of organisational knowledge and learning (Bierly, Kessler & Christensen 2000: 595).

2.3 A Taxonomy of Organisational Knowledge

In the classification of organisational knowledge, the principal constructs are identified as data, information and knowledge (Davenport 1997: 9; Bollinger & Smith 2001: 9). Bierly *et al.* (2000: 595)

add wisdom as a fourth aspect, and view learning as the process of linking, expanding, and improving data, information, knowledge and wisdom. Each of these constructs is also associated with a different type of learning. This is an important observation, which supports my conclusion in the preceding chapters that the construction of knowledge requires a pluralistic approach.

Allee (1997: 62) provides a more comprehensive classification and describes the knowledge archetype as a hierarchical and interrelated framework consisting of data, information, knowledge, meaning, philosophy, wisdom and union. For the purpose of this dissertation, I shall only include data, information, knowledge and wisdom as these four aspects are the most generally accepted in contemporary literature. The following figure provides a graphic representation.

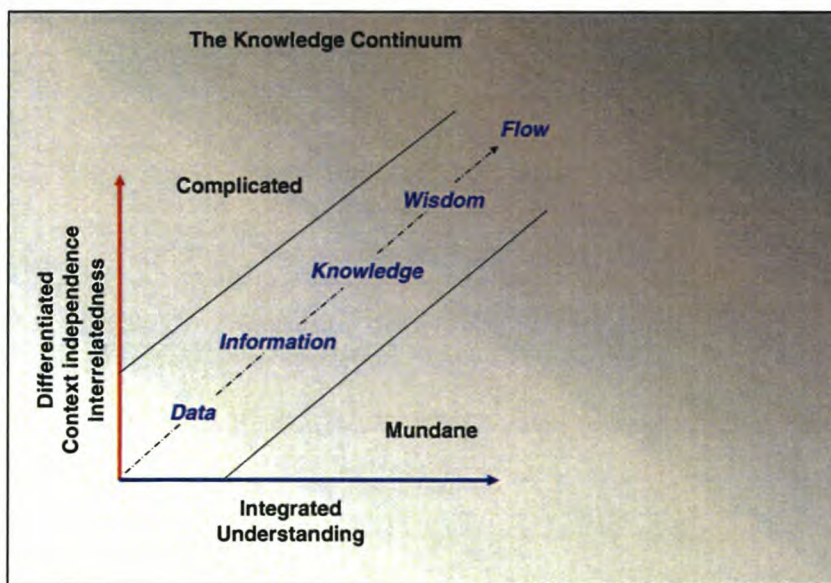


Figure 2.1: Knowledge Continuum (Bellinger 2002: 4)

2.3.1 Data

Davenport (1997: 9) contends that data, information and knowledge are not that easy to separate in practice and that they should at best be constructed as a continuum. This view is underscored by Probst, Raub and Romhardt (2000: 17), who argue that skills and knowledge are acquired slowly and develop over time by means of a process in which quantities of information are assembled and interpreted. Similarly, rather than drawing sharp distinctions between data, information and knowledge, it may be more helpful to place them along a continuum with data at one end and knowledge at the other. See Figure 2.1.

Data is raw, unrelated facts, which are simple observations of the world and is just a meaningless point in space and time (Davenport 1997: 9; Bellinger 2002: 1). Allee (1997: 110) views the activity related to data as having the capability to gather the most essential raw data that the organisation needs. Little learning takes place at this level, and response and action, while possible, are purely instinctive.

Data is the basic and most elementary construct of organisational knowledge and is required to enable organisations to construct information. There are many challenges for organisations in respect of data gathering, interpretation, analysing, sharing and use. One of the primary challenges is the tacit process around data where individuals and workgroups collect data that is not shared across the organisation.

2.3.2 Information

Data that is structured and interpreted becomes information. The *Concise Oxford Dictionary of Current English* (1964) defines information as a thing told, items of knowledge or telling. An important feature of the common use of the term is that information is transferable and can be communicated in some fashion. Bierly *et al.* (2000: 598) define information as meaningful, useful data, and learning about information as the process of giving form to data. While information entails an understanding of the relations between data, it generally does not provide a foundation for why the data is what it is, nor an indication as to how the data is likely to change over time. Information has a tendency to be relatively static in time and linear in nature. Information is a relationship between data and, quite simply, is what it is, with great dependence on context for its meaning and with little implication for its future (Bellinger 2002: 2).

2.3.3 Knowledge

Information is about meaning and it forms the basis for knowledge. Knowledge goes one step further: it encompasses the beliefs of groups and individuals, and it is intimately tied to action. Knowledge construction at the individual level involves the ability to deal with new situations, events, information and contexts (Von Krogh *et al.* 2000: 19-27). Information becomes knowledge when it is applied and one learns and gains experience (through reflection) by taking action on information. The role of action in the change from information to knowledge makes an important contribution to the process of knowledge development. While Sveiby (2000a:1) simply states that knowledge without action is not knowledge, Stacey (2001: 17) argues that action is a choice made on the basis of knowledge and that knowledge is evaluated in the light of the consequences of the decisions and actions it leads to. This is a systemic, error-activated notion of learning. This emphasises the importance of action in the knowledge construction process, but it refers only to one action. A systemic notion of learning must involve other actions as well, and I contend that action learning provides a much more detailed description of the knowledge construction process than Stacey's description of a singular action.

2.3.4 Wisdom

Allee (1997: 16) argues that wisdom is often ignored in the discussions on organisational knowledge and that any framework of knowledge that does not discuss wisdom requires us to operate blindly and without vision. Allee concludes that wisdom aspects of knowledge arrive from self-questioning and self-reflection. These aspects are deeply embedded in action learning as will be discussed in Chapter 4.

Bierly *et al.* (2000: 595) define organisational wisdom as the judgement, selection and use of specific knowledge for a specific context, that is, wisdom relates to the ability to effectively choose and apply the appropriate knowledge in a given situation. Organisational wisdom is therefore concerned with making decisions (judgements) intended to change the conduct of organisational actors. Thus, it is an action-oriented construct. Organisational wisdom is developed through experience, a passion to learn and spirituality. Spirituality can enhance wisdom through self-reflection of experiences and formulation of deeper goals. Individual wisdom is transformed into organisational wisdom through leadership and organisational culture (Bierly *et al.* 2000: 603-605). The issues of leadership, reflection and organisational culture will be explored later in this chapter as enablers of organisational knowledge.

The following figure graphically depicts organisational knowledge:

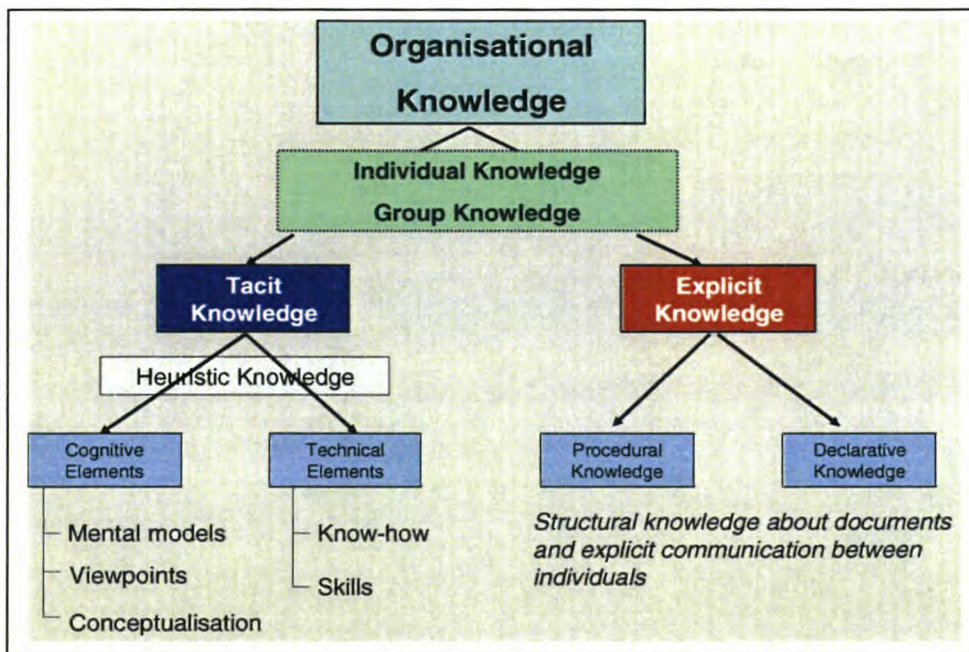


Figure 2.2: Taxonomy of Organisational Knowledge (Vasconcelos, Kimble & Gouveia 2000: 4)

Organisational knowledge, its constructs and how it is defined, are shaped by the epistemology in which it is grounded. In other words, in order to determine what organisational knowledge is, we need to explore the different epistemologies that shape organisational knowledge. I shall therefore first discuss some general epistemological developments before continuing with a detailed analysis of some of the main epistemologies evident in contemporary organisational science.

2.4 Background and Developments in Organisational Epistemology

Organisational development in the 1970s was characterised by the emergence and impact of the Living System Theories and a holistic, systemic approach where the emphasis moved from the individual to the group/team. Although management thinking had already been influenced since the 1950s by

general systems theory, organisational learning was now a central focus point with the realisation that simply increasing knowledge about an activity does not result in personal and organisational learning and growth, or a change in behaviour. It is necessary to examine present behaviour, experiment with alternatives and start practising modified ways if change is to occur (Grieves 2000a: 348). This approach is also aligned with action learning which similarly starts with identifying a problem, researches and examines the problem, suggests alternatives and then takes action on a well motivated decision. Action learning, has, however, a reflective element built into the process, which is better suited to effect change in a fast changing and dynamic environment.

The excellence movement of the 1980s, led by the investigations of Peters and Waterman (1982), challenged the rational model by advocating eight principles, which, *inter alia*, included a bias for action. The latter expressed a preference for doing (anything) rather than going around in circles without getting results (Grieves 2000a: 348). A few central themes emerged from the excellence movement, namely:

- (1) a focus on customers;
- (2) the need for constant innovation [viz. creativity and learning];
- (3) employees regarded as a resource rather than a cost [viz. knowledge worker], and;
- (4) the nature of leadership (Grieves 2000a: 349).

The above themes, supported and strengthened by the systemic approach of the preceding decade, also found their way into current-day organisational learning and knowledge management theories. In his seminal work, *The Fifth Discipline*, Peter Senge (1990) emphasised, *inter alia*, the importance of systems thinking and team learning to create the learning organisation (Senge 1990: 236).

The 1990s experienced some of the most disruptive types of organisational changes ever experienced which included the emergence of downsizing and restructuring with the team as the focus point for innovation and change, and a movement from training to organisational learning, personal growth and development (Grieves 2000b: 55).

Developments in organisational development, as specifically related to organisational learning, during the last decade of the 20th century were thus characterised by (1) a movement away from training with an increased emphasis on personal and organisational learning based on collaborative team learning, (2) a methodology informed largely by action research in favour of the positivist approach, and (3) a systems approach to learning.

Although organisational epistemology and learning are today largely informed by a systems perspective, Pawlowsky (2001: 75) identifies five distinct theoretical perspectives on organisational learning, namely: (1) decision-making perspective, (2) systems-theory perspective, (3) cognitive perspective, (4) cultural

perspective and (5) action-learning perspective. Besides the differences in the theoretical foundations of these perspectives, there are a number of conceptual similarities that reappear in most other perspectives and that make up the core architecture of a conceptual model of organisational learning.

Pawlowsky (2001: 79) suggests that such a conceptual framework for the management of organisational learning must be based on four integrative dimensions of organisational learning, namely: (1) different systems level of learning, (2) different learning modes, (3) different learning types and (4) different phases of the collective learning process. Graphically it can be shown as:

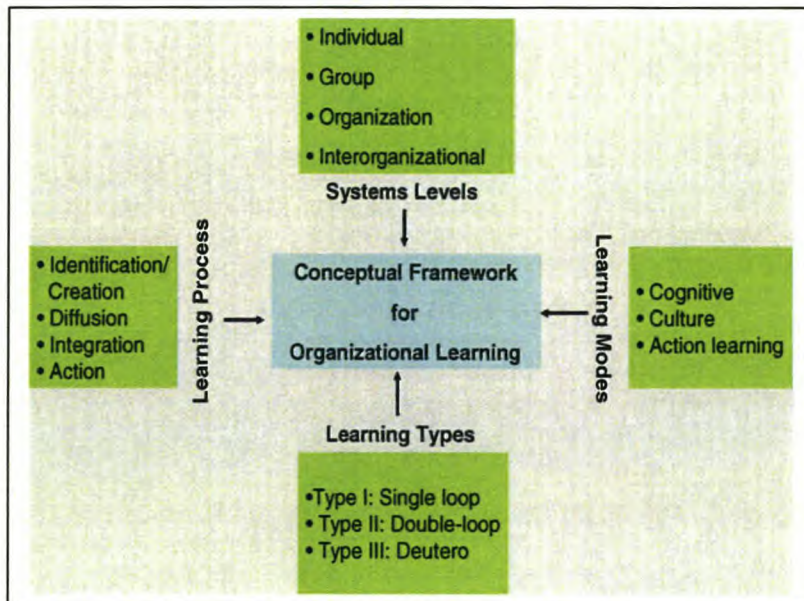


Figure 2.3: Conceptual Framework for Management of Organisational Learning (Pawlowsky 2001: 79)

While Pawlowsky's model provides some guidance as a conceptual framework in managing organisational learning, I disagree with its separation of the learning modes. These learning modes (or epistemology) should inform the overall model and should not be included in the model. I agree with Choo (2000: 19) and Daft and Weick's (1984: 293-294) interpretation that the most significant distinction regarding organisational learning is whether organisational learning is viewed as a technical process or a social process. The technical view assumes that organisational learning is about effective processing, interpretation of and response to information both inside and outside the organisation, and is strongly supported by the use of information technology.

The social process, on the other hand, focuses on the way people make sense of their experiences at work (Easterby-Smith & Araujo 1999: 3-5). This view is underscored by Johannessen (1998: 359), who argues that the learning organisation should be seen as a social system where the concepts of the learning organisation and organisational learning imply an unstated rejection of the early mechanistic procedures. Knowledge work appears to be the new domain of the learning organisation, modelled on

systemic thinking and with close links to the social constructionist epistemology. Three of the key contributions of this school of thought are to see organisational learning as socially constructed, as a political process and as implicated in organisational culture (Easterby-Smith & Araujo 1999: 5).

Similar to these approaches to organisational learning and knowledge, the socially constructed group of KM models assumes a wide definition of knowledge and views knowledge as being intrinsically linked with the social and learning processes within an organisation. This model assumes that constructed knowledge is embodied within the organisation, not just through explicit programmes but through social interchange. The social constructionist model therefore highlights the importance of organisational knowledge construction as a central feature to all aspects of KM (McAdam & McCreedy 2000: 155-156). This approach gives primacy to the social structure and supports a critical realist's position which insists that social structure always exists prior to any individual actor (Stacey 2001: 55).

On the other hand, some proponents of the social constructionist paradigm argue there should be a balanced approach to KM to be taken in terms of both the scientific/technological and social paradigms. These paradigms should not necessarily be considered as mutually exclusive, but rather that benefit can be gained from the respective viewpoints (Alvesson & Willmott 1996: 4; McAdam & McCreedy 2000: 159). This approach is aligned with the attempts in social theory to synthesize action and systems thinking, as well as with Giddens' concept of duality where agency and structure are mutually inclusive as I have shown in Chapter 1.

Most authors on the subject of organisational knowledge draw on Polanyi's (1997) distinction between tacit and explicit knowledge (Nonaka & Takeuchi 1995: 59; Stonehouse & Pemberton 1999: 132; Stacey 2001: 17). Polanyi (1958: 266-268) argues that the development of knowledge cannot be understood in terms of explicit or scientific method of analysis alone and argues what is learned through experience must also be considered. Tacit knowledge is personal, context-specific and gained experientially, emphasising the privacy of personal experience. It is therefore hard to formalise and communicate. It is rooted in action and shows itself as a skill embedded in the beliefs and perspectives of the way in which people understand their world and act in it (Stacey 2001: 17).

Explicit knowledge is described as knowledge which is tangible and clearly stated in a form that can be recorded and stored. It can be easily transmitted from one person to another in the form of language (verbal, mathematical and numerical). Both tacit and explicit knowledge invariably begin as individual knowledge, but are transformed into organisational knowledge to substantially improve performance and competitiveness (Nonaka & Takeuchi 1995: 59; Nickols 2000: 14).

The inter-dependence and interaction between tacit and explicit knowledge is one of the key focus points in the construction of organisational knowledge. Nonaka and Takeuchi (1995: 225) base their

'theory of organisational knowledge creation' on the continuous interplay between tacit and explicit knowledge to show how organisational knowledge is constructed. I shall discuss this theory in more detail later in this chapter when I address theories of organisational epistemology. McNiff and Whitehead (2000: 181) argue that self-reflection plays an important role in one's understanding of what happens when tacit knowledge becomes explicit. Reflection requires one to think critically and ask critical and relevant questions and its importance in order to generate a new cycle of learning and knowledge should not be underestimated.

A central idea of the proponents of the social constructionist view is thus based on Polanyi's (1997) concept of tacit knowledge, i.e., that much crucial organisational knowledge neither exists on paper, nor in the heads of individuals, but within the "community" as a whole. Many authors of the technical school touch on the idea of organisational learning as a political process, but from a perspective that this is a persistent problem which needs to be overcome and nullified if learning is to take place. In contrast to this, the social perspective views the goal of eliminating organisational politics as naïve and idealistic as politics are a natural feature of social processes. If knowledge is socially constructed by individuals and groups, it is inevitable that particular interpretation will suit the interests of some and harm the interests of others (Easterby-Smith & Araujo 1999: 5-6). Thirdly, the notion of learning as a cultural artefact manifests itself in the ways that people behave when working with others. Organisational cultural traits such as communication, trust, leadership, sharing of information, and risk-taking all have an impact on the depth and quality of learning that will occur at organisational level. These issues will receive closer attention in both Chapter 3, which will explore constitutive features of organisational knowledge, as well as Chapter 5 where the results of the empirical study are interpreted.

It appears, therefore, that two conflicting models with different primary goals, namely the technical, systems-structural view based on positivist epistemology, and the interpretive approach based on social constructionist epistemology, have emerged. This is a legacy of the failure of early theories, such as Parsons (1949), to integrate action and systems thinking. The system-structural, rational view holds that uncertainty is the main problem facing decision makers. On the other hand, the interpretive view, emphasising social construction processes, holds that organisational environments are fundamentally ambiguous (Ford & Ogilvie 1996: 54). The primary challenge facing managers with the latter approach is to create and communicate meanings which serve as the basis towards subsequent action, and to confront the unknown with action. This underscores the importance and role of language (communication) in the learning process, an aspect which will receive detailed attention later in this and subsequent chapters.

Choo (2000: 8) adopts a different view and concludes that rational, systematic decision-making is better suited to solving problems where issues are clearly defined, while collective interpretation is

needed in dealing with problems where issues are unclear and information is ambiguous. Organisational learning occurs both at organisational level where learning is viewed as a process and at the individual and team levels where learning is based on the constructionist approach. This approach to organisational learning is followed in the discussion on organisational learning and is graphically presented in Figure 2.3. I support this view and contend that organisations will benefit if an integrated approach is adopted.

Stacey (2001: 2-9) posits that mainstream thinking on organisational learning and knowledge construction is mainly informed by systems thinking and that even the main points of critique against systems thinking, such as autopoiesis and social construction, do not make a fundamental move away from systems thinking. Stacey (2001: 14-22) furthermore contends that knowledge is not a “thing”, or a system, but an ephemeral, active process of relating. Drawing on complexity theory and complex adaptive systems, Stacey (2001: 69-75) argues that instead of thinking about human acting and human relating in systemic terms, we should be exploring ways of thinking in which individual minds, relating between people, organisations and societies, are all transient processes in which human futures are perpetually constructed. The complex adaptive systems view will be discussed later in this chapter.

The role, impact and significance of action in organisational knowledge construction in contemporary management have recently been growing in importance and scope. Drawing extensively on Parsons' general theory of action, which depicts organisations as systems of social interactions, Schwandt and Marquardt (2000: 42-48) developed the Organisational Learning Systems Model (OLSM). I shall explore this model in more detail in the next section.

However, earlier attempts to emphasise the importance of action and problem-solving in the construction of organisational knowledge have not yet fully described the role that various actions play in the development of organisational knowledge. Ford and Ogilvie (1996: 54-62) distinguish between the varied influences that different actions have on the production of knowledge by focusing on cognitive and communication processes in an organisation. Cook and Brown (1999: 381) contend that the action and interaction between knowledge and knowing provide a model for organisational innovation. However, these authors remain at metatheoretical level with their theories and have not at methodological level provided suggestions on how action influences the construction of knowledge. I contend that action learning shaped by a pluralistic epistemology, presents an improved approach for constructing organisational knowledge. At organisational level, action learning represents both a (technical) process and an interpretive, constructionist approach. It should thus not be seen as two different and opposing approaches, but a single integrated approach. Action learning has the ability to integrate technical and social processes, thereby aligning the social constructionist approach of individual and team learning with the organisational learning process. Action learning is both a systemic and interpretive approach and succeeds in avoiding the conflict of being a technical or social

approach. How this is achieved will be expanded upon later in this chapter when I propose my own model for organisational learning.

Since Von Krogh and Roos's (1995b: 9) observation that organisational epistemology, as a field of study within organisational science, had not received much attention, various authors have thus made an attempt to bring clarity to this field and a number of organisational epistemologies have emerged (Dierkes *et al.* 2001: 14-168). The dominant positivist epistemology excluded, attempts have been made to trace the roots of organisational epistemology to:

- (1) Autopoiesis theory (Von Krogh & Roos 1995b: 33; Johannessen 1998: 359; Maula 2000: 157).
- (2) The Habermasian social constructionist theory (O'Donnell *et al.* 2000: 188).
- (3) The pluralistic epistemology dynamic theory of the firm as a dialectical system of knowledge (Spender 1996: 63).
- (4) The theory of organisational knowledge creation (Nonaka & Takeuchi 1995: 56).
- (5) Systems theory (Vancouver 1996: 166; Allee 1997: 58).

From these preceding paragraphs it is clear that corporate epistemologists are searching for new ways in which organisational knowledge is constructed. A number of theoretical perspectives on organisational knowledge and learning are evident with the most distinct ones those identified by Pawlowsky (2001: 66-74), namely the (a) perspective of organisational decision-making and adaptation, (b) systems-theory perspective, (c) cognitive perspective, (d) cultural perspective and (e) action-learning perspective. These frameworks are characterised and shaped by specific paradigms and there is little evidence of attempts being made to have the subjective, social, and objectives worlds integrated.

While the importance of organisational epistemology in the construction of knowledge cannot be ignored, there are other features of organisational knowledge that can either enable or impede organisational knowledge construction. In an investigation into the factors that influence the management and construction of organisational knowledge Holsapple and Joshi (2000: 235) identify three main classes of influencing factors, namely managerial, resource and environmental. Similarly, Nonaka and Takeuchi (1995: 73-83) have identified five conditions that are required to promote organisational knowledge. These conditions include (1) development of a corporate strategy to conceptualise a vision about what knowledge should be developed, (2) providing more autonomy to individuals and teams, (3) promoting a continuous process of questioning and reflection, (4) sharing of redundant information, and (5) matching an organisation's internal diversity with the variety and complexity of the external environment in order to deal with challenges. In order to achieve the latter, a flat and flexible organisational structure must be developed in which different units are interlinked. Besides organisational epistemology, which should be the primary driver in constructing organisational

knowledge, it displays a number of constitutive features such as leadership, culture and structure, and technology (resources) which are of importance. These constitutive features of organisational knowledge, together with learning that is taking place at individual, team, organisational and inter-organisational levels, will be further explored in Chapter 3.

These differentiated attempts to find a suitable epistemology are an indication of the wide-ranging and sometimes confusing views which are apparent in both the field of organisational learning and knowledge management. Organisational learning, despite its two approaches of technical and social, is mainly seen as the human medium of constructing knowledge. Although this perspective is changing, knowledge management on the other hand is seen as the technical, non-human approach to constructing organisational knowledge. McElroy (2000: 195) underscores this, and argues that knowledge management is anxious to rid itself of its overly technology-centric reputation in favour of promoting the role it can play in furthering organisational learning. The convergence of organisational learning and knowledge management can therefore be successful with a fusion of the technical and human approaches.

In following Pawlowsky's distinction of the main perspectives on organisational epistemology, I shall only focus on developments and the main exponents in three of the primary contemporary epistemologies that are evident in organisations, namely (a) the systems-theory approach popularised by Senge and others (b) Nonaka and Takeuchi's theory of organisational knowledge creation, and (c) the social action perspective. Drawing mainly on Habermasian theory of communicative action and Giddens' structuration theory, I shall argue that the challenges of knowledge organisations in the post-modern era are best addressed through a pluralistic approach. From these conclusions I shall then explore the main aspects of what constitutes organisational knowledge and learning.

2.5 Main Contemporary Frameworks Informing Organisational Knowledge

2.5.1 Systems theory

General systems theory has been taken up by a number of authors from different disciplines such as philosophy, biology and psychology. Von Bertalanffy became the primary articulator for the 'general systems theory' viewpoint, principally perhaps because he appreciated more than most the limitations of traditional science and saw the need to generate a revised science (Evered 1980: 5). Vancouver (1996: 167) states that the basic observation that informs Living Systems Theory is that systems (e.g., cells, humans, organisations and societies) can maintain regularity despite irregularity in the systems' environment. This regularity is accomplished by comparing current or anticipated states with internally represented desired states and converting any difference into actions that will keep the difference small. In organisational context it means that in order for an organisation (a system) to survive, it needs to change or adapt to the changes in its environment. If it does not, or is slow to react to change,

extinction (in the form of a merger, bankruptcy or hostile takeover) will become a real factor. Yolles (2000: 1204) furthermore argues that viable organisations seek ways of improving their ability to survive in complex situations and that survival hinges upon the ability to construct and manage knowledge.

Learning must occur at all systems levels of the organisation, that is, individual, group and organisational levels, and this learning process furthermore needs to integrate the learning at the various levels into one coherent learning process. The main argument against systems thinking is similar to the criticisms raised related to socially constructed knowledge, that is, the divide between individual and social, and social and organisation. Knowledge construction takes place at different systems levels. Extending Giddens' concept of duality as argued for in Chapter 1, as well as language as a medium to link these systems, I contend that this criticism is no longer valid.

Stacey (2001: 26) underscores the relevance of systems thinking and states "the underlying frame of reference in mainstream theory and application to learning and knowledge creation in organisations is clearly that of systems thinking". With respect to organisational learning, Pawlowsky (2001: 68-69) posits that at least three distinctive approaches regarding systems theory have developed, namely (1) a traditional systems-based management perspective, (2) systems' concepts based on the assumptions of self-organisation processes, using self-referentiality as basic processes to deal with organisations, and (3) the systems-dynamics approach. This latter approach sees all outputs of systems as input into other systems, therefore learning means understanding the complex relations of social systems and their dynamics.

The traditional approach is mainly applied as a general theory to organisational development and states that "organisations that have to cope with environmental complexity have to generate structures that can deal with complexity" (Pawlowsky 2001: 68). This observation has more to do with organisational structures to enhance organisational learning. I shall explore the concepts and relevance of environmental scanning and competitive intelligence as prerequisites for effective strategic organisational learning later in this chapter, and shall now only focus on the remaining two approaches.

Systems theory concepts based on the assumptions of self-organisation processes conceive organisational learning as problem-solving potential of social systems that are derived from institutional learning (Pawlowsky 2001: 68). This approach has been taken up by prominent organisational scholars such as Beer (1980: 73) and Senge (1990: 68). The latter argues that the purpose of the learning process is to develop a capacity for systems thinking, which requires "a change of mind" in order to "see the world anew", while Beer (1980: 77) has developed a social systems model of organisations. Elements of this approach are evident in Senge's (1990) systems approach and the Organisational Learning Systems Model (OLSM) of Schwandt and Marquardt (2000: 53-64).

The third approach, systems-dynamics, sees learning as a means of understanding the complex relations of social systems and their dynamics and has been used by Stacey (2001) to model organisational learning and McElroy (2003: 37) to inform second-generation KM models. Stacey (2001: 5), McElroy (2003: 37) and Snowden (2002: 105) use complexity theory, that is, the study of emergent order in what are otherwise very disorderly systems, to expand the systems-dynamics approach. Challenging traditional systems thinking, this school of thought argues that “human futures are under perpetual construction through the detail of interaction between human bodies in the living present, namely, complex responsive processes of relating” (Stacey 2001: 6). This approach, therefore, emphasises rather the relationships between people (or systems such as individual, group, organisation), than focusing on the system level itself. This is underscored by Tsoukas (2001: 991) who states that “paradoxically, the management of the heuristic aspect of organisational knowledge implies more the sensitive management of social relations and less the management of corporate digital information”.

Stacey (2001: 70) argues that although theorists working with the concept of complex adaptive systems are clearly doing so within a systems framework, some “of that work intriguingly points beyond systems thinking”. This statement is also true for research related to second-generation knowledge management which owes much of its thinking to complexity theory which has a great deal to say about the nature and role of learning in organisational context. Complex adaptive systems theory (CAS theory) holds that “living systems (i.e. organisations) continuously self-organize and fit themselves, individually and collectively, to ever changing conditions in their environment” (McElroy 2003: 27).

Some of the core characteristics and principles of the CAS theory can be identified as follows:

- (1) Organisations are seen as living systems and the KM framework is firmly rooted in the study of complex adaptive behaviours in living systems.
- (2) People in organisations tend to self-organise around the production, diffusion and use of knowledge and the pattern of behaviour which follows is an emergent property of human social systems.
- (3) Problem-solving and learning at organisational level display certain social behaviours such as the production and integration (sharing) of knowledge.
- (4) Both knowledge production and integration are emphasised, in contrast with the first generation KM which emphasised only knowledge integration.
- (5) Learning and innovation is a social process, not an administrative one (McElroy 2003: 5).

This view of knowledge, informed by complex adaptive systems theory, sees knowledge as something that is produced in human social systems through individual and shared processes that have regularity. This approach is also influenced by the debate on ‘agency and structure’ as explored in Chapter 1. Stacey (2001: 98) posits that:

Agency is, thus, neither located in an individual, nor in the collective, nor in both. Instead it is a patterning process, simultaneously individual and social. Furthermore, in this way of thinking, knowledge is not stored anywhere and then retrieved to form the basis of action. Rather, knowledge is continuously reproduced and transformed in relational interaction between individuals.

Stacey's (2001: 98) argument regarding the storing and retrieving of knowledge focuses entirely on tacit knowledge, that is, individual knowledge and how it becomes organisational knowledge. Little is said about explicit or procedural knowledge. CAS theory, in its knowledge construction attempts, focuses on the individual and social, neglecting the relevance of information technology (as necessarily part of the structure) as an organisational process in enabling organisational knowledge. This is a shortcoming in the CAS conceptualisation of a KM and organisational learning framework, an aspect which I shall address later in this chapter.

McElroy (2003: 6) and others describe this process as the Knowledge Life Cycle (KLC) and have developed an improved framework for knowledge management and organisational knowledge construction. Annexure E gives a graphic representation of the KLC.

This new conceptualisation views organisations as collectives which produce and integrate their knowledge through a social process known as the knowledge life cycle (KLC). The KLC has become therefore the central organising framework around which a powerful new branch of KM theory and practice has been defined. The purpose of KM, according to the KLC framework, is "to enhance an organisation's capacity to produce and integrate its knowledge, thereby enhancing the quality of, and access to, valuable organisational knowledge" (McElroy 2003: 54).

Following from complex adaptive systems theory, there is an emphasis on connecting people, rather than storing and retrieving data. The solution is therefore not to try to warehouse everything one's workers know. Lang (2001: 55) also supports this view and states the "real task of knowledge management is to connect people to enable them to share what expertise and knowledge they have at the moment, given that cutting edge knowledge is always changing".

Although proponents of the complex adaptive systems theory approach posit that this is a new approach, there is, in fact, not much difference between this approach and an integration of the social systems approach with the more technical approach as explored earlier in this chapter. Whereas earlier attempts emphasised the production of knowledge through the storing and sharing of knowledge, second-generation KM has adopted a more balanced approach by emphasising both the production and integration of knowledge.

Although this confrontation with complexity is only in its infancy and requires from organisational science a shift in worldview (Schwandt & Marquardt 2000: 41), both these two approaches, that is an integration of the three systems theories and the complex adaptive systems, are highly relevant as departure points in the construction of contemporary organisational knowledge and will subsequently be explored.

A model which succeeds in integrating systems thinking at organisational level is Beer's (1980: 74-77) social systems model which is built on the premise that organisational effectiveness is a function of the congruence between people, process, structure and environment. Each component is defined as:

People: Members' needs, abilities, values and expectations.

Process: The behaviours, attitudes and interactions that occur within the organisation at the individual, group and intergroup level.

Structures: The formal mechanisms and systems of the organisation that are designed to channel behaviour towards organisational goals and fulfil members' needs.

Environment: The external conditions with which the organisation must deal include its markets, technology and legal/governmental environment. A social systems model for organisations can be graphically depicted as follows:

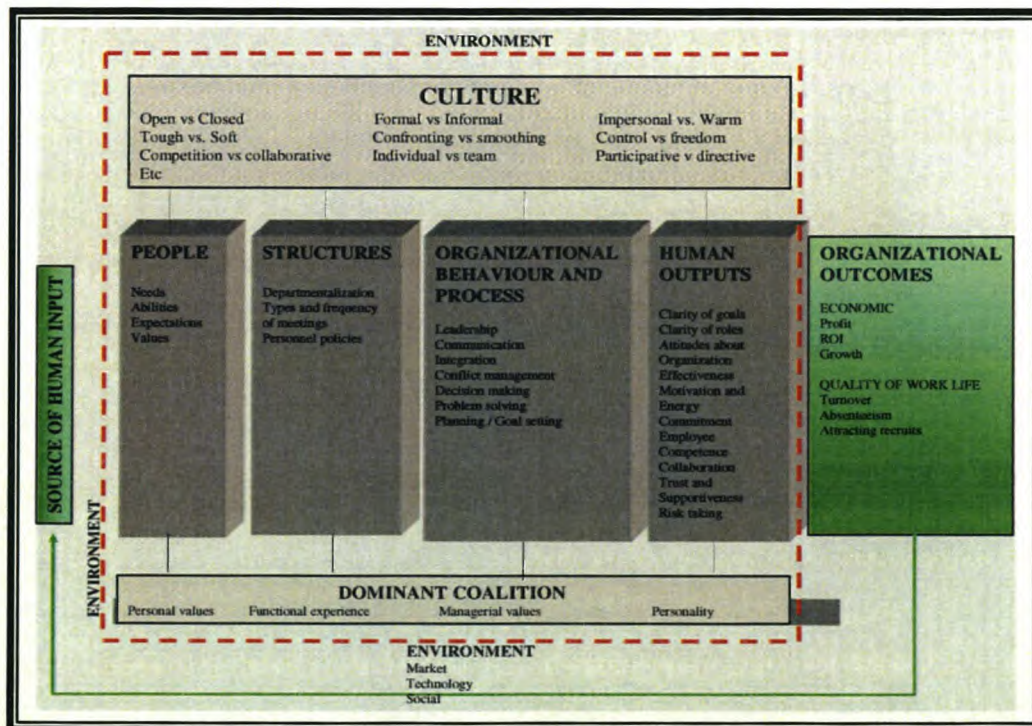


Figure 2.4: Social Systems Model (Beer 1980: 102)

This model will serve as basis in developing my own framework in Chapters 3 and 6 in arguing for a pluralistic action-learning systems model.

In his model for constructing organisational knowledge and learning, Senge (1990: 7-13) identifies five aspects, which he calls disciplines, as critical in fostering organisational knowledge. These are personal mastery, mental models, shared vision, team learning and systems thinking.²⁶ He refutes Nonaka and Takeuchi's statement that systems thinking does not include bodily experience. Senge (1990: 69) highlights systems thinking, the fifth discipline, as the conceptual cornerstone on which the other four disciplines are based. The practice of systems thinking starts with understanding a simple concept called 'feedback' that shows how actions can reinforce or counteract each other. Senge (1990: 73) contends that the four remaining disciplines are all built on the foundation of systems thinking and that the essence of the discipline of systems thinking lies in a shift of mind, namely, (1) "seeing interrelationships rather than linear cause-effect chains, and (2) seeing processes of change rather than snapshots".

In her application of systems theory to the construction of organisational knowledge, Allee (1997: 160-170) contends that the integration of knowledge and action is critical for renewing organisational knowledge. Systems thinking requires deep self reflection and the ability to see patterns. This integrative learning approach is based on the notion of 'duetero learning' which is defined as the capacity to reflect on and inquire into previous contexts of learning. This means deepening the learning process by inquiring into our own thinking processes (Allee 1997: 161). While there is a clear correspondence between Allee's approach to systems learning and action learning, there is too much of an emphasis on the importance of self-reflection, which is only one aspect of constructing knowledge within a pluralistic approach. Similarly to Schwandt and Marquardt (2000: 64-66), who see action-reflection as a subsystem of the learning system, Allee (1997: 167) sees reflection as a tool to "create integrating knowledge", but does not regard it as a theory to construct organisational knowledge.

A social systems approach corresponds with earlier conclusions in this chapter that construction of organisational knowledge needs to be based on a pluralistic and integrated approach, an approach that is equally supported by both an action learning approach and systemic approach to organisational development. The use of the action learning approach is furthermore strengthened by Reason (1980: 50-57), who contends that the application of systems theory to organisational development invariably rests on a research methodology for organising relevant experience and drawing inferences for future action. This approach to social systems research allows a dynamic interplay between human action and reflection. By developing a "research-learning-action programme", Reason (1980: 50) shows how this can be used to diagnose and develop role systems in organisations.

A systems theory approach, despite different strands of thinking within this field, is used by a number of leading experts to provide a framework for organisational learning. Evered (1980: 10) and Reason

²⁶ For a detailed explanation of these aspects please see: Senge, P. 1990. *The fifth discipline*. London: Random House.

(1980: 56) both argue that positivistic science is unsuited to understanding and changing social systems. I fully agree with Evered (1980: 8-11), who suggests that the organisational sciences need to expand their focus from technical-rational (physical, technical, rational worlds) to include social-phenomenal realities (phenomenal, organic, culture-mythic worlds). Such a shift in focus will allow us to view organisations as a complete system functioning in an integrated manner.

Systems thinking, in the way I apply it in this dissertation, has a multiple purpose. Firstly, in Habermasian fashion which integrates three epistemologies (empirical-analytic, heuristics and critical reflection), it is perceived as a pluralistic epistemology which allows for different epistemologies in the construction of knowledge. Secondly, it integrates learning at the various system levels, that is, individual, team and organisation through communicative action. Thirdly, within organisational context it also allows for a holistic perspective of an organisation, similar to Beer's social systems model. These three related views on systems thinking, integrated with the process (action) view of constructing knowledge, will form the core of my framework in developing a pluralistic action learning systems approach.

Parallel to systems thinking, the cognitive perspective, mainly popularised by Nonaka and Takeuchi (1995), is also exercising a noticeable influence in the field of contemporary organisational learning and knowledge construction and will now be explored in more depth.

2.5.2 Cognitive perspective

Pawlowsky (2001: 69-72) posits that the cognitive perspective on organisational learning is based on the early works about decision-making processes in organisations, "but it has developed far beyond the concepts of bounded rationality in terms of its ability to integrate the value and belief perspective". In this view of organisational learning, cognitive systems are the basic concepts applied at the individual and collective levels.

Argyris and Schön (1978: 10) state that the cognitive perspective centres on the assumption that "all deliberate action had a cognitive basis, that is reflected norms, strategies, and assumptions or models of the world which had claims to general validity... Human action and human learning could be placed in the larger context of knowing". Members of organisations are therefore not merely a storage bin of past rational experiences, but interpreters of reality according to the specifications of their cognitive system (Pawlowsky 2001: 69).

Two cognitive approaches have received attention, the structural approach which focuses on information processing abilities, and the corporate epistemology which regards the interpretation process and the cognitive construction of reality as the central issue of importance in learning (Pawlowsky 2001: 69). The second approach, corporate epistemology, emphasises the question of how

organisations develop knowledge. Essentially, both these two approaches do not define knowledge as an 'objective' mental reflection of reality, but rather as a coexisting and conflicting interpretation of reality that is based on the history of each participating member of a joint knowledge system.

I shall now explore the more important theories which have emerged from the cognitive perspective.

2.5.2.1 Theory of organisational knowledge creation (SECI model)

One of the most widely known organisational epistemologies to have emerged during the 1990s is the 'Theory of Organisational Knowledge Creation' developed by Nonaka and Takeuchi (1995: 56). This theory has been developed mainly from experiences and the knowledge paradigm of the Japanese and Eastern cultures, with the objective to start building a universal model and a "new theory" of how to construct knowledge in organisations (Nonaka & Takeuchi 1995: 245). Although viewed by many experts as a groundbreaking work in the field of knowledge construction within organisations, I contend, that arguing from an action learning epistemology, the Nonaka and Takeuchi theory does not offer that many new insights. It primarily succeeds in highlighting the difference between the Japanese and Anglo-Saxon approaches to constructing knowledge, that is, a more collective approach based on the Japanese concept of 'ba', and the individualistic approach common in Western corporate culture where the quest for knowledge normally involves the analysis of data and information. In essence, this theory applies many of the action learning concepts in a slightly different format. Furthermore, the theory stays at a metatheoretical level and does not offer practical insights on how to implement it in organisational life, except for the emphasis on collective learning. In contrast with action learning, the latter is easier to understand and to apply within organisational contexts than the Nonaka and Takeuchi theory of organisational knowledge construction.

Nonaka and Takeuchi (1995: 58-73) base their epistemology on three fundamental premises, namely:

- (1) Knowledge is about beliefs and commitment, and knowledge is a "justified true belief".
- (2) Knowledge is essentially about human action and is based on the active, subjective nature of knowledge that is deeply rooted in individuals' value systems.
- (3) Knowledge is context-specific and relational in that it depends on the situation and is created dynamically in social interaction among people.

The Nonaka/Takeuchi model is primarily influenced by Polanyi's (1958) distinction between tacit and explicit knowledge and that scientific objectivity is not a sole source of knowledge. Nonaka and Takeuchi (1995: 61) clearly state that their "dynamic model of knowledge creation is anchored to a critical assumption that human knowledge is created and expanded through social interaction between tacit and explicit knowledge. It should be noted that this conversion is a social process between individuals and not confined within the individual". This makes it clear that their emphasis is on a social constructionist approach. In this respect it is similar to the action learning approach, but also

different in the sense that action learning also utilises elements of the scientific method as reflected in the Systems Beta approach of Revans as I will show in Chapter 4.

According to the Nonaka and Takeuchi model, organisational knowledge construction is therefore a continuous and dynamic interaction between tacit and explicit knowledge. Four different modes of knowledge conversion, socialisation, externalisation, combination and internalisation, known as the SECI model, shape this interaction between tacit and explicit knowledge. These four modes can briefly be described as follows:

Socialisation: Facilitates the sharing of members' experiences and mental models.

Externalisation: Triggered by dialogue and collective reflection to articulate team members' tacit knowledge.

Combination: Linking of existing explicit knowledge with newly constructed knowledge to create a new product, procedure, etc.

Internalisation: Creates operational knowledge through learning by doing and applying new knowledge which might form the basis for the next cycle of knowledge (Nonaka & Takeuchi 1995: 71).

Graphically, it can be portrayed as:

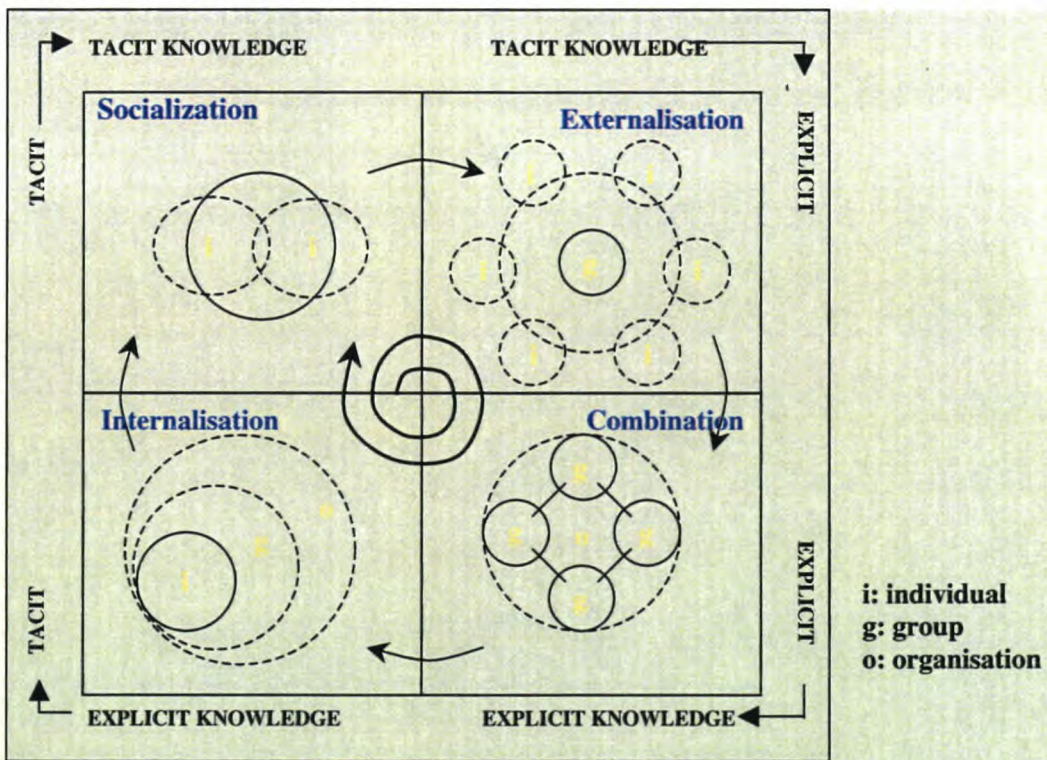


Figure 2.5: SECI Model of Knowledge Conversion and Evolving Spiral Movement (Nonaka & Takeuchi 1995: 73)

Nonaka and Takeuchi (1995: 125-127) argue that the two traditional Western management styles, “top-down” and “bottom-up”, fail to foster the dynamic interaction necessary to construct organisational

knowledge. They suggest a “hypertext”²⁷ organisation consisting of interconnected layers as the ideal structure for knowledge construction. This approach emphasises two important elements in the construction of organisational knowledge, namely leadership/management and organisational structure and culture. These two points will be taken up in Chapter 3 in exploring some constitutive features of organisational knowledge.

The theory of organisational knowledge creation, or the SECI model, has contributed significantly to a better understanding of organisational knowledge construction. It has started a new age in what is generally known as knowledge management. It is derived from experiences in the Japanese culture and emphasises the importance of a paradigm, that is, the values, culture and beliefs in the construction of knowledge and how the Western paradigm differs from the Eastern intellectual tradition. The SECI model builds on an interpretive and heuristic approach, emphasising the importance of action, questioning and reflection (Nonaka & Takeuchi 1995: 79-80). The cycle is essentially constructivist, but it also has a positivist structure (Yolles 2000: 1209). The positivistic elements are clearly seen in the tacit/explicit distinction. Nonaka and Takeuchi do not provide any clarification that their view of objectivity is not positivist; one can assume that it is. This dichotomy is not uncommon in paradigms that attempt to integrate theory and practice, and in this regard it exhibits similarities to the action learning approach in constructing organisational knowledge. It is strongly influenced by the Eastern paradigm based on social processes of knowledge construction, but fails to explain how organisations learn at organisational level. I contend that as a model it is difficult to implement practically within organisational contexts. Compared with the SECI model, action learning is easier to implement. Secondly, the pluralistic approach of action learning also allows the inclusion of positivism, and thirdly as the empirical findings in Chapter 5 will show, action learning is highly successful in integrating theory and practice.

Nonaka and Takeuchi (1995) have made an important contribution to the field of organisational knowledge construction and knowledge management and no other authors in this field arguably had made such a forceful business case for the construction of organisational knowledge (Movers and Shakers 2003: 134). Their SECI model is in strong contrast with Cartesian dualism which states that true knowledge can only be obtained by the mind and not the body. Nonaka and Takeuchi (1995: 238-239) also emphasise the importance of the bodily experience in the construction of knowledge and are therefore opposed to systems thinking, which they contend focuses clearly on learning with the mind and not the body. However, I do not agree with Nonaka and Takeuchi’s statement regarding systems thinking only emphasising the mind, and shall expand on this in the following section.

²⁷ In a hypertext organisation the interconnected layers, namely, the business system, the project team and knowledge base should be interpreted in their different contexts (Nonaka & Takeuchi 1995: 167).

2.5.3 Action learning perspective

Pawlowsky (2001: 74; 81) posits that action learning is one of the five theoretical perspectives on organisational learning that can be distinguished and that action learning derives its assumptions from several traditions. Essential to action learning is the idea that learning occurs through acting. While I generally agree with Pawlowsky’s conceptual model (Figure 2.3) I shall argue that action learning should not only be seen as a kind of learning mode, but that action learning has, in fact, succeeded in synthesizing these learning modes, learning types and learning processes into one integrated approach. An analysis of action learning will show that it has not only gone beyond being merely a learning mode, but being informed by a pluralistic epistemology has also succeeded in integrating the various elements referred to by Pawlowsky.

Within the action-learning perspective, I shall explore the Organisational Learning Systems Model (OLSM) of Schwandt and Marquardt (2000).

2.5.3.1 Organisational Learning Systems Model (OLSM)

Drawing on Parsons’ social action system theory, Schwandt and Marquardt (2000: 42-43) developed the OLSM which “focuses on the learning aspect of an organisation as a social system and explains how an organisation learns so that it can survive in a changing environment”.

Analogous to Parsons’ general theory of action with its functional prerequisites of Adaptation, Goal Attainment, Pattern Maintenance and Integration, the OLSM builds onto four learning subsystems. The OLSM learning subsystems are graphically portrayed as:

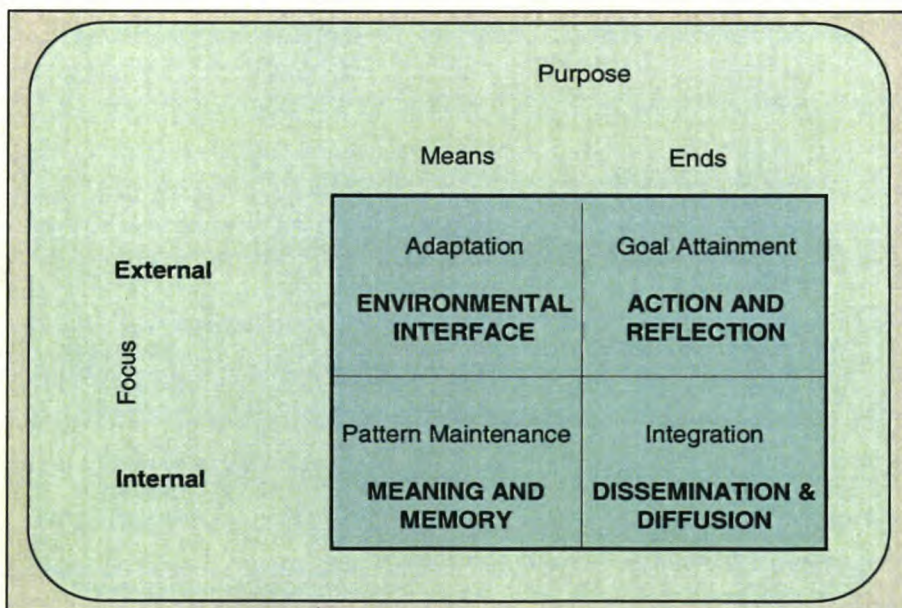


Figure 2.6: Learning Subsystems and Functional Prerequisites (Schwandt & Marquardt 2000: 64)

Schwandt and Marquardt (2000: 46) posit the “focus of Parsons’ theory of action is the establishment of a systemic relationship between the ‘actions’ of the actors and their ability to adapt to both their inside and outside environments. The unit act can emanate from the level of individuals, groups, organisations, or societies and is a function of the biological, psychological, sociological and cultural systems”. This is further underscored by the statement that the logic of the OLSM is founded on a sociological paradigm which describes the functioning of organisations as “the concept of interrelated systems of action emanating from the individual, group and organisational levels” (Schwandt & Marquardt 2000: 43-44). From a Habermasian theoretical perspective, this latter statement is arguable and the primary focus of my criticism against the OLSM.

In Chapter 1 I analysed extensively Parsons’ general theory of action and concluded that it is not suitable as a model for organisational learning. A number of shortcomings were highlighted of which the most significant one is the failure to integrate action and systems theory into a coherent theory. Furthermore, the OLSM does not clearly address the issue of ‘agency and structure’, and with its emphasis on the importance of action, the OLSM neglects the importance of structure. Schwandt and Marquardt (2000: 47) contend that “Parsons’ theory of action provides us with a starting point for understanding the action of the collective as it changes through performing and learning”. Similar to the criticism against Parsons, this results in mainly a focus on the actions of the collective, where “the actions of the organisation are based on a combination of the functions carried out by the actors, symbols, and processes in a manner such that they will allow the system to survive” (Schwandt & Marquardt 2000: 64). System is therefore always reduced to action and fails to integrate action and systems theory.

My criticism against the OLSM from a Habermasian perspective is important, not only to show the shortcomings of that model, but also to underscore the critical aspects of TCA which serve as a framework for my own Pluralistic Action Learning Systems (PALS) model for organisational learning which is considered later in Chapter 6.

2.5.4 Pluralistic epistemology

In this chapter I have explored a number of contemporary organisational epistemologies, not all of which fully satisfy the demands of the new world of business. Organisational analysts are searching and have become interested in richer epistemologies which can address more complex notions of uncertainty than are permissible in a positivistic framework. Interpretive approaches on the other hand also have their shortcomings, mainly by emphasising the primacy of the collective over the individual. In an attempt to bridge this problematic, organisational epistemologies, characterised by a pluralistic epistemological approach, are emerging. Pluralistic approaches are primarily based on the interaction between explicit (positivist) and tacit (interpretive) knowledge, interacting at the various systems levels of an organisation. Informed by complexity theory, these system levels are not only intra-

organisational, that is at individual, group and organisational level, but also between organisations. In a complex and changing environment, organisations also need to interact with their environment and other actors or entities in that environment such as customers, suppliers and competitors.

In order to bridge the positivistic/interpretative divide, Spender (1996: 68-74) proposes a pluralistic epistemology which involves dialectical relationships between both the explicit and implicit categories, and between the individual and organisational categories. These four types of knowledge (conscious, objectified, automatic and collective) interact dialectically to form an organic system with knowledge at both the level of the system and at the level of the individuals it embraces. System level knowledge, whether objectified or collective, is not autonomous and does not exist independently of the individual members. It is a reflection of the social aspects of the individuals' consciousnesses. Although showing similarities with the SECI model, Spender's typology expands on the relationship between implicit and explicit knowledge by delineating them at both the individual and social (organisational) levels (Schwandt & Marquardt 2000: 130).

This double dialectical model of Spender reflects the underlying dynamism of an organisation and can be illustrated graphically in the following manner:

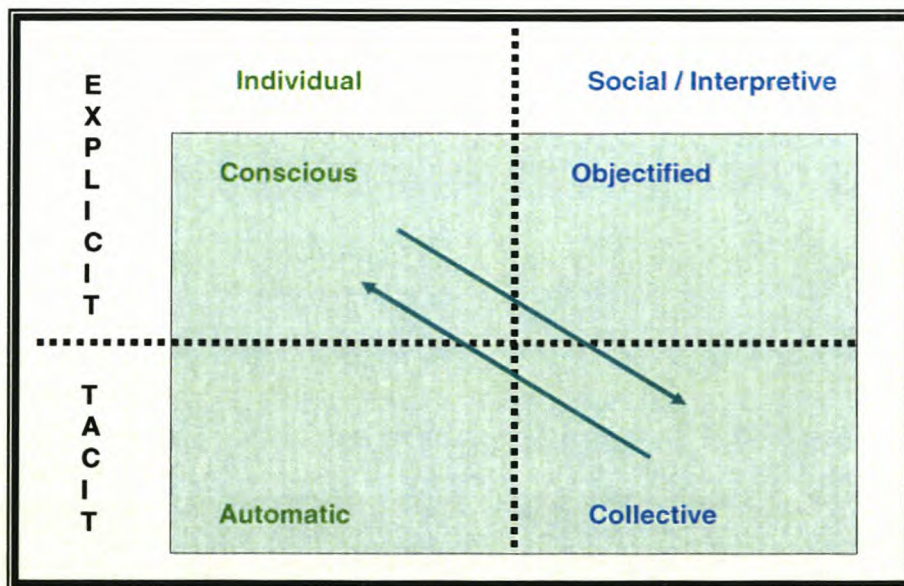


Figure 2.7: Pluralistic Duality Model (Adapted from Spender 1996: 75)

I agree with Spender's (1996: 71) conclusion that a consideration of the various types of organisational knowledge and practice, both separately and in their interaction, will lead to a more comprehensive and pluralistic epistemological approach. I shall propose my own model, which is shaped by a pluralistic epistemology, in Chapter 6.

The pluralistic approach also shows similarity with Stacey's (2001: 5) model of complex responsive processes in organisations which posits that "human agency is processes of interaction between human bodies and those processes construct themselves as continuity and potential transformation", where the emphasis is not so much on the system levels, but rather on the relationship between these system levels. While this approach provides some new insights into organisational learning with the emphasis on the relationship between the systems levels, rather than on the interaction between them, I contend that those relationships are better informed by communicative action. If there is no communication between the individual, team and organisation, whether in tacit or explicit form, those relationships cannot develop and mature. The communicative nature of action learning is well suited to developing these relationships and enabling organisational learning.

Although Spender is arguably the main exponent of the pluralistic approach in organisational context, Chua (2002: 73) and Cook and Brown (1999: 381) argue along similar lines to Spender, namely that organisations are better understood if explicit, tacit, individual and group knowledge are treated as four distinct and coequal forms of knowledge (each doing the work the others cannot), and if knowledge and knowing are seen as mutually enabling and not competing. Cook and Brown (1999: 390-400) subsequently differentiate between the 'epistemology of possession' (knowledge) and the 'epistemology of practice' (knowing) in an effort to integrate theory and practice. These arguments all have their roots in the 'agency and structure' debate and favour the concept of duality rather than that of dualism. As will be shown in Chapter 5, integrating theory and practice is one of the major strengths of action learning, which in this sense corresponds with the concept of duality.

Although both Spender and Stacey's models as abstract theories are difficult to apply within organisational contexts, they emphasise an important aspect of organisational knowledge, namely that knowledge is constructed via relationships and as an interaction between different system levels. Organisations construct knowledge in various ways by tapping into the four sources of organisational knowledge identified by Spender, and in a complex responsive process as underscored by Stacey. However, from Parsons to Spender, the dilemma of these frameworks for organisational knowledge construction is that they succeed only partly, and in most cases do not succeed at all in connecting social action theory and systems theory. Habermas (1989: 206) posits that Parsons remains entangled in contradictions by subdividing two central categories, namely 'unit act' and 'action system'. At an elementary level, actions can be analysed in terms of the action orientation ascribed to an actor in an action situation, but this is insufficient in terms of systems thinking. Spender faces a similar problem with his dualistic approach to knowledge construction, ignoring the importance of language as the connecting medium.

Habermasian TCA provides an alternative framework for developing a model for organisational learning. Learning, through communicative action, takes place at the various systems levels. As I shall

show in Chapter 4, action learning succeeds in overcoming the dilemma of action and systems theory by joining social action and systems theory.

2.6 Summary and Conclusion

There is general agreement that developments in the area of organisational epistemology can be categorised into two main approaches, namely an early positivistic approach and a later period characterised by an interpretive approach (Von Krogh & Roos 1995b: 61; Spender 1996: 64; Ortenblad 2001: 130). These approaches are evident in both the fields of organisational learning and knowledge management. While the positivist approach is still prevalent in organisational science, systems theory and its various branches such as social systems and complex adaptive systems, have gained favour against the positivist approach. Various scholars, however, agree that contemporary epistemology is characterised by the movement away from the social engineering of earlier periods through a perspective that incorporates values, visioning, organisational learning and problem solving with Action Research as a mode of enquiry (Spender 1996: 63; McNiff 2000: 76; Nodoushani 2000: 71). While Allee (1997: 57) contends there is a necessity to come to a shared understanding, Canella and Paetzold (1994: 332) argue that a single paradigm is constraining and elitist. In addition to this vastly and rapidly expanding scope of organisational knowledge, Spender (1996: 64) argues that the literature on the subject of organisational knowledge, and its related concepts of learning and memory, are fragmented and narrowly positivistic. This is underscored by Lam (2001: 212) and Tsoukas (2001: 973), who contend that organisational knowledge and learning need considerable refinement to be of value to both practitioners and corporate epistemologists. Developments in social constructionist and systems theories should also be considered, strengthening Canella and Paetzold's argument that a single paradigm is constraining. A pluralistic approach therefore offers possibilities for an improved understanding how to construct organisational knowledge.

In this chapter I have examined two primary approaches to organisational knowledge, one based on a technical approach which advocates that organisational knowledge is constructed through a process of collection, interpretation and analysis, application and review. On the other hand the social approach supports the idea that knowledge is constructed through social interaction. These two approaches should not be seen as two different and dualistic approaches, but rather as complementary to each other. If these two approaches are not integrated, organisational knowledge construction will remain fragmented and only partially successful.

I have also critically explored some of the most important organisational epistemologies and models for organisational learning, notably the SECI model of Nonaka and Takeuchi (1995), the Organisational Learning Systems Model (OLSM) of Schwandt and Marquardt (2000) and the pluralistic approach of Spender (1996). While each of these frameworks reflects important features of how to

construct organisational knowledge, some shortcomings are still noticeable. The SECI model does not provide clarity on how learning is taking place at the various system levels, the OLSM model reduces systems to action and fails to integrate agency and structure successfully, while Spender is not clear on how his pluralistic approach is applied in practice.

Drawing on a social action-systems approach to organisational learning, as informed by Beer's social systems framework and the Habermasian theory of communicative action, I contend organisational learning is constructed in a "seamless" manner across individual, team, organisational and inter-organisational levels through the use of communication. This model will be presented in Chapter 6.

Organisational knowledge is not only constructed through an epistemology which is the primary construct in underpinning knowledge. Organisational knowledge is also impeded or enabled by a number of constitutive features such as leadership and communication. In the next chapter I shall explore some of the primary constitutive features of organisational knowledge before considering action learning as a possible framework.

Constitutive Features of Organisational Knowledge

Chapter

3

3.1 Introduction

The previous chapter has explored some of the major organisational epistemologies which are currently shaping organisational learning and knowledge management initiatives. Two main paradigms are evident, a result of the failure of various attempts in social theory to integrate action and systems theories. I have concluded that the Habermasian theory of communicative action, which succeeds in integrating the subjective (individual), social (team) and objective (organisation) domains through communication, can serve as an analogy to construct organisational knowledge.

Giddens' theory of structuration provides additional support and clarification for learning which takes place at the different system levels, namely that knowledge is not only constructed by the actor (individual or team), or the structure (organisation), but rather in the interaction between them. This approach is also underscored by the complex adaptive systems theory which claims that neither the actor, nor the structure has primacy in constructing knowledge, but that knowledge is enabled through the relationship between agency and structure.

Organisational knowledge is therefore constructed at different system levels, primarily through language as medium. While communication arguably plays the most important role in constructing organisational knowledge, organisational culture and structure, leadership and technology have been identified as important enablers in constructing organisational knowledge. These constitutive features of organisational knowledge will now each be explored to determine their influence in constructing organisational knowledge.

In Chapter 2 I have used Pawlowsky's conceptual model for organisational learning to explore some of the major learning modes. In the following section I shall explore the concept of organisational learning and how knowledge is constructed at the various systems levels of individual, group, organisation and inter-organisation. I shall also examine some of the more important constitutive features of organisational knowledge such as communication, organisational culture and structure, leadership and technology.

3.2 Organisational Knowledge and Learning at System Levels

Drawing on Pawlowsky's (2001: 79) conceptual framework for the management of organisational learning (refer to Figure 2.3), I have explored in the previous sections three major learning modes, namely the system-dynamic, cognitive, and action learning perspectives.

I shall now explore the last concept of Pawlowsky's conceptual model, that is, learning at the various system levels, namely the individual, group, organisation and inter-organisational levels. Bhatt (2002: 31) and King (2001: 13) agree that organisational knowledge is constructed through interaction between the individual and the organisation and that different strategies are required to enable organisational knowledge. The interaction at these systems levels is based on the concept of plurality, which means that one system level, for example, the individual, interacts with both the team and the organisation. This is in contrast with the concept of duality, which proposes that only two elements are interdependent. This approach is also consistent with the Habermasian perspective on epistemology and with structuration theory, which is to "develop an ontological framework for the study of human social activities" (Giddens 1991: 201).

3.2.1 Individual learning

Individual learning and organisational learning and change are inextricably connected and the link between individual and organisational learning occupies a critical position in theories of organisational learning. Various seminal theorists on the subject agree that organisational learning begins, and often ends, with the individual (Argyris & Schön 1978; Senge 1990; Nonaka & Takeuchi 1995). I shall subsequently explore the most important developments regarding some of the major learning theories.

In an emerging school of thought, Stacey (2001: 8) adopts a different view and argues that the split between individual and group/organisation is an inappropriate one when it comes to thinking about organisational learning and knowledge construction. Stacey (2001: 61-65) argues that the properties of the individual mind and of social practices do not exist outside action, but are constituted in it. Individual and social practices are thus not separate levels of being, but the same level "with each arising in the reproduction of patterns of interaction between people, in which reproduction there is the potential for transformation". Much of Stacey's thoughts and arguments are based on Mead's (1934) theory of the evolution of mind, self and society, where meaning is not transmitted from one individual to another, but rather arises in the interaction between them. Meaning is thus not attached to an object (or agent), or stored, but is perpetually created in the interaction (Stacey 2001: 79). This approach is commensurate with the Habermasian theory of communicative action which also builds on Mead's theory. This is also the approach I shall adopt in developing my own framework.

Allee (2003: 62-63) also bases her arguments on complex adaptive systems and argues along similar lines as Stacey when stating "when something is truly complex, all the parts work together in such a

way that the whole cannot be divided without losing its integrity – and the parts also lose their integrity when separated from the whole”. For Allee (2003: 66), it is therefore important to recognise the pattern of the process in the complex world of business and that “being able to see and work with processes gives people a way to attend to and communicate certain principles and interactions that we may want to work with”.

Drawing on both Stacey’s (2001) and Allee’s (2003) concepts which emphasise the relationship between the various systems levels (that is the individual, group/team, organisational and inter-organisational) and which view these system levels rather as one level of interaction, I shall argue that the relationship will be strengthened if these systems levels are synthesized by the same learning process, similar to Habermas’ (1989: 222) concept of communicative action which enables us to have clarity about how culture, society and personality hang together as components of a symbolically structured lifeworld. There should therefore not be a split between the learning process used by the individual and that used by the group and organisation. Building on both Kolb’s and Mumford and Honey’s learning styles which inform action learning, I contend this is an adequate learning approach as the same learning process can be followed at all three these systems levels.

Equally important to the type of learning process an organisation adopts is the organisational culture, which determines to what extent the organisation enables knowledge construction. The challenge therefore revolves around developing organisational knowledge by formalising the context, structures and procedures which promote the building and sharing of knowledge (Stonehouse & Pemberton 1999: 133). The context refers to the organisational culture and paradigm in which learning takes place, while the structures and procedures relate to the enabling conditions that need to exist in an organisation to optimize learning. These enabling conditions include organisational cultural aspects such as knowledge leadership and competencies to enhance individual and team learning, trust, caring and sharing, as well as organisational structure and information technology.

Knowledge leadership depends on the ability of managers and professionals to learn quickly and effectively and is probably the most important factor determining the capacity of the organisation to cope with new challenges. In order to meet these challenges, workers need to develop lifelong learning skills to deal with the pace of change and the information explosion (Jennings 2000: 62; Knasel, Meed & Rosetti 2000: 23). Any organisational learning theory therefore needs to address the issue of leadership and how to develop lifelong learning skills.

The empiricism/rationalism divide that plagued epistemology also had a major impact on the theories of learning that developed during the last century and numerous viewpoints concerning the learning process exist today. Most of these theories focus on academic learning and how individuals learn, and

do not take individual learning in relation to organisational learning and professional development into account (Knasel *et al.* 2000: 51; Raelin 2000: 1-2).

One of the most influential learning theories, which is expected to remain popular for a long time, is the social learning theory of Bandura (Bower & Hilgard 1981: 461; Hergenhahn 1982: 351). The major difference in learning theories remains the division between behaviourism and cognitive psychology. Social learning theory tries to provide a more balanced synthesis of cognitive psychology with the principles of behaviour modification and provides the best integrative summary of what modern learning theory has to contribute to solutions to practical problems (Bower & Hilgard 1981: 461). Bandura's social learning theory emphasises that most of our learning usually involves other people in a social setting and typically reflects real-life situations and problems. In this social cognitive view, people are neither driven by inner forces nor automatically shaped and controlled by external stimuli. Rather, "human functioning is explained in terms of a model of triadic reciprocity in which behavior, cognitive and other social factors, and environmental events all operate as interacting determinants of each other" (Bandura 1986: 18; 23). In this model, behaviour, cognitive, and other personal factors, as well as environmental influences, all operate interactively as determinants of each other. In this triadic, 'reciprocal' refers to the mutual action between causal factors. This model can similarly be applied to organisational knowledge where behaviour (leadership and organisational culture) and the influence of technology can either impede or enable organisational knowledge.

This triadic model reflects a pluralistic approach and concurs with an action learning approach. Bandura's social learning theory displays a similarity to the social constructionist epistemology of Habermas. In their respective ways, both make an attempt to synthesize Empiricism/Behaviourism and Rationalism/Cognitive psychology. Bandura makes an important distinction between learning and performance, an aspect that is still relevant today in organisational learning (Schwandt & Marquardt 2000: 58-61). Learning is therefore linked to actions and these "actions can be associated only with performance, associated only with learning, or they can be associated with both performance and learning simultaneously" (Schwandt & Marquardt 2000: 57-59). The element of action therefore needs to be incorporated into both an individual and an organisational learning theory. Parsons (1949) general theory of action, as explored in Chapter 1, provides an answer, namely that all action is directed towards a goal.

Two other inter-related issues need also to be addressed. Guthrie proposed that learning at its most basic level takes place in an all-or-none fashion, while an alternative view proposes that learning takes place gradually (Bower & Hilgard 1981: 17). A second issue is the question whether only one kind of learning exists, or if more kinds of learning exist. Theorists such as Kolb *et al.* (1984: 128) and Honey and Mumford (1986: 10-15) have argued for recognition of different types of learning that follow different laws. Kolb's experiential learning model was refined by Honey and Mumford who contend

that comprehensive learning encompasses four elements: active participation in a new experience; reflective examination of that experience; integration of conclusions based on the new experience into workable theories; and active application of theories to new situations. Learning is seen as a cyclical and continuous process, suggesting that it is not happening as a singular event, but rather that learning is taking place gradually. The dynamic properties of knowledge, as discussed in Chapter 1, also impact on learning. Learning is not static, but rather an active process and represents a conscious effort to develop. It is now widely accepted that learning is not a singular event, but a cyclical process (Allee 1997: 89; Stonehouse & Pemberton 1999: 133; Garvin 2000: 19).

Having considered and reviewed a number of learning theories, some of which are also aligned with action learning, I contend that the Honey and Mumford model is more appropriate as an organisational learning theory. Both action learning and the Honey and Mumford model align and integrate individual, group and organisational learning which, as I have stated earlier, is a prerequisite for successful organisational learning. It interacts at all systems levels and in a complex and responsive way strengthens the relationship between these systems levels as has been argued by Stacey (2001: 5-6).

Schematically, the Honey and Mumford learning cycle can be presented as:

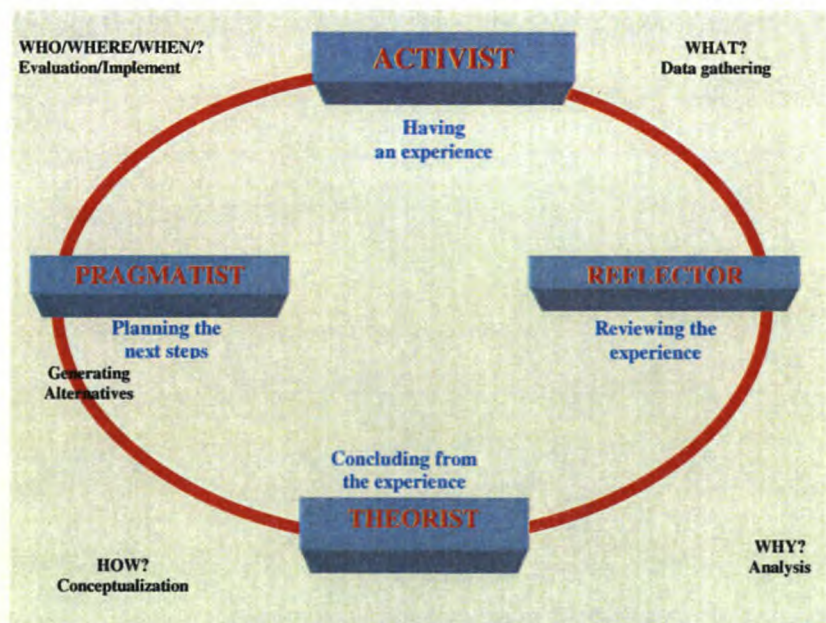


Figure 3.1: Honey and Mumford Learning Cycle (Adapted from Weinstein 1991: 40)

Honey and Mumford (1986: 5) contend that knowledge about one's learning style will secure more effective learning. This insight into how one learns will:

- (1) increase awareness of learning activities which are congruent or incongruent with the dominant learning style of the individual;
- (2) result in a better choice among those activities, leading to more effective and more economical learning;

- (3) identify areas in which an individual's less effective learning processes can be improved;
- (4) develop ways in which specific learning skills can be improved.

These four learning styles are those of Activist, Reflector, Theorist and Pragmatist.²⁸ These four learning styles are directly linked to the action learning variants which are discussed in Chapter 4. Activists prefer to collect data, (Q = asking questions about who, what, where, when); reflectors to review the experience (R = reflection); theorists to conclude from that experience (P = programmed knowledge); and pragmatists to plan the next steps by taking action (A). Although there might be at individual level a specific preference by the individual to learn in a preferred way, the ideal is to become an all-round learner (Honey & Mumford 1986: 43). This same process of collecting information, integration and analysis, action and use, and reflection, is also applied at organisational systems level, but at this level an organisation needs to execute all these actions otherwise the organisational learning process will probably fail.

Complementary to action learning and the Honey and Mumford learning cycle, some contemporary educational strategies have emerged during recent years, amongst others problem-based learning (PBL). Since action learning is essentially a problem-solving technique, it is therefore important to explore the concept of PBL and its relevance to action learning. The basic principle supporting the concept of PBL is that learning is initiated by a posed problem, query or puzzle that the learner wants to solve. In this approach, complex, real-world problems are used to motivate students to identify and research the concepts and principles they need to know to work through those problems. To cope with these new situations, students need more than ever to be able to pose questions, seek and find appropriate resources for answering these questions, and effectively communicate their solutions to others (Duch, Groh & Allen 2001: 6).

Problem-based learning displays many of the desirable outcomes of adult education, namely:

- (1) Think critically and be able to analyse and solve complex real-world problems.
- (2) Find, evaluate and use appropriate learning resources.
- (3) Work cooperatively in teams and groups.
- (4) Demonstrate versatile and effective communication skills, both verbal and written.
- (5) Use content knowledge and intellectual skills acquired at the university to become continual learners (Duch, Groh & Allen 2001: 6).

In addition to the above attributes, such as past experiences of how adults view and integrate new knowledge, the need to be self-directed learners should also be considered in adult education (Knowles 1978: 57-58).

²⁸ For a description of these styles see: Honey and Mumford (1986: 10-15).

Adults are primarily involved in organisational learning. An organisational theory that wants to be successful in constructing organisational knowledge will have to meet most of the above criteria. The empirical study in Chapter 5 will closely examine whether action learning as an organisational epistemology meets the above-mentioned criteria such as problem-solving and the ability to develop life-long learners.

Gagné and Briggs (1979: 12) state that older learning theories gave greatest weight to external factors, while newer theories place greater emphasis on the importance of factors which originate from the internal sources of the individual's memory. The influence of these factors occurs through memories or what has been learned previously. Prior learning therefore plays a very important role in effective learning. The emphasis on learning from past experience is, however, in contrast to Beckman's (1999: 6) view, that although learning from experience is more vivid, it is not very efficient. There is also a human tendency to over-generalise from one or several experiences. This is also underscored by Gilmore (1997: 302), who argues that the processes of learning from one's experience may be both too slow and too embedded in rapidly obsolescing frameworks. From a pluralistic perspective, learning from past experience is not overemphasised; rather that experience is part of the holistic approach in constructing knowledge.

From contemporary learning strategies it is clear that attributes such as critical thinking, problem-solving, team work, finding and interpreting information and the incentive to become life-long learners are priorities, and that any modern learning strategy will have to incorporate these aspects. These variables will also be empirically researched in Chapter 5 to determine their relevance in the construction of organisational knowledge and their impact on individual learning.

The Honey and Mumford learning model best captures the individual learning process and embraces important elements present in individual learning. This is underscored by Gagné and Briggs's (1979: 11) contention that one of the internal processes required in a learning event is the activation of strategies for learning and remembering. The individual may bring into play strategies for attending to complex stimulation and solving problems. For any particular learning event, the strategies brought into play may be simply the best the learner has available at the moment. They may expect to improve with continued practice, and as learners gain more experience in learning, they more and more become 'self-learners'. This corresponds with the Mumford and Honey learning cycle that learners have a preferred style of learning, but that they might also simply use the one style, or combination of styles that are the most appropriate for that moment. The objective, however, is to improve these learning styles which will be the case as learners gain more experience in learning and become life-long learners. Garvin (2000: 47) contends that there is no single best approach to learning. The challenge is to become more knowledgeable about the range of techniques available in order to tailor the learning strategies to the task at hand.

A critical aspect in individual learning and its interrelationship with team and organisational learning is the nature of the learning process. If the individual learning process is not aligned with the team and organisational learning process, learning will be problematic and not be able to achieve optimum results. Action learning provides a process and shared understanding of how learning can take place at the individual, team and organisational level, thereby aligning the learning process across each systems level. When this is achieved, organisational knowledge is easily enabled.

3.2.2 Team learning

In following Bandura's (1986) social learning theory, as well as drawing on one of the three Habermasian dimensions, namely the social dimension, which both emphasise that most of our learning usually involves other people in a social setting and typically reflects real-life situations and problems, it naturally follows that within organisational context the importance of team learning cannot be overstated. Organisations are only able to learn if a group of people is able to learn together (Senge 1990: 139; Ketelhohn 1995: 8; Stacey 2001: 7).

The importance of the collective is also emphasised by Dibella and Nevis (1998: 25-27) in identifying the three essential criteria for organisational learning:

- (1) New skills, attitudes, values and behaviours are created or are acquired over time.
- (2) What has been learned becomes the property of some collective unit (team).
- (3) What is learned remains within the organisation or group even if individuals leave.

Although organisational knowledge is primarily derived from individuals in an organisation (Stonehouse & Pemberton 1999: 138; Garvin 2000: 215), most organisations focus their knowledge creating and sharing efforts on the team (Dixon 2000: 21). Organisations cannot "create knowledge on [their] own without the initiative of the individual and the interaction that takes place within the group" (Nonaka & Takeuchi 1995: 13). Nonaka and Takeuchi (1995: 225) furthermore contend that one of the keys of organisational knowledge creation is the concept of sharing at group or divisional level, and that without this spiral process across different levels, organisational knowledge will not be amplified and knowledge creation will not be possible. This circular interaction is considered to be of central importance to the possibility of learning and knowledge creation and is being accepted as mainstream thinking (Stacey 2001: 21).

Allee (1997: 77-78) furthermore argues that there is no simple prescriptive formula for fostering team learning, and contends that individual and team learning will take place regardless of whether people pay attention to it or not. However, if a group wants to maximise and deepen learning together, it must be valued and attended to. There is no simple prescriptive formula for fostering team learning and the only real requirement is a desire to learn and grow together. This kind of commitment, combined with a willingness to experiment and enquire, will assist a team to achieve its own learning breakthroughs.

Similarly, Raelin (2000: 115) argues that the rationale for a learning team structure is simply that people engaged in similar work will tend to encounter similar difficulties and hence will be likely to offer practical suggestions to one another. Through this process team members will learn how to manage their own problems. Senge (1990: 9-10) and Lam (2001: 214) contend that a critical step in achieving results in team-based learning is for individuals to transform their personal vision into a shared vision. It is therefore important that for team learning to be successful, the team is presented with a challenge and there are clearly stated learning objectives.

Three important aspects related to communication, namely questioning, listening and reflection, impact on the quality of learning which takes place in learning teams. The typical conversational device in most learning teams, and in particular action learning teams, is questioning rather than advice-giving. In addition to developing the ability to ask questions, team members also need to practise active listening to demonstrate that they understand both the content and feelings of the message. The importance of feedback and consciously reflecting on the team's learning process cannot be over-emphasised (Allee 1997: 77; Marquardt 1999: 230; Dixon 2000: 39; Garvin 2000: 100; Raelin 2000: 119).

Senge (1990: 236-241) identifies team learning as one of the fifth disciplines in establishing a learning organisation and contends that there has never been a greater need for organisations to master team learning than there is today. Senge furthermore contends that the practices of dialogue and discussion must be mastered. Dialogue is the free and creative exploration of complex and subtle issues, a "deep" listening to one another and suspending of one's own views. By contrast, in discussion, different views are presented and defended and there is a search for the best solution to support decisions that must be made at this time. In this chapter I shall also explore concepts related to communication and how the latter enhances team and organisational learning.

In addition to the above communicative aspects of team learning, effective team learning also requires time, support and practice. Raelin (2000: 121) argues that perhaps the most critical concern is to provide for some diversity of background and ways of knowing to avoid having the team begin with an entrenched mental model that inhibits divergent thinking. This is clearly illustrated by the following observation of Fryer (2002: 3) on his experiences in an action learning set during an MBA action learning programme:

Previous resistance to attending formal classes was soon something of the past and active participation brought about some of the most rewarding chapters in the student's quest for learning. Initial fear of the unknown was soon replaced by the active hunting down of applicable information, followed by the self-guided and highly rewarding process towards successful implementation.

The student is a self-confessed sceptic and nothing is ever taken for granted. The process whereby six students were grouped in a subset and told to discuss

homework was quietly sneered at since it was expected that quality time would be wasted. This point of view was changed after the first few meetings of the subset when it became clear that some set members were seriously underestimated by the arrogant one mentioned previously. As working relationships began to take shape, the strong points of set members rubbed off onto the other students, paving the way towards excellent cooperation and the sharing of ideas. Examples of these are the particularly strong negotiation and oratory skills of one subset member and the analytical skills of another.

From personal experience and involvement with action learning teams, I contend there are many factors influencing effective team learning. The composition of the team in terms of various learning style preferences may influence the quality of the learning; the strategic relevance and importance of the task or problem to be researched and how trust is established within the team are all factors that need to be considered for effective collaborative learning to take place. This is confirmed by Edmonson and Moingeon (1999: 158) in an empirical study which showed that work groups with high levels of trust among members are more likely to engage in learning behaviours than that of other groups. The absence of a personal commitment to the success of the team is another important consideration that must be addressed if learning within a team context is to be successful.

The move away from the individualistic and competitive learning of the rationalist approach to a more team-based and collaborative approach is an indication of the changing paradigm of knowledge construction and the importance of the role team learning occupies in the construction of organisational knowledge. The role of the team in constructing organisational knowledge will receive further attention in Chapter 5 with the analysis and interpretation of the empirical results.

3.2.3 Organisational and inter-organisational learning

Just as individuals need to learn in order to actualise their being, to engage with their environment, to grow and develop, organisations need to learn to maintain and improve themselves (Edmonson & Moingeon 1999: 157; Raelin 2000: 27). Organisations only learn through individuals who learn, although individual learning does not guarantee organisational learning (Senge 1990: 139).

In order to achieve this goal a number of different approaches have emerged. DiBella, Nevis and Gould (1996: 365) propose a three-stage model of knowledge acquisition, knowledge sharing and knowledge utilisation. Similarly, Garvin (2000: 20) identifies three stages in organisational learning, namely acquiring information by obtaining facts and data, interpreting information to get a refined understanding, and applying information by translating analysis into action. Garvin's (2000: 11) definition is more descriptive of the processes and activities and defines a learning organisation as an "organisation skilled at creating, acquiring, interpreting, transferring and retaining knowledge, and at purposefully modifying its behaviour to reflect new knowledge and insights". Dixon (1999: 7-9) defines organisational learning as "the intentional use of learning processes at the individual, group and

system level to continuously transform the organisation in a direction that is increasingly satisfying to its stakeholders". While the organisational learning processes are important, they will not lead to organisational learning until rules and procedures are in place. Each individual can act for him- or herself, but cannot act in the name of the collective. When members have created rules and procedures, they can be said to have organised, and effective organisational learning could occur.

Choo (2000: 19) contends that the organisational learning process "is a continuous cycle of activities that include sensing the environment, developing perceptions and generating meaning through interpretation, using memory about past experience to help perception and taking action based on the interpretations developed".

The following diagram graphically depicts a learning organisation.

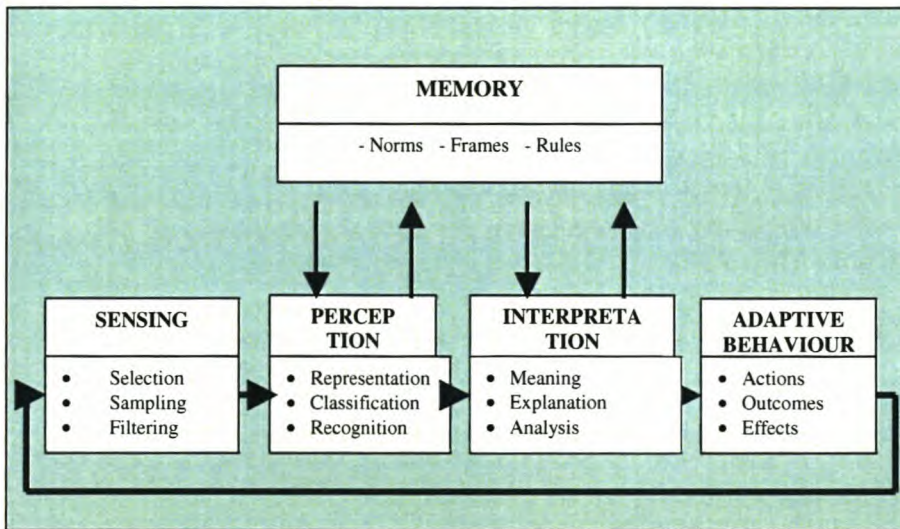


Figure 3.2: Organisational Sense Making (Source: Choo 2000: 19)

Sensing is the collection and filtering of internal and external information to prioritise areas of learning; memory is derived from the experiences of the organisation interacting with the environment; perception is based on the paradigm of the organisation; interpretation leads to understanding and creative insight by finding through a social process; and adaptive behaviour initiates a new cycle of learning by taking new actions (Choo: 2000: 20).

Organisations cannot learn and develop knowledge by only looking inward. Scanning the environment, or sense making, is best achieved by implementing a competitive intelligence programme. Competitive intelligence results in strategic organisational learning and the development of knowledge at the inter-organisational systems level. Johnson (2000: 85) states competitive intelligence is largely concerned with the external business environment, even though it is generally understood that eighty per cent of what a company needs to know about competitive and other forces in the external environment is already being collected and generated somewhere in the organisation.

Organisational learning and knowledge management cannot be considered without including CI. Competitive intelligence is an indispensable element of organisational knowledge and a critical requirement for strategic organisational learning. An effective CI programme will enhance the construction of organisational knowledge, improve the decision-making process, and contribute to the organisational knowledge base. This is underscored by Davenport, De Long and Beers (1998: 49), who state that competitive intelligence systems may often be overlooked as knowledge management systems, but that most effective ones will filter, synthesise and add context to information from the external environment, which qualifies them for this category.

Competitive intelligence is an important element of the organisational learning landscape, and I agree with Johnson (2000: 97) that the importance of CI as an adjunct to knowledge management will continue to expand in scope and importance as a means of integrating the externally focused knowledge with what is already internally aware. However, for this to be successful, it should be informed by the same epistemology as other organisational knowledge notions such as knowledge management and organisational learning. A pluralistic approach provides possibilities to unlock the full potential of organisational knowledge construction.

Organisational knowledge construction therefore involves aspects such as organisational learning, knowledge management and competitive intelligence. An action-learning framework succeeds in enabling organisational knowledge in all three these instances because it is informed by the same epistemology. Stated differently, although there might be a shift in the emphasis owing to either an internal, external or technological emphasis in constructing organisational knowledge, all three instances are grounded in the same pluralistic epistemology. If organisations can succeed in embedding action learning as an organisational learning process, the real power of action learning will be unlocked.

These actions of sensing, perception, interpretation and adaptive behaviour correlate strongly with the action inquiry strategies which will be explained in Chapter 4, namely collection (sensing), analysing and interpreting (perception and interpretation) and action-reflection (adaptive behaviour). I contend that these actions also constitute the organisational learning process at the organisational systems level and that organisations learn through a process which is similar to the action learning process.

These actions reflect the behaviour of an intelligent organisation. Intelligence should, however, not be confused or equated with knowledge. Miller (2000: 301) argues that “knowledge is a synthesis of information, while intelligence is what it takes to create knowledge. Intelligence includes the inherent capabilities to learn, transfer knowledge, reason, envision what is possible, acquire new insights, generate alternatives and make wise, value-based decisions”. Intelligence is based on the collection of information, reasoning and quickness of understanding. Liebowitz (2000: 8) contends that organisational learning is a key component of organisational intelligence and in order for an

organisation's intelligence to increase, the organisational entity must be able to learn and adapt. From an organisational perspective, intelligence depends on the ability to acquire information, analyse and interpret it, which through reasoning and learning, results in the generation of relevant and timely knowledge. The net result of intelligence is evident in the competencies of an organisation that adds value to its products and services. Intelligence and knowledge are both dynamic in nature, and consequently their development depends on the ability to learn (Stonehouse & Pemberton 1999: 134). The concept of intelligence therefore has two distinct meanings: the possession of knowledge and the construction of knowledge. The creation of new knowledge to solve problems is a convincing mark of intelligent behaviour and the context of intelligent behaviour is therefore problem solving (Choo 2000: 11).

If an organisation grows through its interaction with its environment, its ability to learn and change can therefore not only be based on the use of internal information. External information is equally important. Sveiby (2000a: 5-9) identifies nine knowledge transfer nodes that exist in relations between organisations and their customers, suppliers and competitors. To enable an organisation to optimise its learning from the external environment, it needs to execute an environmental scanning. This is defined as "the acquisition and use of information about events, trends and relationships in an organisation's external environment, the knowledge of which should assist management in planning the organisation's future course of action" (Choo 2000: 82).

Environmental scanning or sense making, which is directly related to the terrain of competitive intelligence, is therefore an important element in strategic organisational learning. Daft and Weick (1984: 286) suggest that an organisation's interpretation of its environment may be divided into three stages that constitute the overall learning process: scanning, interpretation and learning. During scanning, the environment is monitored and data collected on events and relationships. The purpose of interpretation is to give meaning to the data by sharing perceptions and collective construction. During learning, a new response or action is invoked based on the interpretation.

Action learning meets all the above aspects to develop an intelligent organisation. The action learning process is based on the criteria of knowledge (P) and the construction of new knowledge through the process of empirical research by asking the right questions (Q). In the final analysis the organisation thus needs to act (change) and adapt through continuous reflection (R). Another strong feature of action learning is its problem-solving capability, which is also a characteristic of an intelligent organisation. Organisational intelligence furthermore plays an important role in knowledge management. Action learning has the capability to enhance organisational intelligence and this link will be further explored in the next chapter. Through action-based learning the organisation gains knowledge about action-outcome relationships between the organisation and the environment. Action generates new data for scanning and interpretation, thus starting a new cycle.

For organisational learning to successfully construct organisational knowledge, the following aspects, which will also be addressed as part of the empirical study in Chapter 5, are of critical importance. Organisational learning, and how organisational knowledge is constructed, need to be based on a clearly defined process. This process includes the following actions: (1) planning and identification of the learning objectives, (2) collecting and storing data and information about these objectives, (3) analysing and interpreting, (4) applying and acting on these newly gained insights, and (5) reflecting on their outcomes. This process needs to be aligned with the learning approach which is taken by both individual and team-based learning. Action learning/action research is based on this process and is therefore ideally suited to align learning at individual, team and organisational levels. Organisational learning is similar to other organisational processes such as strategy formulation or product development. It develops over time, involves other departments and levels, and consists of interrelated activities and steps (Garvin 2000: 190). It therefore needs to be crafted and managed to be successful.

While an individual will have a preference for a specific way of constructing knowledge, an organisation needs to focus on all aspects of the learning process. The elements of the process are interrelated and inter-dependent and a weakness in one of the elements will impact negatively on the learning process as a whole.

An important common denominator at individual, team and organisational learning is the element of problem solving. The problem-based approach to learning, which is embraced in action learning, provides cohesiveness in the learning process across organisational systems levels, that is, the individual, group and organisational level. Its importance in individual learning, as well as the relevance of action learning as a problem-solving technique, will be discussed in Chapter 5.

Organisational learning takes place at various system levels. The action that links them together, in Habermasian fashion, is communication. Without communication the relationship between these various levels will break down and organisational learning will become dysfunctional. I shall now explore the importance of communication as a constitutive feature of organisational knowledge.

3.3 Constitutive Features of Organisational Knowledge

3.3.1 Communication – from dialogue to deliberation

In Chapter 1 I argued that the Habermasian Theory of Communicative Action can serve as an analogy for organisational knowledge construction where the individual, team and organisation system levels are integrated similarly to Habermas' distinction of subjective, social and objective worlds in which language plays a central role in integrating these three system levels. Habermas (1984: 95) argues that communicative action represents a higher form of rationality in that "only the communicative model of action presupposes language as a medium of uncurtailed communication whereby speakers and

hearers, out of the context of their pre-interpreted life-world, refer simultaneously to things in the objective, social and subjective worlds in order to negotiate common definitions of the situation”.

Similarly, various authors have pointed to the importance of language and communication in constructing organisational knowledge and enabling organisational learning (Isaacs 1993: 28; Dixon 1998: 32; Gear, Vince, Read & Minkes 2003: 89). While making a distinction between conversation, discussion and dialogue, dialogue is favoured as a means of communication which points the way management may need to develop in order to deal with an increasingly complex and unpredictable world (Isaacs 1993: 29; Varney 1996: 30). Discussion, on the other hand, emphasises analysis, different viewpoints and dissecting problems into smaller parts.

Dialogue also differs from consensus building, where people seek some rational means to limit options and focus on the ones that are logically acceptable to most people. This approach is questionable as consensus generally does not have the ambition of exploring or altering underlying patterns of meaning (Isaacs 1993: 26).

In research done by Williamson, Bright and Parkin (2001: 55), they concluded that a recurrent theme in their results is the importance of creating and maintaining meaningful dialogue between the various parties involved in the change process. The culture of any organisation is carried in and through patterns of communication of its members, in which language is key. Dialogue is not developed as just a process of communication, but as one of learning and understanding and “an absence of meaningful dialogue will limit the ability to create an organization in which learning is natural”.

Dixon (1998: 59) defines dialogue as “a special kind of talk that affirms the person-to-person relationship between discussants and which acknowledges their collective right and intellectual capacity to make sense of the world”. Isaacs (1993: 25) provides the following definition of dialogue, namely, “a sustained collective inquiry into the processes, assumptions, and certainties that compose everyday experience.” Isaacs (1993: 32) proposes a new kind of dialogue “where the aim is to produce a special environment in which a different kind of relationship among the parts can come into play”. Similarly, Gear *et al.* (2003: 90) argue that dialogue is both a conversation in which people think together in relationships, and in acknowledgement that the “other” is always incorporated within one’s utterances. Similar to a complex adaptive systems perspective the emphasis is here on relationships and how relationships enable “thinking together”.

Dixon (1998: 32-40) addresses the need to create the conditions in which dialogue can take place and concludes that a forum for dialogue needs to be set up. Four conditions need to be present in order for such a forum to succeed, namely: (1) the group is empowered to make decisions; (2) there is equality among participants; (3) the group has the collective intelligence to understand and resolve the

issues; and (4) there is a mixture of large and small group interaction. Several forums are presented, including action learning. The success of these forums depends on (a) acts of speech: making one's own reasoning explicit, voicing the perspectives of others and publicly testing one's inferences, and (b) situation variables: freedom from coercion, equal opportunity to participate and a cooperative context.

While it leaves little doubt that dialogue, through collective thinking, can enable effective organisational learning, Dixon's (1998: 32-40) conditions as stated above raise an important question, namely the role of power in communication. Organisations typically reflect a hierarchical structure in which power plays a significant role, such as equality among participants or the ability to express oneself clearly.

Pellizzoni (2001: 63) distinguishes between two kinds of power, namely internal and external power. In the latter a person is excluded because his/her right to participate in the dialogue is not acknowledged because of an alleged lack of competence, an inability to sustain a discussion, or uninterest in a particular case. Furthermore, when it is impossible or difficult to exclude someone from dialogue, one may refuse to acknowledge what s/he says, or the way in which s/he says it.

Internal power, on the other hand, is the ability of an argument to assert itself by virtue of its greater forcefulness, the one that analyses a problem most thoroughly and indicates the optimal solution in terms of technical excellence and moral rightness. In other words, it is the power to override other arguments merely by the force of what one says. It appears therefore that internal power is perceived as positive and external power as something that needs to be reduced or eliminated in organisational context. However, internal power is not always viewed favourably, either because its relevance is contested, or because its existence is denied (Pellizzoni 2001: 62).

An improved form of communication that is suggested is a deliberative approach which affirms that conflict can be resolved by means of unconstrained discussion intended to achieve the common good. Habermas' notion of deliberative democracy is of particular importance to organisational knowledge in enhancing effective communication during action-learning situations. Although definitions on deliberative democracy differ widely, Elster (1998: 8) posits that deliberative democracy includes collective decision making with the participation of all who will be affected by the decision. It also includes decision making by means of arguments offered by and to participants who are committed to the values of rationality and impartiality. Thus, the basic principle of deliberative democracy is that the decision-making process must involve discussion of all the viewpoints, with none of them excluded *a priori*. Deliberative democracy rests on argumentation, both in the sense that it proceeds by argument and in the sense that it must be justified by argument. The arguments of each party are compared, in consideration of the interests of everyone. Deliberation increases knowledge and enhances the quality of decisions. For Habermas, the unity of reason is expressed in the possibility of agreement on the most convincing argument (Pellizzoni 2001: 60-61). To achieve agreement and to validate claims

Habermas (1984: 306-308) argues that agreement must simultaneously be reached at three levels, namely (1) normative accord, that is a speech act is performed that is right in respect to the normative context, (2) shared propositional knowledge and (3) mutual trust in subjective sincerity can be explained in turn through functions of achieving understanding in language.

Bohman (2000: 6; 24) posits that epistemic considerations in justifying deliberation should not be narrowly constructed and argues “for an account of deliberation based on dialogue, since it is only in dialogue with others – in speaking to them, answering them, and taking up their views – that the many diverse capacities for deliberation are exercised jointly”. One need not think of the correct decision as a truth “out there”, somewhat independent of the processes and procedures that discover it. Outcomes may concern the common good, or consensus or the impartial viewpoint constructed by all in the very process of deliberation. Rational accounts of deliberation improve outcomes as far as they help participants construct an interpretation of the decision and its consequences in light of what all those affected think about the matter at hand.

In following Bohman (2000: 6), I define organisational deliberation as an approach to decision-making in which knowledge workers consider relevant facts from multiple points of view, converse with one another to think critically about options before them, and enlarge their perspectives, opinions, and understanding. Although such an approach to deliberation has the objective of constructing knowledge and improves understanding, it is not restricted to only a rationalistic approach. It emulates action learning which uses a pluralistic approach. Organisational deliberative democracy as a virtue of action learning will enhance organisational knowledge. Such an approach will empower knowledge workers, as they will be able to see the result of their influence on the policy and resource decisions of the organisation.

However, not all agree that the force of the best argument is a remedy for deliberative democracy and three main objections are raised against Habermas’ theory. A weak argument is that the ideal conditions for dialogue are very distant from any concrete situation as the theory represents only a benchmark against which institutions or projects can be measured. The second objection concerns the distinction between moral and ethical issues which may result in irreconcilable controversies. A third criticism relates to that agreement only occurs when parties reach consensus on the reasons for a choice. Besides these three criticisms Pellizzoni (2001: 79) posits that the “myth of the best argument probably does a disservice to deliberative democracy, because it reinforces elitist solutions, the dominance of which is testified to by the proliferation of expert committees”.

Despite these criticisms, deliberation provides advancement on dialogue in exploring new ways to enable organisational knowledge. Deliberation provides a careful consideration of the issue, taking everyone’s views into account. In this way tacit knowledge, a major challenge for organisations, is

unlocked and brought into organisational context. An example of how deliberations are used to improve organisational effectiveness is provided by Stebbins and Shani (1995: 26) who argue that deliberations are one of the most promising analytical tools to assist with organisational transformation processes. Deliberations are reflective and communicative behaviours concerning a particular topic or issue, and may take the shape of formal meetings or informal desk-side discussions. While the methods of analysing deliberations are relatively new, they show promise for understanding non-routine conversion processes. Deliberation forum structures and processes can be analysed in each work situation. These variables all potentially affect the quality of deliberations that are taking place and include forum size, membership, openness in sharing information versus competition among forum members, time pressure and knowledge of the task and technical transformation process (Stebbins & Shani 1995: 26-27).

Communicative action such as deliberation plays an important role in enabling organisational knowledge at individual, team and organisational levels. Similar to action learning situations, the idea of the best argument entails its being possible to compare different solutions to a problem. This will be addressed in Chapter 4 and 5 when action learning is explored as a possible framework for constructing organisational knowledge.

The role of language, and the power of communication, highlights other important elements in constructing organisational knowledge, such as leadership, organisational culture and structure, and technology. These constitutive elements of organisational knowledge will be discussed in the following sections.

3.3.2 Leadership

In section 3.2 I have discussed communication and how it can exercise power. Leadership is an inherent component of organisations and one that defines their direction and shapes, as well as exercising power and control. It is widely recognised that new leadership competencies are required to enable organisational knowledge construction and sharing in an organisation (Horner 1997: 277). It is an important agency for organisational learning. Constructing organisational knowledge essentially evolves around people and for organisational learning and KM to be effective, we must adopt greater people-centric perspectives of knowledge (Nonaka & Takeuchi 1995: 61; Wüig 1999: 20).

In a static world the need to learn is not very great. But in an uncertain world, learning never ends. This approach requires that we need to revisit the way in which people acquire knowledge and the competencies required by knowledge workers and leaders. Horibe (1999: 6) and Sadler (2001: 426) argue that these new management challenges related to knowledge workers require the following:

- (1) Encouraging new knowledge to come forward.
- (2) Tapping into everyone's knowledge.

- (3) Managing knowledge you do not understand.
- (4) Encouraging people to learn.
- (5) The encouragement of learning by asking challenging, awkward questions, by stimulating intellectual curiosity.
- (6) The ability to facilitate the learning of others by acting as coach or mentor.

Bhatt (2002: 31) argues that knowledge can be a liability if it does not provide the expected results. The majority of management techniques used by many organisations are in stark contrast to the traditional management principles that once were perceived to increase the competitiveness of an organisation. These traditional methods, based on command and control principles, have become a liability, as these methods have not been found to offer competitive advantages to these organisations. Management's role and organisational leadership therefore need to change to reflect these new realities.

Holsapple and Joshi (2000: 239-241) identify four main managerial influences impacting on organisational knowledge and KM, namely (1) leadership in the management of knowledge, (2) coordinating the management of knowledge, (3) controlling the management of knowledge and (4) measuring the management of knowledge. Nonaka and Takeuchi (1995: 127-130) contend that knowledge is constructed primarily by middle management. Introducing the concept of 'middle-up-down' management, they place the emphasis on knowledge leadership at middle management level. While I do not disagree with Nonaka and Takeuchi on this aspect, I support Senge's (1990: 360) view that leadership in learning organisations is both collective and highly individual. I shall subsequently focus on leadership as the primary influencing management factor.

The relevance and importance of new 'emerging' leadership have been explored by Nonaka and Takeuchi (1995: 156), Bennis (1999: 4-6), Scholtes (1999: 704-711) and Gilley and Maycunich (2000: 69). In contrast to transformational²⁹ and transactional³⁰ leadership styles, the latter define the new leader as one with a developmental leadership approach, that is, servanthip. Developmental leaders help employees grow and develop without regard for their own selfish interests. Similarly, Horner (1997: 277) posits that leadership is seen as a process in which leaders are not seen as individuals in charge of followers, but as members of a community of practice. These views are underscored by Sadler (2001: 422-424), who argues that in a learning organisation a leader has three functions, that of designer, steward and teacher. The essence of leadership is to design the learning processes. Stewardship has to do with the long-term survival of the company, and as a teacher, the leader is continually helping people to see the bigger picture.

²⁹ Transformational leadership searches for ways to help motivate followers by satisfying high-order needs and more fully engaging them in the process of the work; it is leading by motivating (Horner 1997: 274).

³⁰ Transactional leadership stems from traditional views of workers and organisations, and it involves the positional power of the leader to use followers for task completion (Horner 1997: 274).

The competencies these new leaders require can be summarised as follows:

- (1) The ability to think in terms of systems and knowing how to lead systems (Senge 1990: 343; Scholtes 1999: 705; Gilley & Maycunich 2000: 81).
- (2) The ability to understand the variability of work in planning and problem-solving (Scholtes 1999: 708; Gilley & Maycunich 2000: 124).
- (3) Understanding how we learn, develop and improve, and leading true learning and improvement (Bennis 1999: 5; Scholtes 1999: 706).
- (4) Knowledge in generating and sustaining trust (Nonaka & Takeuchi 1995: 156; Bennis 1999: 4).
- (5) Understanding the interdependence and interaction between systems, variation, learning and human behaviour: knowing how each affects the others (Senge 1990: 359; Scholtes 1999: 706).
- (6) Giving vision, meaning, direction and focus to the organisation (Bennis 1995:6; Senge 1990: 346; Scholtes 1999: 708).
- (7) Needing the ability to integrate various methodologies for knowledge construction (Nonaka & Takeuchi 1995: 156; Gilley & Maycunich 2000: 124).

Action learning intrinsically promotes most of these competencies that need to be developed in a developmental leader. In Chapters 4 and 5, I shall show how action learning is used by a number of leading international organisations as a leadership programme. The relevance of these competencies, such as problem-solving, leadership development, team learning and individual learning, trust and a pluralistic approach in integrating various methodologies, will be further explored through an empirical approach in Chapter 5.

Action learning is well equipped to developing the leadership style which is required for a new era of business which emphasises the importance of enabling organisational knowledge. In developing leadership in organisations, an action-learning methodology has already been proved in practice and has been shown to be highly successful.

3.3.3 Organisational culture and structure

The importance of organisational culture and organisational structure as some of the primary enablers in constructing organisational knowledge has received considerable attention from many different scholars and it is now realised that knowledge management systems (KMS) are multi-faceted. Successful and effective KMSs involve far more than just technology, encompassing broad cultural and organisational issues (Alavi & Leidner 2002: 27).

One of the critical factors which has been identified is that of organisational culture. Arora (2002: 240) states that excessive focus and use of technology without bringing about a corresponding change in the culture of the organisation has been a major reason for the failures of KM. Neidorf (2002: 60) contends that bringing knowledge management principles into a company represents a cultural

transition for which most companies are not fully ready. Beckman (1999: 1-13) posits that “without a trusting and properly motivated workforce, knowledge is rarely shared or applied; innovation and risk-taking cease; and organisational cooperation and alignment are nonexistent”. Similarly, Probst *et al.* (2000: 299) maintain that a knowledge-orientated culture means trust and open discussion of problems. It is unrealistic to expect employees to share their knowledge when the company’s organisation and culture do not promote trust. The importance of these attributes in constructing organisational knowledge has been explored earlier in this dissertation, and I shall not repeat them here.

The structure of an organisation also impacts on the construction of organisational knowledge. One approach which has been shown to enable organisational knowledge is the formation of communities of practice. A community of practice needs to display the following characteristics: (1) learning is fundamentally a social phenomenon; (2) knowledge is integrated in the life of communities that share values, beliefs, languages, and ways of doing things; (3) the process of learning and the process of membership in a community of practice are inseparable; (4) knowledge is inseparable from practice; (5) the ability to contribute to a community creates the potential for learning (Liebowitz 2000: 7-8).

In a globalised environment many of these communities are dispersed. To enable members to communicate, technology is used to enable organisational knowledge by providing fast and reliable channels of communication.

3.3.4 Technology

The use of information technology has for a number of years been in the spotlight as one of the primary drivers to construct organisational knowledge. However, information technologies have been developed for the traditional management philosophies and require substantial modification in the new knowledge era. Tsoukas (2001: 990), Allee (2003) and Davenport (1997) have all argued for a more social and human perspective to constructing organisational knowledge. Although IT provides KM capabilities that were not possible before, and is still viewed as one of the primary enablers of organisational knowledge, the emphasis is now on the need to merge information systems into the organisational culture. Continued developments in enterprise-wide software, communications and networking have led to powerful opportunities to enhance knowledge management, and as Marquardt (1999: 91) states: “Good knowledge management is not possible without the use of technology.”

McCampbell, Clare and Gitters (1999: 176) argue that IT’s critical role lies in its ability to support communication, collaboration and those searching for knowledge and information. Beckman (1999: 1-9) has suggested various IT infrastructures to enable knowledge management. However, all these models are primarily based on how to use structured (explicit) knowledge contained in the digital knowledge base of organisations, while the challenge remains of how to apply IT to unlock the unstructured (tacit) knowledge of an organisation. In a recent study, Alavi and Leidner (2002: 28)

conclude that no single dominant technology tool or product for knowledge management systems (KMS) has become evident. KMS seems to require a variety of technological tools in three areas: database and database management, communication and messaging, and browsing and retrieval. The introduction of technologies which facilitate shared work spaces, the establishment of communities of practice and online-chatting, are promoting the sharing of tacit knowledge. Bourdreau and Couillard (1999: 31) therefore correctly observe that the creative application and combination of these information technology solutions can facilitate how tacit knowledge within individuals is shared with that of others, and how it grows through additions from experience, new combinations and external explicit knowledge.

In a more extensive study on the role and use of technology, incorporating 423 organisations, KPMG Consulting (2000: 16) concludes that the most used technologies are the Internet (93%), Intranet (78%), data warehousing (63%) and document management (61%). Respondents found Intranets (accessing internal information) the most effective technology in helping them to manage knowledge. Although the Internet (accessing external information) is the most widely used tool, it is the least effective. This suggests that organisations have only been able to manage with internal knowledge so far, but they need to improve with respect to external information. This also explains why data warehousing and mining tools were regarded as the second most effective technology (KPMG Consulting: 2000: 17).

New technologies are currently emerging in the field of knowledge management. Drawing on the insights from the science of complexity, Syed (1998: 59-61) argues that knowledge work (the interaction between knowledge workers and knowledge techniques, tools and technology resources) requires new information technologies. He identifies agent-based technologies which are capable of performing knowledge tasks that include searching for, retrieving, filtering and presenting information; learning; collaborating; monitoring; and remotely executing.

There is a variety of knowledge management software tools commercially available. With rapid developments in technology, these products are improving on a regular and continuous basis. It is important for decision makers to know what they really need and how KM can offer business solutions to guide them to make better decisions. It should, at the same time, also enable organisational learning and develop the organisational knowledge base.

In a recent study, Nonaka, Reinmöller and Toyama (2001: 833-835) propose an Action-Reflection-Trigger (ART) system for knowledge construction which includes the use of information technology. They contend that ART systems are not just IT, but "a complex gestalt of technology, human factors and dialogue interactions between IT and human-based systems". ART facilitates the process of shifting from one conversion mode to the next on the knowledge-creation spiral by sensing

discrepancies between them and utilising those discrepancies as triggers. This can be portrayed graphically as:

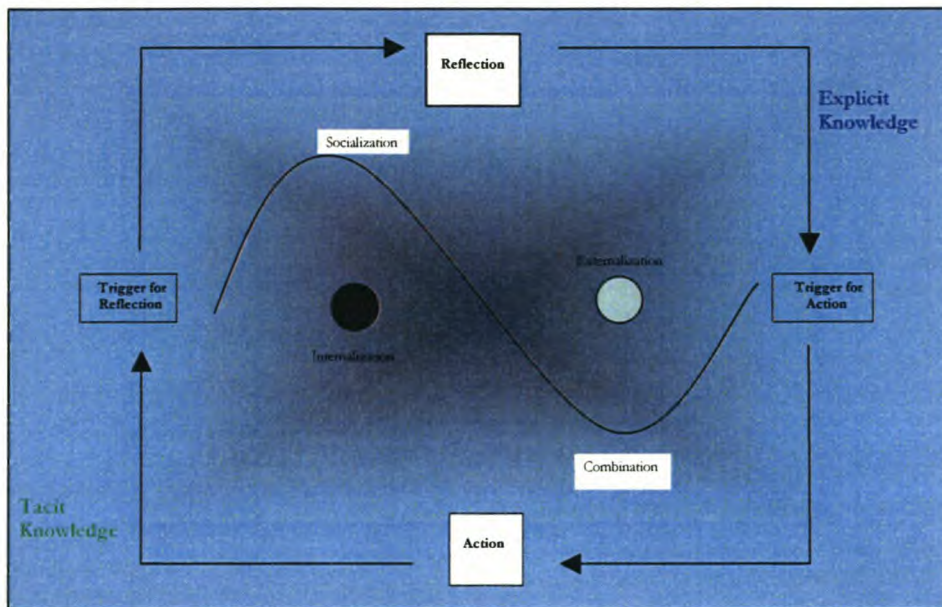


Figure 3.3: Action-Reflection-Trigging (ART) Systems for Knowledge Creation (Nonaka, Reinmüller & Toyama 2001: 834)

This model shows that technology can be included in an action learning approach. However, it shows another important aspect in constructing knowledge, namely the interaction between actor and structure (which includes technology). Technology alone cannot construct knowledge, but the interaction between the actor and technology allows for a dynamic relationship which enables knowledge.

3.4 Summary and Conclusions: Towards an Improved Model for Organisational Learning and Knowledge Construction

In the previous sections I concluded that organisational knowledge construction is the result of organisational learning which takes place at individual, team, and organisational level. There are some important aspects to be considered when designing a model for organisational learning and knowledge construction. One of the most important considerations is the choice regarding an organisational epistemology, and organisations have to exercise a pertinent choice in selecting an epistemology. If this is absent, knowledge efforts will be disjointed and not improve organisational performance.

Knowledge construction takes place at the systems level at individual, team, organisational and inter-organisational levels through a variety of actions such as problem identification, collecting of data and information using both tacit and explicit (programmed knowledge) sources of knowledge, interpretation of information, dissemination of knowledge and taking action. A repetition of this process is triggered by making use of reflection as another source of individual and organisational

knowledge. Organisational epistemology must be able to bring social action and systems theory into a comprehensive and holistic framework. Such an epistemology should be grounded in a pluralistic framework which is able to integrate all these actions in a coherent epistemology.

Organisational knowledge is also constructed through collaborative learning. Beckman (1999: 5-7) underscores the collaborative nature of learning which allows for formal knowledge and expertise to be shared as an important key to superior organisational performance, agility and success. The organisational epistemology underpinning organisational learning must therefore promote specific values. These values include attributes such as trust, dialogue, risk taking, leadership, technology, organisational structure and culture.

Organisational epistemology should therefore be informed by a pluralistic epistemology which simultaneously promotes these values. Action learning provides such an approach and in Chapter 6 I shall present the Pluralistic Action Learning Systems model (PALS) which is designed around two important elements, namely a pluralistic epistemology which enables both collaborative learning (social process), and at organisational systems level, a technical process. This process is further enabled by attributes which are referred to in the previous section and which have been explored throughout this dissertation.

Action learning appears to be a suitable approach to enable organisational knowledge. However, as stated in Chapter 1, action learning requires a redescription to determine its epistemological roots and to establish if it embodies the values that are needed to enable organisational knowledge.

4.1 Introduction

Knowledge and learning have become some of the key words in contemporary management, and together with creativity and innovation, are seen as important drivers providing companies with a competitive edge. The Kaplan and Norton Balanced Score Card (BSC), one of the strategic tools that has since the late 1990s made a noticeable impact on contemporary management, includes learning and growth as one of the performance measures.³¹ This is a clear reflection of the importance which learning occupies in the new economy. Some organisational development practitioners even claim that *learning* is now in the process of replacing *leadership* as the organisational management term of the day (Burke 1997: 96).

In Chapter 1 I have outlined the changing paradigm of knowledge construction, from a positivist approach to one where social action and complexity are taking preference. It appears there is a direct link between the changing paradigm of knowledge and the renewed emphasis of how the construction of knowledge takes place. There is an increasing realisation that a paradigm shift is taking place and that epistemologies such as positivism, which has dominated thought regarding the theory of knowledge, are increasingly coming under attack. Burke (1997: 103) underscores this view and argues that we are currently in the early stages of a third wave of innovation in the domain of training and development. The first wave was the T-group³² (1940s) and the second the 'structured feedback' (1950s).

Although ideas in a post-modern response, also with respect to learning and knowledge acquisition, are dynamic, controversial and still 'in the process of becoming', they generally represent a position that requires:

- (1) a critical analysis of existing theories and models in order to arrive at new interpretations;
- (2) a transdisciplinary and interdisciplinary approach that requires one to be constantly aware of the different possibilities and their differences; and
- (3) an evolutionary and questioning approach where one is constantly on the move dealing with uncertainty and doubt (Skinner 1998: 269; Van Niekerk 1998: 213).

³¹ The other three performance measures are Finances, Customers and Internal Business Processes (Kaplan & Norton 1996: 75).

³² T-groups provide participants with an opportunity to learn about themselves, their impact on others and how to function more effectively in group and interpersonal situations. They facilitate this learning by bringing together a small group of people for the express purpose of studying their own behaviour when they interact within a small group (Gallagher 2000: 2).

In searching for an epistemology that will meet the demands of the 21st century, it will, at a minimum, at least have to meet the above criteria. I shall adopt a three-point approach in this dissertation to determine what kind of epistemology will meet these three criteria. Drawing extensively on the Habermasian theory of communicative action, as well as those of Parsons and Giddens, I shall explore the concept of action learning as a theory of rationality at:

- (1) the metatheoretical level by referring to specific action concepts that constitute action learning;
- (2) the methodological level by showing that our understanding in the social world is mainly based on interpretative understanding and subsequently the importance of deliberation in enabling team-based or collaborative learning and fostering values such as trust, care and openness that are underpinning action learning.
- (3) action research as a method in support of action learning.

4.1.1 Metatheoretical level

Humankind's intellectual development has, through the centuries, been guided and grounded in an epistemological framework, influenced by the prevailing paradigm of that period in time. In Chapter 1 I have shown how various epistemological trends developed through the ages and how these developments have influenced organisational epistemology. The positivist approach subsequently became the dominant epistemology in organisational and business science, and positivism "created the illusion of an 'objective' reality over which the individual has no control, and hence to a decline in the capacity of individuals to reflect upon their own situations and change them through their own actions" (Carr & Kemmis 1986: 130). However, the speed of change now requires an awareness of key learning and knowledge production processes that will meet the demands of the 21st century company (Grieves 2000b: 64). The positivist paradigm is now being challenged by theories of social action, of which the Habermasian theory of communicative action is the most notable. The TCA challenges the dominant positivist belief in the logical and methodological unity of the natural and social sciences, by firstly refuting any claims that science can be objective, and secondly, that science defines the standards in terms of which all knowledge can be measured.

Although the notion of action at metatheoretical level has received attention from philosophers such as Dewey, Mead, Polanyi and Habermas, they did not succeed in popularising action theory into a practical and acceptable method that could be easily understood and applied in the construction of organisational knowledge. In view of the above, the word 'action' needs clarification. Austin (1961: 126-127) explains the concept of action and cautions against the abuse of the word action by stating:

We treat the expression 'doing an action' no longer as a stand-in for a verb with a personal subject, as which it no doubt has some uses, and might have more if the range of verbs were not left unspecified, but a self-explanatory, ground level description.

Danto (1973: 8) underscores this view and contends that doing an action does not stand on its own, but requires a 'ground-level' verb. This brings a new perspective to action learning which indicates that action learning has a broader meaning than its original, narrow interpretation, that is, learning by doing. As stated in Chapter 1, a redescription of action learning is now required. In offering a redescription of action learning I contend it will open up new possibilities in applying action learning as a framework for the construction of organisational knowledge.

4.1.1.1 Action enquiry strategies

During the last fifty years, a number of epistemological technologies have evolved bearing the term 'action' as part of their reference label. Although not always credited with it, these action strategies all originated in Kurt Lewin's reference to action research as a means of conducting systematic inquiry into group phenomena (Raelin 1997: 21).

The relationship between improved knowledge through action and improved action through reflection is the main thrust of this approach which is collectively known as action inquiry strategies, and which includes action learning, action research, participatory action research and action science. In contrast with the positivist models, which were designed to develop theories purposely separated from practice in order to predict truth, knowledge is to be produced in service of action (Raelin 1997: 21; Ellis & Kiely 2000: 83).

Although different in their theoretical domains and philosophy, the relationship between action learning and the other three action inquiry strategies, and in particular action research, needs to be explored in order to understand the purpose of the respective action inquiry strategies and the nature of action learning.

The common denominator of action inquiry strategies is a recurring action-reflection cycle predicated on the relationship of improved knowledge through action, and new or revised action based on imaginative reflective learning. It is a problem-based, interventionist approach to change and continuous improvement that enables individuals, groups and organisations to use reflection on action to solve problems as a basis for the creation of new actions and constructing knowledge (Ellis & Kierly 2000: 84).

Despite this common thread in action inquiry approaches, they all have their distinct and dominant philosophies. With action learning, managers learn by reflecting with peers on issues of practice and by taking action on their decisions. For action research, the overriding philosophy is enhanced efficiency and effectiveness, while for participatory action research it is the liberation and/or empowerment of self. For action science the key is bringing to consciousness discrepancies between espoused theories and theories-in-use, and it explicitly asks learners to examine the reasoning processes they use, based

on the belief that a person can improve action only when his or her mental models become more explicit (Raelin 1997: 22; Ellis & Kierly 2000: 89). While these prescribe the primary domains of each of the four strategies, these should not be viewed as wholly discrete or precise, as there are interweaving strands between the four approaches.

While each of the action inquiry strategies contributes differently in constructing organisational knowledge, this chapter will mainly focus on action research as this has a particularly close relationship with action learning. The most important purpose of doing scientific research is to produce knowledge. Scientific knowledge consists of theories that are capable of and have been subjected to rigorous empirical testing. These theories should not be regarded as proven or true; rather they have scientific status because of and subject to attempts to refute them. Different views on what constitute scientific research and knowledge prevail. Action research has been both acclaimed and criticised, mainly because the term action research is rather broad, it is often left undefined and it is used in different ways (Grønhaug & Olson 1999: 6-7). Those who have rejected some of the paradigmatic assumptions embodied in action research maintain, *inter alia*, that action research is little more than consultancy, that it is impossible to establish causal relationships, and that there is the risk of researcher bias (McKay & Marshall 2001: 49). On the other hand, Bennett and Oliver (1988: 8) argue that action research also contains the main elements of traditional research, and the methods used in collecting data may be similar to those in traditional research. Some of the key differences involved in action research are:

- (1) there is often a need to involve other people in the research process, particularly in interpreting the data collected; and
- (2) reaching conclusions, actions or solutions that are agreed upon if not designed by a group of people in conjunction with the researcher.

Action research is therefore much more involved with the situation, rather than being detached from it, and uses a problem-centred or issue-based approach. These two characteristics are also firmly embedded in action learning. This undeniable link between action learning and action research therefore makes it imperative to include action research in the action-learning process. Conventional or scientific research develops the researcher's skill and knowledge, but often leaves the organisation untouched. Action research, however, combines rigour and relevance in moving towards high levels of performance, as well as leading innovation and making a contribution to knowledge (Bennett & Oliver 1988: 6).

Lewin emphasised the importance of making use of scientific knowledge to make social improvements, indicating that the main purpose of doing (social science) research should be its usefulness to society. From Lewin's perspective, there is no doubt that action research was meant as 'scientific' research. The process underlying action research was described by Lewin (1948: 205-207) as cycles of analysis, fact finding, conceptualisation, planning and evaluation to be conducted simultaneously to solve problems

and construct new knowledge. Similarly, action learning is fundamentally a learning process constituting actions of how we acquire, interpret and analyse, implement and finally reflect on the information to construct knowledge. The action research process has a close affinity with the action-learning process, and this relationship with action learning therefore needs to be defined and explored to determine how it contributes to learning.

Action research was introduced by Kurt Lewin (1890-1947) and is defined as:

A form of collective, self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of those practices and the situations in which the practices are carried out ... The approach is only action research when it is collaborative, though it is important to realise that action research of the group is achieved through the critically examined action of individual group members (Kemmis & McTaggart 1992: 5-6).

Since Lewin's early definition of action research, a number of approaches to action research have developed and it is possible to identify three general approaches. These three approaches can be identified as the (1) interpretive, (2) critical and (3) living theory approaches to action research. (McNiff & Whitehead 2000: 200).

The interpretive approach encourages practitioners to undertake their action enquiries into their workplace practice supported by others such as researchers, mentors, consultants and academic supervisors. The aim of this group is to observe, describe and explain the research of those they are monitoring.

The focus of the critical theoretic approach is on emancipatory issues where participants in all contexts are encouraged to see themselves engaged in collective struggle against the forces of colonization and oppression. This position has been adopted by Carr and Kemmis (1986: 165), who have identified two essential aims of all action research: to *improve* and to *involve*. Action research aims at improvement of a (1) *practice*, the improvement of the (2) *understanding* of the practice by its practitioners and at improvement of the (3) *situation* in which the practice takes place. Involvement relates to involvement in all the stages of the action research process and this involvement will expand to involve others as the research process widens. These two aims of action research are not only of interest to the social sciences, but are also of particular interest to business science which also aims to achieve similar objectives in developing knowledge within organisations.

The third approach, living educational theories, encourages individuals to clarify the values base of their work and to try to live their values in their practice, recognizing that this inevitably gives rise to contradictions. Whitehead (1998), who pioneered this approach, emphasises that action inquiries need to show the ethical dimension of improving practice for others' benefit, a commitment that Dewey

identified as underpinning the concept of education. A living theory approach means that people produce accounts to show how and why they are claiming to have become better practitioners by gathering evidence for the testimonies of others on whom the work impacts that the quality of their life (or practice) has improved (McNiff & Whitehead 2000: 199).

Zuber-Skerritt (2001: 1) states the main difference between action learning and action research is the same as that between learning and research generally. Both include active learning, searching, problem solving and systemic inquiry. However, action research is more systematic, rigorous, scrutinisable, verifiable, and is always made public. Although action learning and action research both share a focus on learning from experience, and both have an action and reflective phase, they have different traditions and the concerns in terms of learning diverge (McGill & Beaty 1992: 32). Action research, as a deliberate social process, follows a research approach that seeks to question the traditional research paradigms copied from the natural sciences. Action researchers are committed to learning from investigation, making decisions about necessary change, applying these and then evaluating the consequences. The researcher is usually an active participant in the process, an aspect that brings the objectivity of the research into question. On the other hand, action learning as a process is more general an approach to learning and research is not the primary aim. The research project may not even involve any formal research at all (McGill & Beaty 1992: 32). The individual is undertaking learning through the process of reflection as part of a group and knowledge is therefore essentially socially constructed. On the other hand, for Lewin (1948: 206) learning occurs within the fact-finding reconnaissance phase where it gives the research planner the chance to learn and to gather new general insights. Despite these differences in opinion about where the focus of learning within action research lies, it remains clear that learning does occur in various phases of the action research process, similar to the learning that is taking place through the various actions that occur in the action-learning process.

McKay and Marshall (2001: 52) argue that to maintain rigour and credibility in the knowledge or theory generated through real-life action research interventions, action research should be considered as being composed of the dual imperatives of problem solving and research enabled. In this new conceptualization of action research, the latter is seen as two separate but interacting cycles: one cycle representing and focused on the problem-solving interest of action research and the other representing and focused on the research interest. This conceptualisation will enable researchers to be much more explicit about the reflection and learning process that seems to be part of the essence of action research. This view is underscored by Ellis and Kiely (2000: 88), who contend that in addition to solving practical problems and contributing to knowledge that is constructed in and for action, contemporary forms of action research also aim at making change and learning a self-generating and self-maintaining process.

It appears, therefore, that one of the primary objectives of action research is the construction of knowledge for learning to take place. Action research is part and parcel of the action-learning approach and is used in the questioning process to research empirically the questions that are raised during the action-learning process. There is thus an unquestionable link between action research and action learning, and that the strength of the relationship between action learning and action research will depend on the purpose for which it will be utilised. Depending on the scope and depth of the problem to be solved, deep learning only takes place when the research results are used to trigger action to solve the problem. Action research basically assists the questioning and critical inquiry process, and is therefore needed to let effective learning take place. One's actions will be limited and inhibited if one does not believe one's research to be correct and true. If one does not fully believe it, one will not be convinced to go into action. Action research, being concerned with the improvement of educational (and similarly business) practices, understanding and situations, is necessarily based on a view of truth and action as socially constructed and historically embedded (Carr & Kemmis 1986: 182). In contrast to interpretive researchers, who aim to understand the significance of the past to the present, action researchers aim to transform the present to produce a different future.

From the above it can be concluded that there is an intrinsic link between action learning and action research and that learning is the common denominator. In parallel to McKay and Marshall's (2001: 52) suggestion that action research should be viewed as two dual imperatives, that is, problem solving and research interest, I contend that action learning should similarly have the dual imperatives of problem solving and learning. Action learning, as spawned from action research, will thus produce scientific knowledge in the same tradition as originally espoused by Lewin. This dual imperative of action learning (learning and problem-solving) will satisfy the organisational requirement for both a learning and systems-approach to organisational problems.

4.1.1.2 What is Action Learning?

Despite Revans's seminal work (Revans: 1971; 1982; 1998) on action learning, many gaps still exist in the knowledge about action learning and critical deficiencies in the literature are evident in a range of generalised, often prescriptive publications without any rigorously evaluated empirical basis (Harrison 1996: 28). It is thus not surprising that questions about the effectiveness and nature of action learning are being raised. Raelin (1994: 305) asks whether "most action learning programmes privilege practice at the expense of theory", raising doubts about the validity of action learning being grounded in epistemology. Wallace (1990: 89-103) underscores the need for more evidence concerning action learning's impact on individuals and value for client organisations, while Harrison (1996: 28) contends that most conclusions underline the poorly tested theoretical and empirical base for both action learning and the learning organisation. Wallace (1990: 90) observes that action learning has rarely been examined for the coherence of its principles, rigorously evaluated or compared with evidence from elsewhere about how professionals learn to improve their job performance. Action learning is also

frequently confused with 'learning by doing', which includes everything from task forces to case studies. Similarly, Spence (1998: 3) identifies three challenges that face action learning today, namely (1) concerns about its misinterpretation, (2) concerns about the methodology and (3) questions about its effectiveness.

Concomitant to the above, additional reasons for the lack of research into the epistemological roots of action learning might have much to do with a view which originated with the principal pioneer and father of action learning, Reg Revans, that action learning takes so long to describe because it is so simple (Revans 1991: 3; Marquardt 1999: xi). Revans (1982: 772) himself admitted that he never took the objection that action learning is seen as lacking any theoretical foundations seriously. Although it indeed appears simple, action learning has become fragmented and is becoming all things to all people to the extent that "action learning has become a generic title for a number of activities not all of which would be recognised or accepted by Revans as being genuine examples of his major contribution" (Honey & Mumford 1986: 33). I ascribe this situation directly to the fact that very little has been written about the metatheoretical nature of action learning. Even Revans (1982: 782; 1998: 76) contributes little to the philosophical nature of action learning and mainly emphasises that knowing means doing. In describing the prime idea of action learning, Revans (1998: 83) concludes "all rational behaviour, intended by sober deliberation to increase one's command over the environment (with the terms command and environment also deliberated) is that learning, advising and deciding (followed by action defined by that decision) are inextricably related". This provides some idea of a theory of action learning and Revans' reference to the inextricably related nature of action learning points to an integrated pluralistic epistemology.

In the recent past, authors such as McGill and Beaty (1992), Marquardt (1999) and Weinstein (1999) have made significant contributions to clarify action learning by providing pragmatic and concrete techniques and practices, but they have done little to place action learning in a theoretical paradigm which meets the demands of a rigorous epistemic investigation. Marquardt (1999: 20) argues that the theoretical roots of action learning are based on the integration of "theories and practices of several disciplines – namely, education, psychology, management, systems thinking, political science, ethics, anthropology and sociology". In her description of the theory and philosophy [*sic*] of action learning, Weinstein (1999: 27-45) bases it on elements such as learning with others, learning from own experience, reflection and the Kolb³³ learning cycle, but yet again little is evident of the epistemological nature of action learning. Attempts by these and other authors to anchor action learning in an epistemological foundation have thus been largely unsuccessful, and have added to the many misconceptions that exist regarding action learning.

³³ The Experiential learning model of David Kolb encompasses four elements: active participation in a new experience (concrete experience), examination of experience (reflective observation), formation of abstract concepts and generalisations (abstract conceptualisation) and application of theories to new situations (active experimentation).

The objectives of this and the following chapter are therefore an attempt to answer these concerns mentioned in the previous paragraphs by firstly grounding action learning in an epistemological framework through a redescription of action learning; secondly to empirically substantiate the value of action learning in constructing both individual and organisational knowledge; and thirdly to underscore its effectiveness as both a problem-solving technique and a method to improve critical thinking skills. Furthermore, a clear understanding of the epistemological roots of action learning will enhance the effectiveness and importance of action learning as an organisational epistemology suited to the learning demands of the 21st century.

4.2 Action Learning Features

Many claims have been made over the years for the superiority of action learning (AL). Much has been written about the power of action learning as a method for organisational development (Marquardt 1999: 79; Weinstein 1999: 204), as a leadership development programme (Keys 1994: 50; Dotlich & Noel 1998: 69; Peters & Smith 1998: 289), as a model for the learning organisation (Revens 1982: 281) and for developing and facilitating teams (Ollerman 2000: 198). Action learning has been used to achieve a range of goals within organisational context and it is exactly this versatility and adaptability of action learning that makes it difficult to define. Within organisational contexts, the overwhelming emphasis is therefore on how to successfully achieve business objectives, and not on the theory behind action learning. Boshyk (2000) provides many real-life examples of the businesses successes of action learning and there remains little doubt that action learning can be highly successful when applied in a business environment. However, I contend that this dominant focus on business successes has been largely to the detriment of developing a sound theory for action learning. If not corrected, the latter may eventually lead to the demise of action learning.

Various definitions of action learning are available and the following two definitions indicate the extent to which these differ. Burke (1995: 166), in emphasising the importance of problem solving, provides the following working definition:

In essence, action learning is combining the solving of actual problems in real time in the organisation with learning about how to work together better, how to solve problems more effectively, and how to improve the learning process in general – that is, learning about learning.

Peters and Smith (1998: 172), focusing on action learning as a learning methodology, state “action learning is an educational methodology that encourages questioning insight, especially in groups, to work towards a deeper understanding. Then, when action is taken, it is meaningful, based on a principle of understood causes and likely effect, rather than mythology or symbolism”.

Although the above definitions provide some guidance, they are, in fact, more a description of the objectives and outcomes of action learning than the metatheoretical nature of action learning. They are

also indicative of the wide range of perceptions that exist about action learning which contribute to the confusion about what constitutes action learning.

The answer lies in a proposition which Revans (1982: 638-640) contends to be fundamental to the success of action learning. These activities are known as the (i) scientific method, (ii) rational decision, (iii) wise counsel and (iv) learning process. Revans (1982: 638) states clearly that “none of them can be pursued without at the same time the subject gaining some benefits to be gained by pursuing the other three”. The underlying structure of these four activities is synthesised and integrated in a five-stage model, which Revans calls System Beta, as follows:

- (1) Survey, a stage of observation.
- (2) Hypothesis, a stage of theory, of conjecture.
- (3) Experiment, in which practical tests are carried out.
- (4) Audit, during which actual and desired results are compared.
- (5) Review, relating the particular results to the whole content.

Although Revans (1982: 638) emphasises the importance of System Beta, he also identifies a System Alpha, which he defines as the complex system within which the problem is defined. The components of the definition are:

- (1) value system of the problem solver, usually defined by the culture of his organisation;
- (2) external system surrounding the problem, namely customers, suppliers, competitors and the like; and
- (3) internal system, namely the resources available to the problem solver in tackling his/her problem.

By identifying System Alpha and linking it with System Beta, Revans has grounded action learning in systems thinking. I shall explore this link with systems thinking in more detail in Chapter 6 when proposing my own model for organisational learning and knowledge management.

System Beta is based on the scientific method of research and rational decision, and the learning process as depicted by Revans ($L=P+Q$) is integrated in this scientific research approach. Revans (1991: 14) states these five stages are identical to rational decision, learning sequence and advisory argument and all three are aspects of the same logical process – the application of the scientific method to changing real systems managed by real people. The wise counsel Revans refers to is based on collaborative learning, or learning together. Parallel to this, Revans contends that the two prime managerial attributes are technical knowledge and interpersonal sensitivity, two attributes which can be equated to explicit and tacit knowledge. Learning should therefore make use of both explicit (programmed knowledge) and tacit (implicit) knowledge. This distinction describes the Revans approach in a clearer manner. Lessem (1991: 26) concludes “action learning is also a personal activity

which combines objective analysis ('science') and subjective commitment ('religion'). Its logical foundation is the structural identity of the scientific method, of rational decision-making, of the exchange of sound advice and fair criticism, and of the learning of new behaviour".

The last activity of System Beta, the learning process, as one of the foundational activities of action learning, requires detailed examination. Revans (1982: 764-766; 1998: 4) describes action learning with a simple formula $L = P + Q$. Weinstein (1999: 36-38) and Marquardt (1999: 29-30) expanded this original description of Revans to include the action (implementation) and reflection aspects of the action learning process which changed the formula for the learning process to $(L = P + Q + A + R)$.

This extended formula is more aligned with the structure of System Beta and is therefore more representative of what the action learning process constitutes. This formula will be used to develop an explicit theory of knowledge for action learning.

The formula $L = P + Q + A + R$ therefore represents the following:

L: stands for the sum total of one's learning, or the real and context-specific learning that is taking place.

P: programmed knowledge (i.e., expert knowledge and theories in current use conveyed through books, lectures, case studies and other structured learning mechanisms. It is characteristic of incremental improvement in performance, such as is brought about by fine-tuning and refocusing).

Q: initiated by people questioning their own direct experience. This process of probing questioning offers access to what is not yet known. It is the essence of radical inventiveness based on total changes of method.

A: represents the conversation and interpretation of the information obtained through the programmed knowledge and questioning process which leads to purposeful human action; and

R: recalling, pulling apart and making sense of one's actions which will in turn lead to a new cycle of learning.

These four elements, programmed knowledge (P), questioning (Q), action-implementation (I) and reflection (R), provide thus the foundational framework and core elements of an action learning epistemology and requires an in-depth analysis.

4.2.1 Programmed knowledge (P)

The standard conception of Programmed knowledge (P), within the action learning context, regards it as expert knowledge and theories in current use, the knowledge in books, case studies and the information or skill derived from material already formulated (Sutton 1990: 10; Revans 1998: 3; Weinstein 1999: 36). This kind of *a priori* knowledge corresponds with a positivist epistemology of logical and precise thinking which analyses concepts, propositions and scientific sentences to develop a

transparent linguistic framework modeled on formal logic. P, as a potential source of knowledge, is also aligned with contemporary epistemology that views *a priori* truths as those that can be known independently of any other experience (Kripke 2000: 562). Compared to Polanyi's (1949) distinction of tacit and explicit knowledge, P relates to explicit knowledge.

Despite the fact that P is primarily about *a priori* knowledge and that it could serve as a powerful source of knowledge, Revans degrades the importance of previously conceived theories and adopts a position where P has no or little place in action learning programmes. "In true action learning, it is not what a man already knows and tells that sharpens the countenance of his friend, but what he does not know and what his friend does not know either. It is recognised ignorance, not programmed knowledge, that is the key to action learning: men and women start to learn with and from each other only when they discover that no one knows the answer but all are obliged to find it" (Revans 1991: 5). Although in his later work Revans softened his stance somewhat towards P, it is clear that P is still not seen as having significant relevance to the aims of action learning as he clearly states "it is recognised ignorance not programmed knowledge, which is the key to action learning" (Revans 1991: 5).

Three approaches to the role and importance of P in the action learning process are evident. The first is Revans's position where the importance of P is negated or shunned. A second approach supports a balanced approach by balancing P and Q through understanding (Morris 1991: 76), while the third approach, the traditional view which is often recommended, is to embrace all of P.

Smith (1997: 368) supports the Revans position and argues that P contributes little to the developmental aspects of action learning. He, however, limits and relates the importance of P to the extent the action learning process is used as an effective and efficient problem-solving methodology. Revans never intended action learning to be a problem-solving process, but places the emphasis on learning. If the goal of an action learning programme is thus on problem solving, the emphasis will be on the importance of P. Most importantly, Smith (1997: 369) also argues that if too much emphasis is placed on P, the participant's or learner's questioning ability will be inhibited. He concludes that the introduction of a significant amount of P places unacceptable emphasis on the problem-solving aspects of action learning, altering the balance to the detriment of development. Weinstein (1999: 90) also argues that action learning should be less of a problem-solving technique and more of a creative, forward thinking nature. The question at the beginning of the action-learning project should thus not be "what do I want to solve?" but rather "what do I want to create?" Such an approach is more creative in nature compared to a problem-solving orientation as it reflects a pro-active orientation which is more suitable for a dynamic and fast-changing business environment.

Dilworth (1996: 45-46) argues that although there is obvious value in linking learning to real life issues, the danger exists that we are creating a workplace context where learners are able to grasp real world

problems, but lack the underlying explicit knowledge to solve them. It is thus not a case of discarding P, but needing both P and Q.

Although there is thus not complete consensus about the role of P, a prudent approach to the use of P is advised by Morris (1991: 75-76) and Smith (1997: 370), contradicting Revans' views that P has little relevance in action learning. While the argument about the importance of P is relevant, the action learning process consists of more variants and should be included in the equation as well. The emphasis that will be placed on the various elements will depend on, and be determined by, the objectives of the knowledge that needs to be constructed. If nothing is known about the subject matter, the emphasis will initially be placed on obtaining prior knowledge by investigating and researching theories and concepts. On the other hand, when sufficient is known about the topic, more emphasis will be placed on probing and researching the topic through critical questioning and empirical observation to compare it with theories in use. The merits and shortcomings of these variants of action learning will be further explored through an empirical investigation in Chapter 5.

4.2.2 Questioning

Action learning developmental approaches presumes little or nothing and no preconceived answers to solve a problem should exist. Q should be initiated by people questioning their own direct experience, as well as on creativity that goes beyond ready-made solutions. Weinstein (1999:120) argues that the major difference between asking questions in action learning, and asking them in most other settings, is that in action learning questions are not seeking answers. Models and theories can be legitimately presented and discussed, but properly, as models and theories rather as cure-alls or ritual magic. The focus is on the question and sometimes questions about the question. The foundation of the question is similar to Parsons general theory of action which is goal orientated, namely addressing a real problem rather than a hypothetical one. This focus on the problem indeed strengthens the belief that action learning is a problem-based learning approach within the pragmatic tradition. Furthermore, the problem must also be of either personal interest to the learner and/or strategic importance to the organisation and the successful solution to the problem should have a beneficial result (Peters & Smith 1998: 171).

While programmed knowledge (P) is an important source of learning, it rarely provides the catalyst to construct new knowledge in a rapidly changing world. Questioning, and reflection, make the critical difference in the quality of problem solving and are important drivers for individual, team and organisational growth (Marquardt 1999: 30). Questioning has been described as the knowledge and skill gained by relevant and pertinent questioning, investigation and experimentation and is the component that produces most behavioural changes since it results from interpretations of experience and knowledge accessible to the learner (Sutton 1990: 9; Raelin 1997: 34). This underscores Revans' view about the importance that should be placed on questioning. Similarly Dilworth (1998: 35) also

remarks that questioning “will also point to areas that will require creation of new knowledge (new P). The key is to start with fresh questions, not with constructs from the past”.

The importance that is placed on the role of questions in the action learning process highlights the ability individual workers should have in asking penetrating and high quality questions. Smith (1997: 369) argues that the less an action learning participant knows of P, the more questioning (s)he will be required to undertake, and will in the process develop the necessary skills and ability to ask penetrating questions. However, this statement is arguable because the reverse is also true. If a person knows little or nothing about P, that is having explicit knowledge about the subject, his/her ability to deliberate is impeded and quality questions and deliberation is subsequently not possible.

Asking questions with action learning as the objective differs from asking questions in other situations. Questions are aimed at enabling the presenter of the problem to broaden and deepen his/her view of the situation he/she is addressing. A deeper appreciation of an issue can be achieved by questions that are open, affective, reflective and probing, rather than closed or leading (McGill & Beaty 1992: 140). Action learning questions therefore “seek to go deeper, to understand, to respond to what is being asked, to give it thought. Asking questions is not only a quest for solutions, but also an opportunity to explore” (Marquardt 1999: 31).

In today’s workplace, the capacity to ask critical questions can no longer be restricted to a privileged few. However, being in a position to ask critical and thought-provoking questions depends on the power of learning in two ways:

- (1) One should have learned enough about the topic at hand to recognise its importance.
- (2) One needs to have learned how to put questions clearly and in a way that will invite a positive response (Knasel, Meed & Rossetti 2000: 155-156).

This position does not only underscore the importance of the ability to ask insightful questions, but also indicates that one should obtain some programmed knowledge (P) to enable one to ask these kinds of relevant questions. This view is underscored by Morris (1991: 72) who argues that P contains the collective wisdom of the past and “no one faced with a challenging situation, and hard pressed to find a way of coping with it, is likely to ignore P in the form of wise guidelines, useful know-how and good practice”.

Action learning concerns itself with how to deal with fresh challenges and questioning (Q) needs to come before pursuit of P. The starting point therefore is to ask fresh questions, which commonly flow from finding yourself in an unfamiliar setting and confronted with an unfamiliar problem. The exploration of new ideas associated with Q can lead to the generation of new P (Dilworth 1996: 46). Sutton (1990: 12) argues that action learning can without doubt add P knowledge to the existing

literature, but that “unlike material in the academic tradition, much of this information will only be transient in its usefulness; possibly only used by one or two action learners in the search of answers to practical problems”. Some P knowledge will endure, but it will be minimal in comparison with the total amount of information that is available. This net result of action learning has contributed to the notion that exists that action learning is a “second-class” approach to learning. It is, however, in keeping with the times where the life span of knowledge has become very short indeed.

The importance of asking questions within organisational context is increasingly becoming a focus point for organisational innovation and a competency that needs to be developed for the modern knowledge worker. Creativity and innovation are about learning and exploring, and are closely linked with an organisation’s capability to ask penetrating questions (Finlayson 2001: 312). In a time of instant information in a fast changing world, the need for a positive questioning attitude and culture has never been more urgent. Like Revans, I contend that if correctly applied, action learning can become a driver of creativity and innovation, essential building blocks for constructing organisational knowledge.

The relevance of asking questions is not only limited to the ability to ask questions, but is also closely related to inquiry, that is, collecting empirical data through interviews, questionnaires and other relevant techniques (Garvin 2000: 63). Revans’s original view of Q should thus not be limited to only asking questions, but needs to be expanded into a corporate critical inquiry when appropriate and the situation demands such an approach. Marquardt (1999: 136) argues that action learning is built on inquiry rather than jumping into boxed conclusions, and groups should learn how to pose questions, when to inquire and when to advise. Well-formulated questions are thus the basis for inquiry, which is utilised when questions are no longer adequate to provide the necessary answers.

Despite the fact that action-learning practitioners place the emphasis more on Q, it appears from the literature on the subject that both P and Q have a pertinent role in the action learning process. Notwithstanding these differences in emphasis from an action learning perspective, it is evident that the P and Q combination of action learning is firmly rooted in a positivist epistemology. The interrelationship between the *a priori* programmed knowledge (P) and the questioning and inquiry (Q) approach, is the central notion on which positivism is based. Positivism rests on the notion that there are two legitimate forms of scientific inquiry that yield genuine knowledge: logical analysis and empirical research (Schwandt 1997: 86). This is not denied by Revans (1998: 14), but he objects to “the distinctions drawn by academics between research, action, learning and communication” as highly artificial and misconceived.

Native action learning (i.e., as Revans formulated it) makes a stronger distinction between P and Q, but it is important to remember that both P and Q are only two of the elements that make up the action-learning process, the other two being action/implementation and reflection. In contrast with this

pluralistic and more comprehensive approach, positivism has synthesised both the P (logical analysis) and Q (empirical research) into a single epistemology. Although the action learning process is thus partly based on a positivist epistemology, it has extended the latter by also embracing action (I) principles and reflection (R).

4.2.3 Commitment to taking action through implementation (I)

Action learning's commitment to take action corresponds with Parsons general theory of action which claims that all action is goal-orientated and that in this process options must be generated. Options are the basis of action and if there are no options, no action will follow. The goals in action learning are multiple. The objective is not only to solve problems or to improve performance, but also to learn from it.

Learning to take action, and learning from it, has been one of the primary objectives of action learning. Revans (1982: 782) firmly believes this and unequivocally states that "our view to the world is called action learning because only by action is learning possible". Smith (1998: 248) argues that action learning was intended to achieve two mutually inclusive objectives. On the one hand, it was intended to provide managers with the opportunity to learn to take action, and on the other hand as a developmental intervention where action was not only an end, but also a means to an end – personal development. Proponents of action learning firmly believe that there is no real learning unless or until action is taken. This view is also underscored by current management practices that emphasise the importance of action. Sveiby (2000a: 1) equates knowledge with the capacity to act, an indication of the importance that is attached to action in the construction of knowledge.

Action learning's primary objective is outcomes based and results driven. If action learning does not result in implementation by physically acting on one's decisions, it does not constitute action learning. Marquardt (1999: 33) contends that merely producing reports and recommendations for someone else to implement results in diminished commitment, effectiveness and learning on the part of the individual members of an action-learning group. On the other hand, taking responsibility and ownership for one's decisions by implementing the recommendations, deepens the motivational levels and depth of learning. It also provides the opportunity for continuous reflection, which again results in deep learning.³⁴ The idea of the importance of deep learning is not new. Dewey (1916: 98) stated that "the depth to which a sense of the problem sinks determines the quality of the thinking which follows and any habit of teaching which encourages the pupil to glide over the thin ice of genuine problems reverses the true method of training".

³⁴ A deep approach to learning is where the learner looks for understanding and meaning. The opposite to this is surface learning where the learner memorises and reproduces what he/she learns (Knasel, Meed & Rossetti 2000: 46).

The importance of taking action within an action-learning context is therefore an important matter. In a management development programme, the emphasis could be, as Smith (1998: 248) has argued, namely, to provide managers with the opportunity to learn to take action even if they do not physically implement it. In an action-learning context it forces managers to think about the action steps, who should be involved, the time frames in which to complete this, and if it is in the company's strategic objectives. In a corporate environment where the emphasis is on the problem-solving nature, managers will be required to have a detailed action plan and to take the necessary steps. Notwithstanding the shift in emphasis, action remains important. The importance of an action plan and action steps is therefore to ensure that effective implementation is executed (Marquardt 1999: 232).

4.2.4 Reflection

Although reflection is indicated as a separate aspect of the action-learning process, it occurs throughout the action-learning process. It is built into each stage of the action-learning process (P, Q and I), where there are moments when participants are forced to look back and reflect on what they did (action taken) or did not do and what happened (Weinstein 1999: 38). Reflection is therefore both a continuous process throughout the programme, as well as a dedicated after action review on the completion of a learning task. McGill and Beaty (1992: 21) argue that reflection is a necessary precursor to effective action and that learning from experience can be enhanced through deliberate attention to this relationship. Ford and Ogilvie (1996: 58) conclude, "lessons learned from action taking are an indispensable source of knowledge creation and competitive advantage". Marquardt (1999: 33) emphasises a different aspect and contends that the purpose of reflection is to develop a questioning insight and the capacity to ask fresh questions. Although all these approaches highlight different aspects of the role of reflection in the knowledge construction process, they are important in underscoring the importance of the role which reflection plays in this process. The following diagram illustrates clearly how reflection is an integral and integrated part of the action learning process:

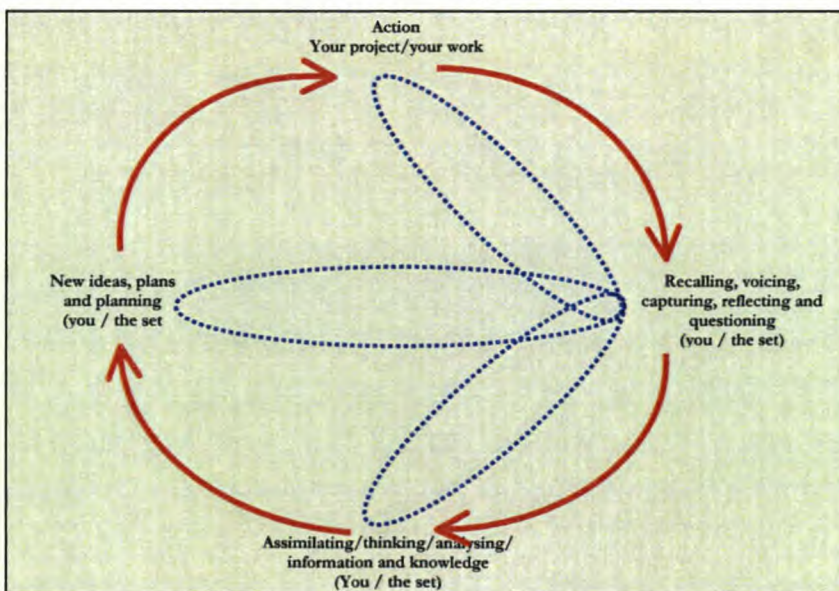


Figure 4.1: Reflection at Each Stage of the Learning Cycle (Weinstein 1991: 41)

Dixon (2000: 18) argues that it takes a certain amount of intention to construct knowledge out of an experience. This involves a willingness to reflect on actions and their outcomes before moving forward, a process that Dixon has identified as the serial transfer of knowledge.

Although debrief meetings, or After Action Reviews (AAR), are not entirely uncommon and unknown in organisations, they are a relatively new way of thinking about a team meeting with the purpose of constructing knowledge out of experiences. Notwithstanding, reflection plays an important role within the team and organisational context to construct both new knowledge and to transfer that knowledge across an organisation. Reflection is thus a very important aspect of the learning process when a team or organisation is serious about constructing and sharing knowledge. Reflection, however, requires the difficult (and often counter-intuitive) task of building self-awareness together. Subsequently, reflection is rarely put into practice in business, because organisations are not equipped for it (Roth & Kleiner 2000: 127).

Dixon (2000: 42-50) and Garvin (2000: 100-107) contend that for an AAR meeting to be meaningful, it should be held on a regular basis, be brief and deal with only four questions³⁵, every team member should participate in the meeting and no blame must be apportioned and the corporate culture must support such an approach.

Dixon (2000: 50-51) and Garvin (2000: 99) furthermore posit that some of the major obstacles in organisations with a bias for action include the following: (1) No time is made available for reflection; (2) team members lack the skills to have knowledge-producing conversations; (3) team members are dispersed before the end of the project; and (4) the team is virtual. Review processes also have a major weakness: they take place after the fact and learning occurs with a lag. These obstacles impede reflection and subsequently have a negative impact on the individual, team and organisation to construct knowledge. As will be pointed out in Chapter 3, these problems are identical in the implementation of knowledge management programmes.

McGill and Beaty (1992: 194) argue that reflection is more significantly achieved in a social context and that there are three elements that are important in the reflective process, namely (1) returning to the experience by replaying it by description of some kind, for example by describing it to others, (2) attending to the feelings associated with the experience, and (3) re-evaluating the experience following attention to description and feelings.

³⁵ The four questions are: (1) What was supposed to have happened? (2) What actually happened? (3) What accounts for the difference? (4) What will we do next time?

The above points underscore the importance that reflection is most effectively achieved in a social setting. Without dialogue, reflection is limited to the insights of the individual. Habermas (1984: 21) contends that personal reflection requires detachment on the part of self to look at the other part of self. However, there is an inherent danger of self-deception in this individual reflection. Polanyi (1958: 264) contends that 'tacit-knowing' cannot be critical, which will increase the danger of self-deception. The individual therefore needs other people, and in an action learning environment, s(he) needs set members to stimulate and enhance reflection.

Following Habermas' thoughts on reflection, I contend that reflection should liberate the mind through critically reflecting to arrive at a solution and understanding. If this is achieved, either through taking a new course of action as McGill and Beaty suggest, or by asking fresh questions as proposed by Marquardt, it will not matter, so long as it leads to intellectual liberation, a higher level of understanding and continuous improvement, more so than was previously the case. In both the natural and social sciences, the act of knowing is not immediately connected with the utilization of knowledge; the theory and practice to which it is directed are separated. However, Habermas argues, theory and practice are linked in the process of self-reflection, and our act of knowing coincides with our release from previously unacknowledged forces (Roderick 1986: 57).

It leaves little doubt that the act of reflection, both as a continuous process and as a dedicated action after a project is finalized, is an important source of knowledge. As referred to in Chapter 1, contemporary epistemology also underscores the importance of reflection and introspection as a source of potential knowledge. However, it remains to be seen to what extent individuals, groups and organisations are making use of this important source of knowledge. McNiff and Whitehead (2000: 18) warn that the issue of self-reflection should not be treated lightly and that it would be naïve to expect people to suddenly become self-reflective when they are used to a culture of command and obedience. Self-reflection is a long and complex process that needs to be learned and practised. Reflection, as one of the dimensions of a pluralistic epistemology, is one of the issues that will be addressed in Chapter 4 as part of my empirical research.

From the preceding discussion it can be concluded that at metatheoretical level, action learning is rooted in a pluralistic epistemology. There are four action-learning variants involved (programmed knowledge, questioning and empirical research, action and implementation, and reflection) that are all important elements of the action-learning process and which have their roots in different epistemologies. Action learning is not as simplistic as Revans made it out to be. It is not difficult to understand and it could be applied fairly easily in organisations if correctly understood. However, one has to be very clear with what objectives one plans to use it, as these are crucial for the successful outcome of an action-learning intervention. These objectives can range from a short-term problem-solving approach, a learning methodology or a method to construct knowledge. Depending on the

objectives, the emphasis on any of these variants may be different in order to achieve the correct outcomes of an action-learning intervention. At an individual level there will be a preference to construct knowledge in a particular way. However, to be effective as an organisational epistemology all four aspects are equally important, as will be empirically shown in Chapter 5.

The Habermasian concept of communicative rationality has three dimensions of communicative action, namely external nature (objective world), society (social world) and internal nature (subjective world). With his 'Theory of Communicative Action', Habermas (1984: 7, 102) shows that the objective world can be approached by way of interpretive understanding from the domain of the social world. There is a fundamental connection between understanding communicative actions and constructing rational interpretations, and one of the methodological contributions of hermeneutics is that the "interpreter can elucidate the meaning of a symbolic expression only as a virtual participant in the process of reaching understanding among those immediately involved" (Habermas 1984: 135).

Action learning shows a strong affinity with this hermeneutic approach (the theory of interpretation as a particular methodology). One of the main tenets of action learning is that we learn best and most effectively when we learn in the company of others who are also learning. When we work with others who are also concerned with trying to understand what is really happening around us, we gain from the searching and questioning that each one of us goes through (McGill & Beaty 1992: 196). In what follows, I shall explore the hermeneutic character of action learning.

4.3 The Methodology of Action Learning

The core entity in action learning is the action-learning group, also called a set or team. In an educational setting, the term action-learning set is preferred. The group is composed of four to eight individuals who examine an organisational problem that is of strategic relevance and importance to the organisation. In an educational setting, set members would typically have had an introduction to the subject of discussion, e.g., Marketing Management. They would thus have had an amount of programmed knowledge (P) as a conceptual reference. This kind of structured knowledge is what Habermas refers to as the objective world. This could similarly apply to an organisational setting where an expert or consultant has provided an introduction to the topic. Set members act as a resource for one another and each member is in turn supported and challenged by the other set members (Weinstein 1999: 57; Marquardt 1999: 6). Revans (1982: 2, 775) contends that learning is a social process and that the social aspects of learning call for conversation and interaction with others while working on real and important problems. To emphasise the importance of people learning together, Revans used the term 'comrades in adversity'.

In a set there are usually three roles, that of facilitator, presenter and member. This gives structure to a group that radically alters the normal flow of conversation. Each member gets “airtime” and becomes the focus of attention. The individual member (presenter) presents his or her issue to the group in order to reflect on it and design new ways of progressing with it. In this way, action-learning sets provide a safe and supportive, but at the same time challenging environment, characterised by trust and confidentiality, where set members can work on issues and solve problems through a process of reflection and action (McGill & Beaty 1992: 59-60).

Through active listening, questioning and reflection, set members assist the presenter to interpret and come to an understanding of the problems they face. The methodology followed with action learning is similar to that of hermeneutics as described by Habermas in his theory of communicative action. For Habermas, the successful functioning of human beings as social species requires that communication be maintained by overcoming misunderstanding. Interaction and communicative action in this domain, which Habermas calls the social world, represents the practical cognitive interest, which is obtained through a hermeneutic approach. [See Figure 1.1].

Habermas (1984: 294) defines the concept of ‘communicative action’ as “the type of interaction in which all participants harmonise their individual plans of action with one another and thus pursue their illocutionary aims without reservation.” Similarly, the importance of learning together as a team forms the basic point of departure in action learning, and incorporating the Habermasian concepts of communicative action will not only strengthen action learning, but also unlock its real potential.

In Chapter 3 I have addressed the importance of communication and explored the concept of deliberative democracy as an extension of dialogue. Those alternative possibilities in constructing organisational knowledge will now be explored in the context of action learning and how the latter relates to the constitutive features of organisational knowledge.

4.3.1 Values of action learning

The importance of values in our learning process and how they shape our paradigm of reality have been the focus of Dewey (1922), Capra (1988: 22) and Habermas (1984: 172). Humankind uses thoughts, perceptions, and values to construct a vision of reality (Capra 1988:22). For Habermas (1984: 1972), rationalisation (which he terms rationality of choice) does not only occur when alternative means are more or less rational, but also when those ends can be sought in accord with values as well. Rationality therefore includes also the evaluation of value postulates or clusters or systems of value that underlie the preference expressed in the ‘rationality of choice’. Although Habermas (1984: 183) leaves the discussion of value contents at a theoretical level, he leaves little doubt that values have an important impact on our construction of rationality and should therefore be taken into account in a theory of knowledge.

The importance of values underpinning action learning has also been recognised as fundamental for action learning to be effective. The following values are of critical importance for the success of action-learning programmes (McGill & Beaty 1992: 35; Marquardt 1999: 152; Weinstein 1999: 8).

4.3.1.1 Care, empathy and support

Empathy is at the centre of the set (group) process. If one knows what the presenter of a problem feels like at a given moment, one will have a better understanding of the situation to enable him/her to make progress. In order for people to share their problems and offer possible solutions based on personal experience, it is important that there be a commitment of support for one other (McGill & Beaty 1992: 36; Marquardt 1999: 47).

Showing this kind of care requires that group members have trust in one other and that in sharing their personal views, and also providing feedback, they respect one other.

4.3.1.2 Trust, openness and respect for others

The effective functioning of a set to ensure that learning is taking place requires that there is a feeling of security for all the participants. Only when there is complete confidence in this, can a member truly explore his/her feelings and possible future actions (McGill & Beaty 1992: 37). In an environment where trust exists, people feel that they have the support of the group, and they are more willing to take risks with new ideas or new actions. Giddens (2001: 68) underscores this and states “we should place the notion of trust alongside that of risk. Trust refers to the confidence we have either in individuals or institutions. In a world of rapid transformation traditional forms of trust tend to become dissolved”.

The importance of trust in collaborative learning and the role team learning plays in constructing organisational knowledge raises some pertinent questions. To what extent does the team (structure) enable organisational learning, or does the individual (agency) have primacy in constructing organisational knowledge? This question has already been addressed in Chapter 1 and will be explored again in both Chapter 5. In organisational context we should have trust in both the individuals (team members) and in the organisation which provides the members with the means not only to take risks, but also to have the means to react quickly to changes and challenges. Knowledge sharing, rests on a foundation of trust and if no trust exists amongst members, knowledge will not be shared and organisational knowledge will be impeded (Abrams 2001: 1).

Respect for and openness towards others and their viewpoints are important for the development of learning to take place. If one is biased towards a particular person or situation, one might not be receptive to learning and valuable learning opportunities can get lost.

4.3.1.3 Effective communication

Effective communication is of primary importance in an action-learning set as it is for organisational knowledge construction. Communication should be open, honest and without prejudice. No effective communication will take place in an atmosphere of hostility, arrogance and bias. Marquardt (1999: 98) argues that high-quality communication is critical to the successful functioning of high-performance work teams. Although action learning needs both discussions and dialogue, it helps to effectively develop the latter. Dialogue is important for action learning since it promotes powerful collective thinking, shared meaning, and communication, and allows members to tap into the collective knowledge base of its members.

Isaacs (1993: 25) defines dialogue as “a sustained collective inquiry into the processes, assumptions, and certainties that compose everyday experience”. However, this experience is of a special kind – the experience of meanings embodied in a community of people. This definition relates to one of the primary characteristics of action learning, that of collective learning. Isaacs (1993: 28) posits that dialogue is central to the notion of organisational learning on the grounds that it “holds promise for the promotion of collective thinking and communication.” He posits that dialogue makes use of “a discipline of collective thinking and inquiry” as an approach which enables people “to develop collaborative thought and co-ordinated action”. Action learning will therefore enable organisational knowledge through dialogue.

Effective communication will result in more effective interpretation and will contribute to higher levels of understanding in teams. McGill and Beaty (1992: 128) identify five levels of communication which ranges from surface communicating only where nothing of oneself is given to peak, open communication though not necessarily agreeing with them. In reaching a situation where there is open, honest and effective communication in a group, all the values mentioned previously play an important role. If these values are absent in an action-learning group, the quality of interpretation will suffer, and will be detrimental to the development of the practical cognitive interests of both the individual and the group.

Deliberation, as I have shown in Chapter 3, provides an improved understanding of communication. It is important for action learning since it promotes powerful collective thinking, shared meaning and allows members to tap into the collective knowledge base of its members. Action learning promotes all these values of deliberation and is well suited to enable organisational knowledge through a pluralistic framework.

I contend that development of the best argument within an action-learning context is comprehensively addressed through an action-learning approach. Problems are discussed and explored by integrating existing conceptual frameworks with the empirical results that are available from research undertaken

relevant to the problem. Different solutions to the problem are subsequently explored and presented by set members, motivated through an integrated and pluralistic approach. Such a pluralistic approach enforces deliberation. However, the emphasis in an action-learning context is ultimately on learning, and although the force of the best argument is important, learning should not suffer by succumbing to winning arguments. On the other hand, when the emphasis is on decision-making and problem-solving, the force of the best argument will be strengthened if a pluralistic epistemology is adopted.

4.3.1.4 Critical thinking and action learning

There is no clear conception of the term 'critical thinking', and given the vagueness of the concept, it would be foolish to suggest that any given conception of critical thinking is the right one. Despite this, critical thinking advocates generally posit that "critical thinking must be directed toward some end or purpose, such as answering a question, making a decision, solving a problem, resolving an issue, making a plan, or carrying out a project" (Bailin, Case, Coombs & Daniels 1999b: 285-287). Critical thinking is also associated with mental processes such as classifying, observing, evaluating and synthesizing, and with following certain procedures. These procedures include: Defining the problem, examining alternatives, considering consequences, investigating importance, deciding direction, and evaluating ends (Bailin, Case, Coombs & Daniels 1999a: 273-278).

Bailin *et al.* (1999b: 290) argue the best way to characterise the critical thinker is in terms of intellectual resources which are identified as (1) background knowledge (2) operational knowledge of the standards of good thinking (3) knowledge of key critical concepts (4) heuristics, that is strategies, procedures etc. and (5) habits of mind.

These intellectual resources are similar to those included in the action learning formula. However, it is especially knowledge of the standards of good thinking that require closer examination. Standards are considered as (1) those that are relevant to judging intellectual products (e.g. arguments, theories and legal judgements for example) and (2) principles that are relevant to guiding practices of deliberation or inquiry (Bailin *et al.* 1999b: 291).

In the context of action learning a variety of different kinds of problems and issues may occasion deliberation. The following principles, which are relevant to a problem of deciding what to do, are illustrative of principles of deliberation. One should:

- Consider as many plausible alternative courses of action as is reasonable given the context of the decision, its significance, and one's prior understanding about similar decisions;
- Attempt to discover and take into account as much relevant information about the nature and consequences of each alternative as is reasonable given the context of the decision; and

- Make a reasonable attempt to acquire an awareness of the point of view and presuppositions underlying one's thinking, and the possible biases to which this may give rise (Bailin et.al. 1999b: 291-292).

Action learning methodology reflects many of these characteristics and requirements of critical thinking. It promotes the principles and practices of deliberation which is one of the primary enablers in constructing organisational knowledge. Helliwell (2000: 44) posits that without exception leadership skills and critical thinking and decision-making ability are arguably the two core competencies which distinguish truly successful business leaders. It is therefore not surprising that action learning, with its strong correspondence with critical thinking, has become popular to develop leaders.

The relationship between action learning, critical thinking and leadership development will be further explored in Chapter 5.

4.4 Summary and Conclusions: Redescribing Action Learning

From the introduction to this chapter it is evident that the term action learning has come to be used in connection with a wide range of strategies for supporting management learning and the development of organisational knowledge. These include problem-solving, personal development and learning, leadership and organisational development, as well as an educational methodology for specifically management education. Modern philosophers of education suggest a post-empiricist, problem-based approach may be the best approach to meet the demands of the knowledge-based economy and learning society of the 21st century (Aspin & Chapman 1998: 15). It is however important that one should at all times be aware of the relationship between theory and practice and the context in which knowledge and understanding are created and shared, for this is fundamentally what a pluralistic problem-centred approach sets out to do (Higgs 1998: 9).

Finding clarity and direction on the wide-ranging application and flexibility of action learning is not the only challenge one faces. Experts also differ on how it should be used. One school of thought, following the native Revans approach, believes that the defining characteristic of action learning is learning to ask questions, and not the requirement for action (Pedler 1991: 63). Others, such as Wallace (1990: 91), Morris (1991: 72) and Smith (1998: 252) propagate a more balanced approach between both P and Q. On the other hand, Sutton (1990: 9) places the emphasis on the value of P or explicit knowledge.

Wallace (1990: 91) concludes that the label action learning is depicting an activity which is undergoing development as new ideas for putting action learning into practice are constantly introduced. Not all these developments are truly adhering to the principles of action learning, which contributes to the

abuse of the term and its own unique contribution. Action learning apologists believe that the 'action' in action learning is there as the pathway to learning. Solving the problem is fine, but it is far more important that there be learning from the experience than there is actually a resolution to the problem (Raelin 2000: 68). The main objective of action learning, therefore, is to construct new knowledge for the participant to improve his/her job performance. To be able to achieve this objective, managers / workers need to learn how to analyse a given problem or challenge, and to take effective action to solve these managerial challenges. To enable them to achieve this, managers must base their learning on all four variants of action learning (P, Q, I and R).

Against the background of Wallace's statement in the previous paragraph, I contend the Habermasian theory of communicative action provides firstly an epistemological framework in which to ground action learning and secondly, can serve as an analogy for organisational knowledge construction. Habermas identifies three knowledge-constitutive interests, which guide and shape the way knowledge is constituted in different activities. These three interests, the technical, practical and emancipatory, result in three kinds of knowledge, namely instrumental, practical and reflection. In this chapter I have investigated the various knowledge constructs that constitute action learning and how they relate to the Habermasian theory of rationality. Programmed knowledge (P) can be related to instrumental or technical knowledge, the Questioning (Q) insight to practical knowledge that is obtained through an interpretive approach, and action-reflection (I/R) to emancipatory (critical self reflection) knowledge. Action learning in the Habermasian tradition therefore implies that different actions of thinking, analysing, interpreting, communicating and taking action are all integrated in a theory of rationality that will have a varied influence on the production of knowledge within organisational context. Furthermore, similar to TCA, action learning succeeds to construct knowledge at the individual, team and organisational system levels using communication as the unifying action. In identifying System Alpha (internal, external and value systems), Revans has also grounded action learning in a systems theory framework. Although Revans does not relate System Alpha to systems thinking, it essential corresponds with Beer's (1959) social systems model which I will integrate with action learning and use to develop my own framework for organisational knowledge construction.

The correspondence between the three primary sources of organisational knowledge as discussed in Chapter 2, namely propositional, procedural and personal, and the action learning variants is evident. These three sources are all innately present in the action learning formula of $L=P+Q+I+R$. Its roots can be traced back to the Habermasian theory of communicative action which characterises human interest as technical (propositional), practical (procedural) and emancipatory (tacit/personal) knowledge. Within the action learning paradigm P, (programmed knowledge) corresponds with propositional knowledge, Q (questioning) with the interpretive nature and approach of procedural knowledge, and I (action/doing) and R (reflection) with personal knowledge. The action learning process therefore taps extensively into not only the sources of knowledge that an organisation

possesses, but through its interpretive nature simultaneously also makes use of the all-important interplay between tacit and explicit knowledge that is generated at individual and team level. Organisational knowledge is dynamic in nature and consequently its development and how it is required depend on the ability to learn. Learning takes place at both the individual and organisational level and arises from experience, from activity, from study, analysis and thought, from teaching and training and from experimentation (Stonehouse & Pemberton 1999: 134)

While it might appear as if the emphasis is on the practical rational action-implementation variant of the action learning equation, action learning remains firmly rooted in the epistemological principles of the Habermasian Theory of Rationality. Action is not only an intentional physical human act, but within the framework of the Theory of Rationality also encompasses actions such as empirical-analytic, interpretation and critical reflection. (Refer Figure 1.1). This complex concept of practical rationality therefore points to a concept of rationality that encompasses *both* theoretical and practical rationality (Habermas 1984: 174).

Within the framework of action learning, this extended concept implies that learning does not constitute only one action, but requires multiple actions to construct knowledge. Although the focus of action learning is on the outcome, that is, of acting on decisions by implementing the decision, action learning does not consist of only this one particular action. It is rather a continuous and inter-related process of learning that consists of various actions through which knowledge is constructed. I contend, therefore, that action learning in its native form should be extended to incorporate all the actions assimilated with the action learning formula of $L = P + Q + I + R$. In this extended concept of action learning action implies not only one action, but various actions such as researching *a priori* knowledge and theoretical concepts in use (explicit knowledge), empirical investigations, implementing and taking action on one's findings (one's belief in what one thinks will be the correct course of action), and lastly, reflection. These actions are all embedded in different epistemologies such as logical empiricism, hermeneutics, action concepts of rationality and critical reflection. An extended concept of action learning is therefore required to incorporate the various actions that constitute action learning. Although in contrast to Revans's native idea of action learning, this conceptualisation of action learning will add the necessary depth and rigour to action learning that is needed to make it a more powerful and acceptable organisational learning methodology than it already is. This approach moves the emphasis somewhat away from action learning as a problem-solving technique, but strengthens its potential as a method to construct and enable knowledge within organisations.

This new conceptualisation also implies that the original Revans formula for action learning is fundamentally flawed. By omitting two crucial aspects of the learning process (action and reflection), Revans fails to align his learning process with his System Beta, which he claims provides the underlying structure for the four activities he identifies as fundamental to the success of action learning. System

Beta does include all the aspects of the learning formula, but this is not reflected in the Revans version, and this result in a skewed learning process. Action learning cannot be optimally applied if all four elements (P, Q, I, R) are not present. In other words, all four variants are to be included and equally optimised in the learning process. This approach calls for a redescription of action learning where various epistemological approaches including positivism, empiricism, action-reflection, system theory and heuristics are synthesised in a pluralistic framework. Action learning is therefore redescribed as a pluralistic epistemology which may serve as a framework for an organisational epistemology.

Finally, action learning can also not be evaluated as a theory for organisational knowledge construction without examining its close relation to action research. Revans (1982: 638) contends that “one cannot claim to ‘do research successfully’ upon some real conditions unless one can demonstrate that one has ‘learned to understand’ those same conditions by demonstrating that one has achieved in them some predictable change”. Levy and Brady (1996: 36) argue that the action-learning process, either within or across organisations, provides a useful tool for learning within an action research framework. McNiff and Whitehead (2000: 33) and Probst, Raub and Romhardt (2000: 29) also underscore that action research is a pragmatic approach to developing organisational knowledge. Action research involves the manager/researcher who is conducting the research. Traditional forms of research place the emphasis on technical rationality (P), which is generated by conventional kinds of research. On the other hand, action research generates practical theory, which is rooted in the unarticulated tacit knowing of practitioners. McNiff and Whitehead (2000: 2) argue that people come to know by trusting their deep tacit knowledge and that learning from experience can be reinforced through intellectual study. Action learning and action research are therefore ideally suited to unlock this body of tacit knowledge. When this occurs, the true power of organisational learning will become evident.

In Chapters 2 and 3 I concluded that organisational knowledge is not only shaped by a pluralistic epistemology, but that organisational knowledge also has constitutive features that enable organisational knowledge. Any framework for constructing organisational knowledge must therefore reflect and promote these features, namely deliberation, knowledge leadership, organisational culture and technology. These features are inherently ingrained in an action learning approach and in the following chapter I will show how these features enable organisational knowledge.

In our search for an organisational epistemology that will suit our needs for contemporary and future developments in business science, it has become evident that we are faced with a paradigm shift. A paradigm shift reflects the importance of and commitment to new values and beliefs (Kuhn 1970: 184-186). Action learning contains many of these values that a new paradigm demands. The change from individualistic learning to collective learning, from competition to collaboration, trust, sharing and respect, reflect these new values and are all embodied in action learning. Action learning is showing the way how to construct organisational knowledge in a post-modern era. However, it still has many critics

who doubt the effectiveness of such an approach. In an attempt to verify empirically many of the claims which were made in this and previous chapters about action learning being informed by a pluralistic epistemology, the following chapter empirically investigates how knowledge is constructed at individual, team and organisational levels. This chapter will also examine some key action learning variables in order to provide additional empirical evidence about the effectiveness of action learning as *inter alia* a problem-solving and leadership development approach.

5.1 Introduction

In the previous chapters I concluded that a pluralistic epistemology informed by action concepts and social systems theory needs to be considered as an alternative to the dominant positivist epistemology in business science. Although this approach undoubtedly requires a paradigm shift in the construction of knowledge, many experts see it as a necessary step to meet the requirements and demands of the post-modern society as such a pluralistic epistemology seems more compatible with a post-modern approach to epistemology. I contend action learning meets the critical requirements of such a pluralistic epistemology in order to enable the construction of organisational knowledge.

However, as has been pointed out in Chapter 4, many gaps still exist in knowledge about action learning, and critical deficiencies in the literature are evident in a range of generalised, often prescriptive publications, without any rigorously evaluated empirical basis. Various proponents of action learning have underscored the need for more empirical evidence concerning action learning's impact on individuals and its value for client organisations, and have called for a rigorous examination of the impact of action learning on the learning of professionals (Wallace 1990: 89-103; Harrison 1996: 28; Spence 1998: 3).

In Chapter 4, I concluded that action learning is informed by a pluralistic epistemology. Besides these action learning variants that comprise a pluralistic epistemology, other action learning attributes have been identified by a number of leading experts on the subject. Marquardt (1999: 73) and Burke (1995: 166) emphasise the problem-solving nature of action learning, Boshyk (2000: xi) and Dotlich and Noel (1998: 69) action learning's ability to develop leaders, Schwandt and Marquardt (2000: 62) action learning as a theory for organisational learning and Peters and Smith (1998: 172) promote action learning as a learning methodology.

Furthermore, in following Revans (1982: 782; 1998: 76), some practitioners contend that action learning emphasises that knowing means doing. Senge (1990: 23), on the other hand, argues that it is a delusion that the most powerful learning comes from direct experience. When our actions have consequences beyond our learning horizon, it becomes impossible to learn from direct experience. Managers seldom experience the consequences of their most important decisions, as the most critical decisions made in organisations have system-wide consequences that may stretch over years or decades. This is to some extent limited by the action learning approach, which requires that

learners/managers should either have the authority to implement, or the power to influence action learning projects, and feedback of their learning in most cases happens immediately.

Although empirical research indicates that active/direct experience is indeed a powerful way of learning, it must be seen in relation to other action learning variants. Empirical results corroborate Senge's observation that action learning is not only learning by doing, and that we should guard against over-emphasising this aspect of action learning as some action learning practitioners are inclined to do.

From contemporary learning strategies it is clear that attributes such as critical thinking, problem-solving, team work, finding and interpretation of information, and the incentive to become life-long learners are priorities, and that any modern learning strategy will have to incorporate these attributes. Knowles (1978: 58) supports this notion and contends that (1) adults approach learning from a problem-centered as opposed to a subject matter-centered perspective, and (2) motivation in adults is as likely to come from internal factors such as self-esteem and pride, as from external factors such as pay or praise from subordinates. As has been highlighted in Chapter 4, these aspects are firmly embedded in action learning and have been the focus of empirical research on how they impact on individual learning.

An organisational theory of knowledge, if it were to succeed, will have to align both individual and team learning with the organisational learning process, which is primarily seen as a process of collection of data/information, interpretation and analysis, distribution and application, reflection and feedback which results in new knowledge to be constructed. If individual, team and organisational learning are not based on a similar theory of knowledge, organisational learning will become dysfunctional and ineffective. My empirical study in this chapter not only closely examines action learning as a pluralistic epistemology, but also whether such an epistemology ought to be attuned with the construction of knowledge at individual, team and organisational levels.

5.2 Objectives of the Research

The objectives of the research include:

- To determine the relevance of action learning as a problem-solving technique, an executive leadership development approach and as a method to enhance the principles of life-long learning.
- To determine the importance and relevance of various action learning variants in the construction of knowledge at individual, team and organisational levels and how it is shaped by a pluralistic epistemology.
- To validate the argument that organisational knowledge is constructed through a pluralistic approach in contrast with the current dominant positivist approach.

- Evince criteria of organisational knowledge and the latter's relationship with action learning.

5.3 Research Methodology

My research methodology is based on both empirical and descriptive findings and is to some extent grounded in a positivist research paradigm. This appears to be in contrast with the action learning and pluralistic approach I am propagating in this dissertation, and therefore needs clarification. The justification for and identification of a research problem for this study resulted from my interaction and discussion with a number of managers and learning officers from leading companies, as well as my own consulting work as a knowledge management consultant, on the need that exists within organisations to clearly define and formulate corporate learning and knowledge strategies. The pluralistic nature of action learning includes positivist elements and hence evidence of that approach in this study. For this study to be truly action learning, it should be complemented by an action/implementation plan and a section on reflection. As this study is not the result of a specific, but rather a generic corporate need, an action plan is not included. However, the study will be complemented by a section on reflection, which will be included in Chapter 6.

The empirical technique furthermore includes the use of a structured questionnaire and a focus group discussion, while the descriptive method uses primary data obtained from an international research institution and compares these with relevant case studies from the literature.

To ensure that the important strata (graduates, dissertation phase, more than 50% completion and less than 50% completion of the action learning development programme) were correctly represented, a stratified random sample was used. A stratified random sample requires a smaller sample (requiring less time and money), and a more representative sample from the population can therefore be obtained with a greater degree of certainty (Kruger & Welman 2001: 56).

The research instrument which was designed comprises a forty-point questionnaire based on a five-point Likert scale. A pilot questionnaire, involving seven respondents, was used to determine the validity and reliability of the questions. From this pilot questionnaire, I developed the final version, which is based on close-ended questions identified during the literature research, as well as from personal experience and discussions with other knowledgeable people involved with action learning. The respondents were also requested to volunteer more detailed answers on three open-ended questions and one yes/no question. The questionnaire is designed around six main categories to be researched, namely the impact of action learning at an individual, team and organisational level, the impact of action learning on the development of the individual competency of the learner, action learning as a pluralistic epistemology, and lastly the difficulties in constructing knowledge from a pluralistic perspective. An example of the questionnaire is attached as Annexure A.

A total of 140 questionnaires were sent out through either normal mail or e-mail to a group of 350. A total of 125 was returned of which 120 questionnaires were used, representing a response of 86%. A statistical software program, Moonstats,³⁶ was used to capture and analyse the data.

A focus group discussion was also employed to determine the conditions under which team based / collaborative learning will be successful. This focus group was held on 29 November 2002 in Cape Town and involved ten graduates who had completed the action learning executive MBA programme with Business School Netherlands during 1999-2002. All the participants in the focus group had had extensive exposure and each individual had more than two years' experience in action learning. The list of participants, the range of questions, and summary of the responses, are attached as Annexure B.

In addition to the empirical procedure, a descriptive approach is also used to present evidence of interesting and significant patterns in existing data (Mouton 2001: 113). This was done by using data from the Teleos Report, *Global Most Acknowledged Knowledge Enterprises (MAKE)* of 2002 (Chase, 2002), and comparing it with case studies available in the literature. This descriptive research confirms the claim that there is a strong correlation between action learning as an organisational learning methodology, albeit by different names, and companies which have successfully implemented knowledge management programmes. I contend that if a company is applying a learning methodology based on action learning principles, the more successful will be the implementation of a knowledge management programme. Action learning as a learning methodology should therefore be an important consideration and driver in the implementation of knowledge management programmes, and should serve as a framework for knowledge management initiatives.

5.3.1 Profile of sample respondents

The sample of 120 students enrolled for an MBA programme based on action learning principles represented a fair sampling of middle and senior managers involved in various industries. A stratified sample was used which represented participation of the students during various phases of a two-three year management development programme. Of the respondents, 85% were from South Africa, 13.33% from the Netherlands and 1.67% from other African countries. All students attended an action-learning orientation workshop at the start of the programme and had all been theoretically and practically exposed to action learning. Managers were drawn from a multicultural environment and were evenly spread in terms of both race and gender. The following graphs provide an indication of the level of participation in the action learning programme and the various industries in which the participants are employed.

³⁶ MoonStats. 2003. <http://www.moonstats.com>

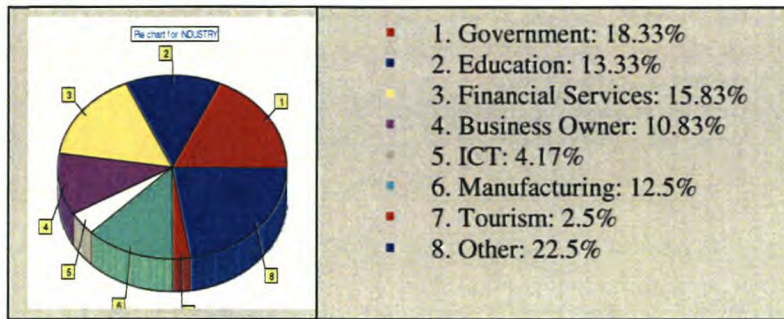


Figure 5.1: Industry Representation

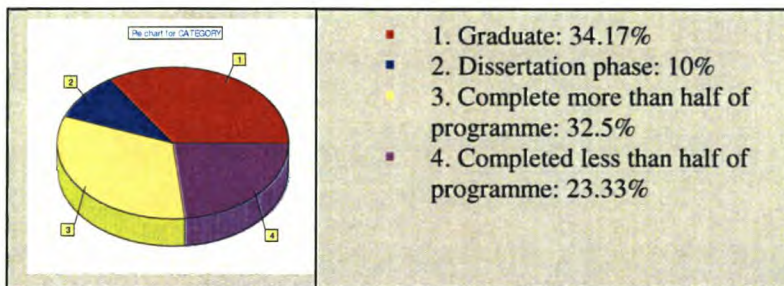


Figure 5.2: Stratified Sampling of Participation in Action Learning Management Development Programme

A total of 45% had completed or nearly completed the programme, with 32.5% who had completed more than half of the programme. A total of 77% in the target group had therefore completed more than half of an action learning development programme. This represents a significant number of people and the results can therefore be considered as statistically significant.

5.3.2 Validity of information

The use of a pilot study to test the validity of the questions and to make the necessary changes, the use of a focus group discussion to follow up on certain aspects of the empirical results, and the use of a stratified sample from a group whose members had all been theoretically and practically exposed to the concepts of action learning, ensured the validity of the information.

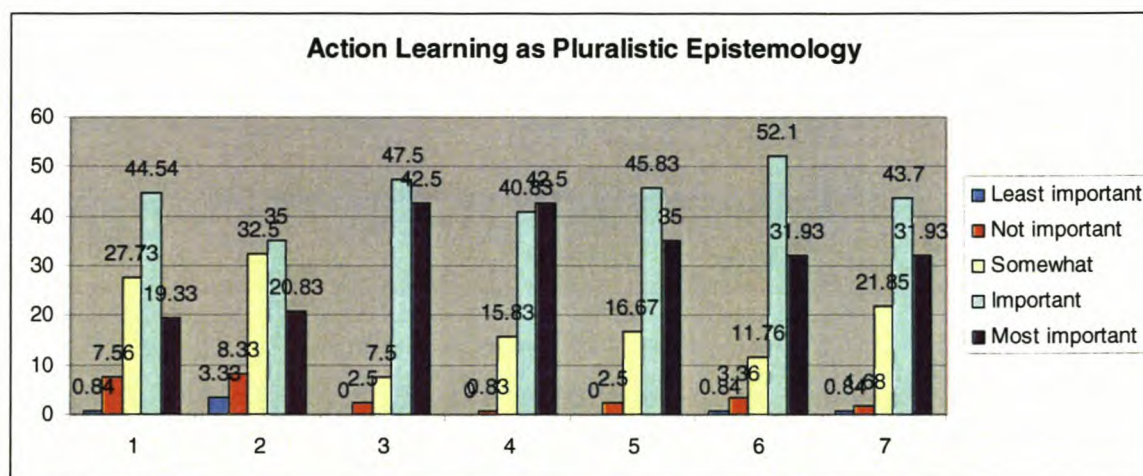
Some of the information related to the relationship between the individual and team could be skewed owing to the fact that the respondents were forced to be part of a team and did not function as a team in organisational context. Some teams (subsets) had functioned exceptionally well, while others had not. Reasons for the malfunctioning of learning sets are multiple and include issues such as learners who were ill-prepared for sessions, non-attendance of sessions, and cultural and other differences. However, following up on this particular aspect with a focus group discussion is an attempt to validate findings related to this specific issue.

5.4 Research Results

5.4.1 Action learning as a pluralistic epistemology

In Chapter 4 I discussed four variants in the construction of knowledge, as informed by action learning and the Habermasian theory of communicative action. In contrast with most views of leading action learning proponents, who emphasise one or the other of these variants, I contend that all these variants play an equally important role in the construction of knowledge. A pluralistic epistemology, informed by action learning and systems theory, is a more appropriate way than positivism to construct knowledge. From a post-modern perspective it is also a far better response in one's quest to find new ways of constructing knowledge.

A number of questions were subsequently asked to determine what individuals experience as the most important attribute or action in the construction of knowledge and can be displayed graphically as follows:



Question	Where did you personally learn and increase your understanding the most?
5.3.1	During plenary sessions where the tutor provided a theoretical framework (programmed knowledge).
5.3.2	During subset discussions and interaction with fellow students.
5.3.3	During own individual literature research.
5.3.4	Own personal observation and empirical investigations (i.e. interviews, questionnaires).
5.3.5	Your own experience and working environment.
5.3.6	Intentional, purposive action taken by you to implement project findings.
5.3.7	Reflection (i.e. learning from actions undertaken).

Figure 5.3: Action Learning as informed by a Pluralistic Epistemology

An analysis of the research results substantiates that there is no clear trend visible which kind of action (variant) generates the most knowledge. The one that stands out is the value respondents got from team (collaborative) interaction and discussions, where 32.5% indicated that they were uncertain and 12% indicated that it was the least important and/or unimportant. Only 55% indicated that it is important or most important. In relation to all the other attributes, this is an important variance.

However, a Pearson³⁷ product-moment correlation indicates that there is a strong association between [small group interaction – Question 5.3.2 in Figure 5.3] and [contribution of team members – Question 5.6.1 in Figure 5.6] and that these two are statistically significantly correlated at the 1% level ($r=0.66$; $p=0.000$). Although learners did not benefit significantly from the small group interaction, the contributions of team members remain an important element in the individual's construction of knowledge. Learning together and from each other can be a truly transformational learning experience for both individual team members and for the company as a whole. This is also underscored by a number of leading experts in the field of organisational knowledge construction such as Alavi and Leidner (2001: 119) and Tobin (1996: 216). The reasons why learners did not benefit from small group interaction are multiple and is an aspect which had been addressed in the focus group which will be discussed later.

The importance of team learning, as one of the core aspects of action learning, was further investigated in a focus group discussion (refer Annexure B). The focus group came to the conclusion that team learning is indeed highly important in the construction of knowledge and it will be decidedly detrimental to the quality of learning if team learning were not allowed to take place. However, for team learning to be successful the focus group concluded that the following conditions must be met:

- (1) Individuals must be highly committed to their studies and learning.
- (2) Clear objectives need to be set, individual roles defined and ground rules established to prevent subsets becoming social events.
- (3) Honesty and respect for each other at all times are essential.
- (4) Strong facilitation is required, especially in the beginning, to guide teams/groups to independent facilitation.

In comparison with other constructs of knowledge, formal classroom instruction by lecturers (that is explicit or programmed knowledge – P) scored slightly lower with 65% indicating this as important or most important. This does not compare well with the 90% who indicated that they obtained most knowledge from their own individual literature research, knowledge which is also regarded as programmed or explicit knowledge. Taking action (84%), reflection (75% with 21% unsure), own experience and work environment (80%) and personal investigation and asking questions (85%), all played an important role in the construction of knowledge.

Dixon (2000: 18-19) and Garvin (2000: 100) contend that reflection is an important source of organisational knowledge, but that barriers such as time constraints limit the full use of reflection as a

³⁷ A Pearson product-moment correlation shows the strength of the relationship between two continuous variables. It is suitable for use if it can be assumed that the variables are approximately normally distributed. The r value indicates the strength of the correlation. An r of -1 is a perfect negative correlation, an r of 1 is a perfect positive correlation, and an r of 0 means there is no correlation. The p value indicates if the correlation is statistically significant. Given a large enough sample size (n), even a very weak correlation can be statistically significant, and given a small enough sample size even a very strong correlation may not be statistically significant.

source of knowledge. The high number of respondents (21%) who indicated they were unsure of the value of reflection also confirms this statement that from both an individual and organisational perspective not enough use is made of reflection as a possible source of knowledge. Bandura (1986: 21) states that the capability for reflective self-consciousness is a distinctively human characteristic. It enables people to analyse their experiences and think about their own thought processes. By reflecting on their varied experiences and on what they know, they can derive generic knowledge about themselves and the world around them. Furthermore, “among the types of thoughts that affect action, none is more central or pervasive than people’s judgements of their capabilities to deal effectively with different realities”. Reflection is thus an important construct of constructing knowledge and must be developed to gain maximum benefit.

It appears, therefore, that no single theory of knowledge (logical positivism, action-reflection) plays a dominant role, but that knowledge is rather constructed in a systemic and integrated manner. The construction of knowledge takes place in a pluralistic manner as informed by different variants embedded in the action learning approach. Action learning succeeds in constructing knowledge in a pluralistic manner and the findings of this dissertation confirm that redescribing action learning as a pluralistic epistemology is not without foundation.

5.4.2 Action learning and difficulties in the knowledge construction process

While the previous analysis indicates that there is no specific action dominating the construction of knowledge, and that various actions play an equally important role, the same cannot be said when respondents were asked which action was the most difficult to execute.

The following graph displays the difficulties in the knowledge construction process:

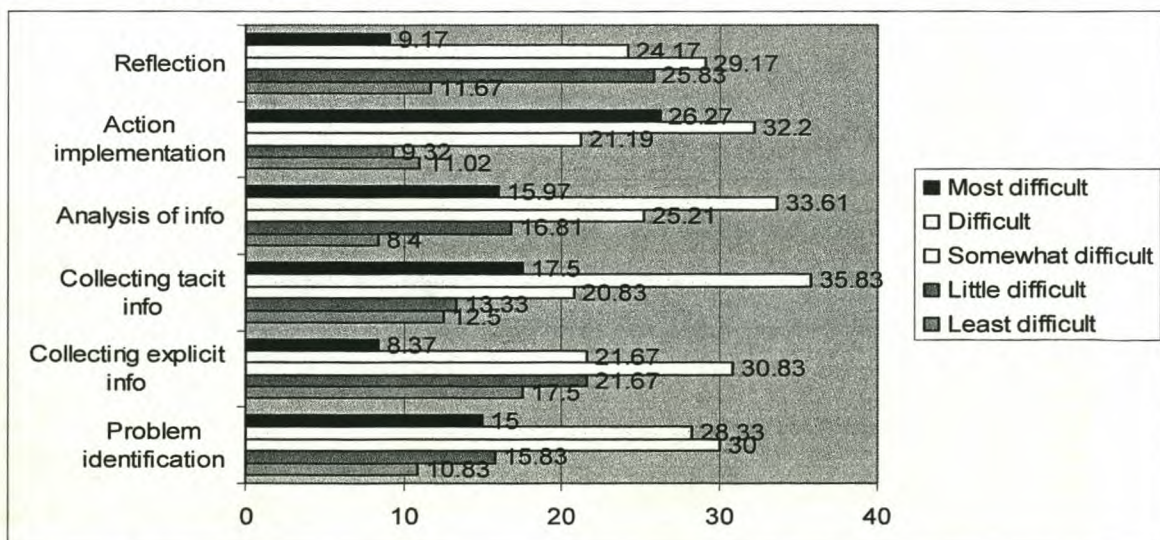


Figure 5.4: Difficulties in the Construction of Knowledge (Refer Annexure C.2)

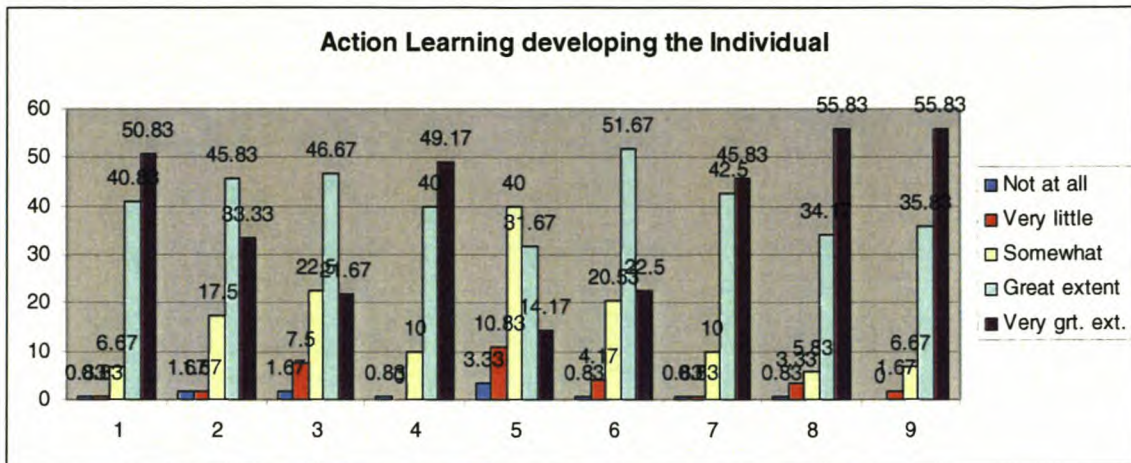
An important aspect of action learning is the identification of the problem, which requires it should be of strategic importance and significance to the organisation. The importance of identifying a suitable problem in the learning process is also underscored by Dewey (1916: 182) who states “the most significant question which can be asked, accordingly, about any situation or experience proposed to induce learning is what quality of problem it involves”. For 25% of the respondents, identifying a suitable problem was least or a little difficult, but for 45% it was difficult or most difficult, 30 % indicating it as somewhat difficult. Identifying a problem correctly must therefore be of primary importance if effective knowledge construction is to take place.

For 58.5% of the respondents (the highest percentage in this category), the most difficult or difficult aspects were taking action and implementing their findings. This is in contrast to the 84% (Figure 5.1) who indicated that they had learned to a great or very great extent from implementing their findings. Even if this was difficult to achieve, it did not prevent effective and deep learning from taking place. A similar situation exists with regard to reflection where a low percentage of 34% indicated that this was difficult or most difficult, but 74% indicated that they had learned to a great or very great extent by making use of reflection. The degree of difficulty therefore does not favour any particular action, supporting the claim that all actions are equally important in the construction of knowledge. The response on the “somewhat” averaged 25% on all the questions in this category, indicates that respondents were not completely sure about their own knowledge paradigm and is perhaps an indication of a changing paradigm, that is from a traditional, positivist approach to a social constructionist one. This tendency could be researched in more detail in future studies.

5.4.3 Impact of action learning on the individual

Action learning is widely used as a leadership programme, notably in the work of Boshyk (2000), and Dotlich and Noel (1998), as well as a problem-solving technique (Marquardt 1999: 57). Similarly, Probst, Raub and Romhardt (2000: 24) emphasise the problem-solving nature of knowledge and define knowledge as “the whole body of cognitions and skills which individuals use to solve problems”. The ability of managers and professionals to learn quickly and effectively is probably the most important factor determining the capacity of the organisation to cope with new challenges. In order to meet these challenges, workers need to develop lifelong learning skills to deal with the pace of change and the information explosion (Senge 1990: 141; Jennings 2000: 62; Knasel, Meed & Rosetti 2000: 23). Liebowitz (2000: 41-42) furthermore states that for both organisational learning and knowledge management strategies to be successful, it is imperative for organisations to build a continuous learning culture.

The following figure provides an overview to what extent action learning succeeds in developing these and other skills and attitudes in the individual:



Question	To what extent did/does Action Learning ...
5.5.1	Contribute to your development as a leader?
5.5.2	Contribute to sharing information within the organisational context?
5.5.3	Contribute to establish a learning culture in your organisation?
5.5.4	Improving your problem-solving techniques?
5.5.5	Assist in changing the corporate culture (i.e. to create trust)?
5.5.6	Contribute in fostering creativity and innovation (i.e. related to new products, improved services, etc)?
5.5.7	Improve your ability to learn compared to current practices of learning?
5.5.8	Contribute to an awareness to become a life-long learner?
5.5.9	Improve your critical thinking skills? (i.e. asking relevant, penetrating questions)

Figure 5.5: Action Learning Developing the Individual

Although only 68% indicated that action learning had assisted in building a learning culture in their organisations, 90% of the respondents indicated that action learning had contributed to an awareness of becoming a life-long learner. It should be kept in mind that the respondents were all individuals in organisations which might not have adopted action learning as a learning methodology. Despite this, it shows that action learning is well suited to achieve the objectives of building a learning organisation. This point will be discussed in more detail later in this chapter when my descriptive findings are interpreted.

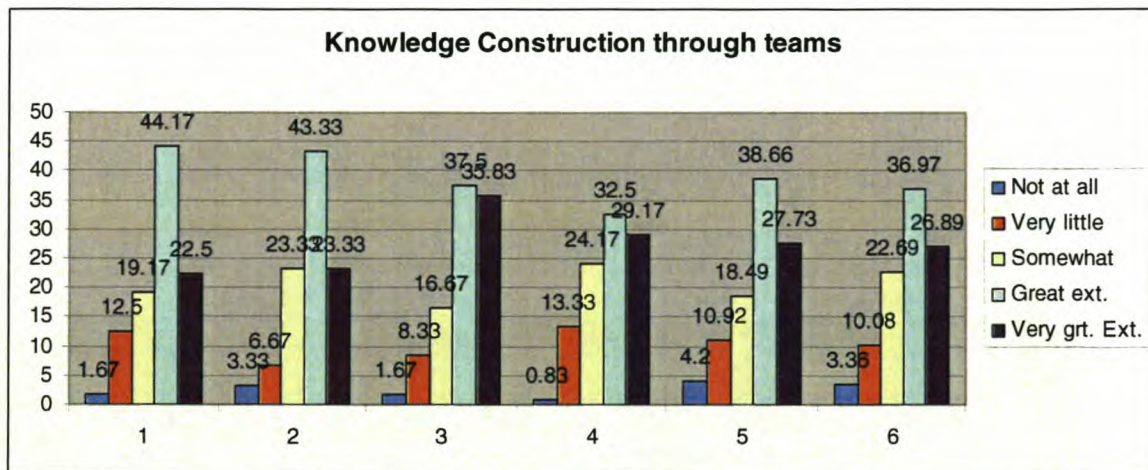
Research results indicate that action learning in its totality had a very high impact on individuals, with 93% indicating that action learning had developed them to a great or very great extent as leaders. Similarly, action learning also helped to improve problem-solving techniques (89%), improved critical thinking skills and asking penetrating questions (92%), and contributed to an awareness of becoming life-long learners (90%). The relationship between knowledge construction and innovation is also an important link, and while 20.53% were unsure whether action learning had contributed to enhancing creativity and innovation, 74% agreed that action learning had, to a great or very great extent, helped in fostering innovation.

5.4.4 Team learning

At the core of action learning is team learning. Teams are composed of individuals who are learning together. Besides the fact that individuals must have certain competencies, teams also need to function in a manner conducive to learning. One of the primary conditions for effective team learning, and therefore organisational learning, is dialogue, a constitutive feature of the Habermasian theory of communicative action. Similar to Habermas (1984: 306-308), Bohm and Peat (1989:241-243) contend that the following are prerequisites for dialogue to take place:

- People are able to listen to each other freely, without prejudice and without trying to influence each other.
- Each person has to be interested primarily in truth and coherence.
- Each person must be ready to drop his or her old ideas and intentions and be ready to go onto something different if this is called for.

In Chapter 3, I have argued that the concept of dialogue in organisational context should be extended to include deliberation. Deliberation, and the ability to ask penetrating questions, is essential aspects in enabling organisational knowledge and advancing communication. However, as the feedback of the focus group discussion underscored, there are conditions for communication to freely take place. Some individuals are more eloquent and overbearing than others. Such a situation does not enable dialogue in advancing organisational knowledge. The following figure provides empirical evidence on a number of issues important to the construction of knowledge within a collaborative learning environment.



Question	Team (to what extent does/did...)
5.6.1	Subset members contribute to your learning/knowledge development?
5.6.2	Were subsets composed of self managed individuals capable of learning from each other?
5.6.3	Subset members freely share their individual knowledge?
5.6.4	Subset members have the ability to ask relevant and penetrating questions?
5.6.5	Teamwork establishes trust within the subset?
5.6.6	Subset / team interaction improve your ability to direct conversations to maximise learning opportunities?

Figure 5.6: Impact of Team Learning in the Construction of Knowledge

The above results indicate that individuals within a team context had not yet fully developed the ability to direct conversations in order to maximise learning opportunities. While 63% indicated that it was either important or most important, 36% indicated that it was somewhat or unimportant. Deliberation plays a crucial role in the construction of knowledge. The high unimportance weighting (36%) supports Senge's (1990: 237) argument that most teams lack the ability to distinguish between dialogue and discussion and to deal creatively with the powerful forces opposing productive dialogue and discussion in working teams.

The importance of communication and reflection are underscored by Finerty (1997: 103), who states that the introduction of structured reflection and facilitation of productive conversations are central to the effectiveness of action learning. A key to learning is therefore the use of conversational skills along with the tools of skilful dialogue.

The focus group results (Annexure B), in addition, indicate that individual team members do not have clarity on their roles as team members and how one should go about applying those roles in an action learning environment. The focus group results indicate that individuals must be committed to their learning. This provides additional substantiation for the empirical findings which show that only 67% (with 23% unsure) indicated that teams were composed of mature, self-managed individuals who took responsibility for their own learning and development. The focus group also indicated that strong and dominant personalities impede effective group learning which underscores Bohm's criteria for successful dialogue. This also enforces the concept of power in deliberative democracy, where power reveals itself in the admission or exclusion of a person from communication, or in the acknowledgement or disregard of his/her contribution to dialogue (Pellizzoni 2001: 61).

5.4.5 Organisations and action learning

Organisations learn only when individuals as a collective learn in an organisation (Dixon 1999: 9; Senge 1990: 10-11). The culture and leadership of an organisation, in particular the elements of trust, care, share and risk taking, are furthermore of critical importance to promote sharing of information to enable effective organisational learning (Marquardt 1999: 113; Holsapple & Joshi 2000: 241). Other important issues are related to the use of information technology and the alignment of learning objectives with the strategic business objectives of an organisation.

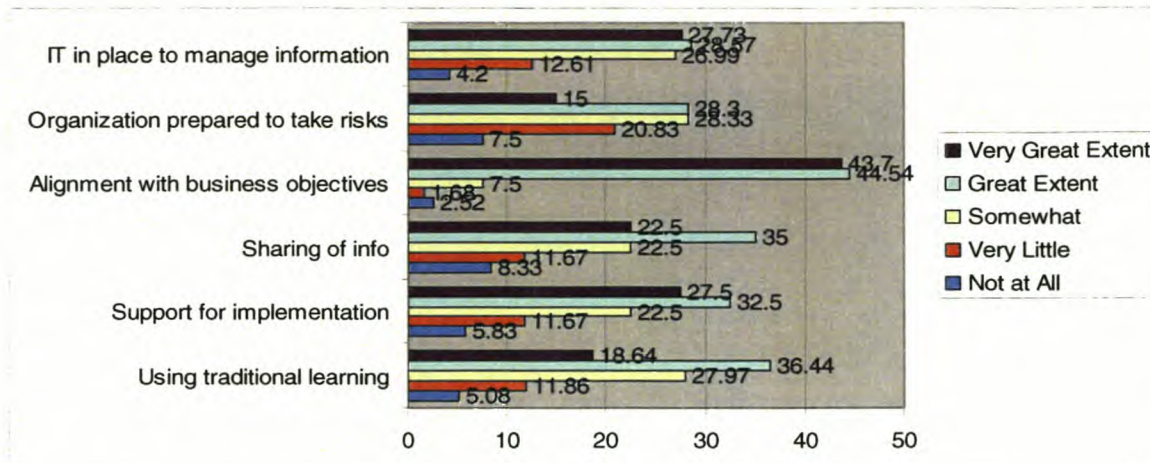


Figure 5.7: Enabling Attributes of Organisational Learning

The overall results indicate that, in general, organisations have not yet arrived at a point where one can confidently state that organisational learning is effective. This could be ascribed to the fact that 55% of the respondents indicated that their organisations, to a great and very great extent, were still making use of traditional learning methods. In addition to this, enabling conditions such as organisational culture and information technology were not supportive of the learning process. Only 56% of respondents indicated that their organisations had technology in place to manage information and enhance knowledge management, 43% were prepared to take risks by implementing project findings, and in only 57% of the cases were project findings (that is, new knowledge) shared with other relevant departments in the organisation. A promising aspect, however, is that in 88% of the cases, the learning objectives were aligned with the business strategy, indicating that organisations view real-time problem-centred business challenges as important. Alignment of strategic business objectives and difficulty in identifying a clear problem that is linked to the business strategy are statistically significantly related at the 5% level ($\chi^2=27.83$; $df=16$; $p=0.033$).³⁸

These results are supported by a study done by KPMG Consulting (2000: 18), in which 419 organisations were interviewed. My findings also underscore that organisations are only slowly migrating to becoming learning organisations and applying knowledge management principles. In the KPMG Consulting study, only 16% indicated that they had a specially designed KM system, while 69% indicated that the technology for KM had grown over time. Technology is an important enabler in organisation-wide knowledge construction, and until such time that KM technologies are more readily available and understood by end-users, the benefits of organisational learning might be impeded. The lack of technology will not prevent learning, but it will impact on the speed and scope of the learning that is taking place.

³⁸ The chi-square test shows if there is a relationship between two categorical variables. Simply look at the p value to see if the relationship is statistically significant. Here the probability value (p) is smaller than 0.05, which means that there is a 95% or better probability that there is a statistically significant relationship.

5.5 Open-ended Questions

The open-ended questions included at the end of the questionnaire asked respondents:

- (1) to substantiate why they would recommend to their organisations that action learning be used as the primary learning methodology;
- (2) what they perceived as the single most important aspect of action learning; and
- (3) for additional comments.

Annexure D provides an overview of the key responses received.

The first question required a yes/no answer and asked respondents if they would recommend implementing action learning as a learning methodology to their organisations. The following pie chart shows the results.

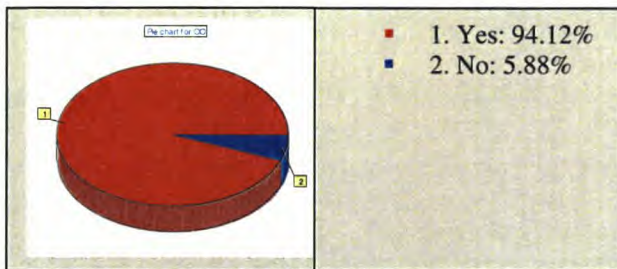


Figure 5.8: Recommendation that Organisations Implement Action Learning as Primary Learning Methodology

Respondents were highly supportive (94.12%) that organisations should implement action learning programmes. The motivation for recommending action learning as the learning methodology of choice revolved around two primary responses, namely (1) that action learning integrated theory and practice and (2) that action learning addressed real issues which resulted in problem solving leading towards continuous improvement. Other issues mentioned were learning through action and reflection.

The negative responses towards using action learning indicated that action learning was only suitable for mature individuals who were committed to learning and that action learning should only be used by organisations that were ready for such an approach. Although these negative responses (5.88%) were by far in the minority, it does indicate that action learning should not necessarily be taken for granted. Organisations (and leadership) need to support learners in the identification of strategic problems, allow learners access to company-specific information, and create the necessary space for learners to implement their recommendations in order to allow learning to take place. Despite these negative responses, it clearly shows an overwhelming support for action learning and that action learning can assist organisations in becoming learning organisations where knowledge is effectively collected, analysed and interpreted, distributed, and applied in a continuous spiral of learning.

The second open-ended question related to what respondents regarded as the single most important aspect of action learning which assists them in developing as managers. The responses mainly followed the trend as in the first question. Problem solving and the integration of theory and practice were seen as important aspects of action learning, with learning to ask the right questions, improving critical thinking, action-reflection and team learning as secondary issues. Some responses also indicated that research, and collection and analysis were important. Four responses indicated that there was not one single most important aspect, but rather that the whole action learning process, that is a pluralistic approach, was of primary importance.

The third question dealing with additional comments mainly elicited responses of an administrative nature and had no direct relevance to the results.

These open-ended questions confirmed the empirical results, which also indicate that problem-solving and critical thinking are perceived as important attributes of action learning.

The descriptive results which follow next support these findings and show that there is a high correlation between organisations which are based on action learning principles and organisations which have implemented successful knowledge management programmes.

5.6 Descriptive Findings

Descriptive findings are based on a correlation study using reports and data from an internationally recognised research organisation. This data is then compared with case studies available in the literature and from this correlation an interesting pattern emerges.

The Global Most Admired Knowledge Enterprises (MAKE) research programme, conducted by Teleos, annually releases a report to acknowledge organisations for their ability to leverage new as well as existing enterprise knowledge to deliver superior performance in areas such as organisational creativity. The research is based on the Delphi technique³⁹ and finalists are measured against eight knowledge performance dimensions which are the visible drivers of competitive advantage. These dimensions, *inter alia*, include the creation of a corporate knowledge culture, developing knowledge leaders and creating a learning organisation (Chase 2002: 1). These dimensions have all been included as part of the empirical research discussed in the previous section which dealt with the empirical analysis.

For the 2002 Global MAKE study, a total of 106 organisations was nominated of which 50 were selected as finalists. From this list of finalists, the top 20 organisations were selected as winners. These

³⁹ A technique in which separated experts independently assess the likelihood of specified events. These assessments are combined and returned to each expert for fine tuning until agreement is reached (Wheelen & Hunger 2002: 72).

companies are presented in alphabetical order in the table to follow. The second column of the table also includes the names of the companies who have made the top 20 list since 1998.

The MAKE list of companies is subsequently evaluated against references and case studies of companies which are known for following action learning development programmes. These cases have all been obtained from experts on action learning programmes who have either done research on these companies, or have consulted for them. This evaluation compares companies which have all embarked on action learning development programmes and whose learning methodology is based on action learning, with companies which are internationally recognised as leading companies that have implemented knowledge management programmes.

From this descriptive analysis it appears that there is a strong relationship between action learning and the implementation of successful knowledge management programmes.

Global Most Admired Knowledge Enterprises (MAKE)	Global MAKE finalists 1998-2002	Case studies of companies applying action learning principles
Arthur Andersen / Accenture	Yes	Dotlich and Noel (1998: 93); Marquardt (1999: 84-85); Schwandt and Marquardt (2000: 143)
British Petroleum (BP)	Yes	Dixon (2000: 14; 24; 38-39)
Buckman Laboratories	Yes	Dixon (2000: 15)
Clarica Life Insurance		
Ernst and Young	Yes	http://www.partnersforlearning.com/clients.htm [See comment below of Fred Jones]
General Electric	Yes	Marquardt (1999: 217-218); Boshyk (2000: 50-53); Welch (2001: 173-175)
Hewlett-Packard	Yes	Schwandt and Marquardt (2000: 166-168)
IBM	Yes	Boshyk (2000: 76-90)
KPMG		
McKinsey and Company		Thurbin (1995: 9-12); Schwandt and Marquardt (2000: 157)
Microsoft	Yes	
Nokia		
Royal Dutch/Shell	Yes	Dotlich and Noel (1998: 7;1 ; 42-46; 3-14);
Schlumberger		
Siemens	Yes	Boshyk (2000: 140-151)
Skandia	Yes	
Toyota		
Unilever		
US Government		
World Bank		
Xerox	Yes	Thurbin (1995: 9-12)

Fred Jones, manager at Ernst and Young (USA) states the following:⁴⁰

Partners for the Learning Organisation didn't ignore where we were and ask us to take an impossible leap. Instead, we were met where we were and challenged to reach a little further than we might have, with just the right amount of help. The result: Rather than putting some action in our firm's training, we went right to the real action and helped our managers learn what they really needed to learn. The Integrated Learning and Change Solutions are based on a fundamental belief that learning best occurs using real work through repeated cycles of action and then learning from that action.

Many of the values espoused by action learning are similar to the ones that are emphasised in knowledge management programmes such as trust, openness, the ability to ask critical and penetrating questions and the commitment to take action. The successful implementation of these KM programmes, based on action learning principles, therefore shows that action learning can serve as a conceptual framework to establish KM programmes.

5.7 Conclusion

This study, and this chapter in particular, attempts to counter some of the criticism against action learning by providing empirical evidence for action learning as a framework which enhances organisational knowledge construction. Action learning does not construct knowledge through one particular action, but in a pluralistic manner using all four variants to construct knowledge. Building onto systems theory, action learning furthermore can consistently be applied at individual, team and organisational systems levels and offers a powerful learning methodology which synthesises the learning process at various systems levels. If different learning and knowledge construction strategies are used at different systems levels, that is, individual, team and organisational levels, the learning process will be without focus, ineffective and disjointed, thus leading to dysfunctional organisations.

In Chapters 3 and 4, I referred to the complex and responsive nature of organisations, which should “consider organisational learning as a process manifested in patterns of actions and attributes of the social system, rather than causal relations between isolated variables” (Schwandt & Marquardt 2000: 41). This approach is also underscored by Allee (2003: 66). Action learning deals with real world problems and has, with its process approach to learning and questioning approach the ability to react quickly to change. In an increasingly complex world action learning is therefore particularly well equipped to deal with the demands of a post-modern epistemology.

The action learning process, both in process and the values underscoring it, shows strong similarities with knowledge management conceptual frameworks which are being advocated by leading experts. The nature in which action learning constructs knowledge is dynamic, pluralistic and the result of

⁴⁰ Partners for the Learning Organisation. Available at: <http://www.partnersforlearning.com/clients.htm/>

social action. The empirical findings furthermore underscore that knowledge is not only constructed by the individual (actor or agency), or by a team (structure), but rather in an integrated manner. This underscores the importance of Giddens's structuration theory that we need to consider both the concepts of action and structure when exploring organisational knowledge construction. In the post-modern society, the concept of structure must also be extended to include technology. Although technology does not determine society, and society does not script the course of technological change, many factors intervene in the process of scientific discovery, technological innovation and social application so that the final outcome depends on a complex pattern of interaction (Castells 2001: 5).

The management and construction of organisational knowledge is characterised by a dynamic and complex pluralistic framework which includes people (agency), organisational processes (structure) and technology. The next chapter will explore this conclusion in more detail.

6.1 Introduction

A new global economy is emerging around the world in which “productivity and competitiveness are, by and large, a function of knowledge generation and information processing” (Castells 2000: 52). The strategic relevance and importance of an organisation’s ability to develop its intellectual capital and to expand its knowledge base are widely recognised as critical focus points in the new world of knowledge-based industries. In this resource-based approach to strategy, products and services are differentiated by knowledge and intellectual capital. In the move from the industrial age to the technological age, intellectual property of knowledge impacts on profitability. It will require not simply changing what we do, but also what we think and how we relate to each other (Horibe 1999: 281; McCampbell *et al.* 1999: 173; Den Hertog & Huizenga 2000: 3). The strategic importance of organisational knowledge, and how such knowledge is constructed, remains a challenge for many organisations, and this dissertation is an attempt to provide clarity in respect of those challenges related to the construction and management of knowledge in organisational contexts.

Action learning has been used successfully in organisational contexts as a leadership and management development programme, a problem-solving technique and for facilitating and developing teams. This study focuses on the relevance of action learning as an organisational epistemology and primary driver of knowledge construction by (1) grounding it in an epistemological framework, the absence of which has been a major shortcoming in the development of action learning; (2) providing clarity on what action learning is; and (3) substantiating theoretical claims through empirical findings of how action learning provides a framework for enabling organisational knowledge. The primary finding of this dissertation is that action learning is essentially informed by a pluralistic epistemology which provides an alternative framework for enabling organisational knowledge in a post-modern society. Furthermore, action learning is grounded in the epistemological framework of the Habermasian theory of communicative action, which provides the epistemological framework action learning seemingly has been lacking.

This dissertation also addresses both specific and some general epistemological considerations which characterise contemporary epistemology and which also impact on organisational epistemology. In Chapter 1, I refer to three such aspects at meta level which characterise the debate in contemporary epistemology, namely justification of knowledge (Gettier problem), the foundationalist / non-foundationalist character of knowledge, and sources of knowledge. I contend that at meta level,

organisational epistemology has to consider these issues if it wants to make any credible contribution to the field of organisational learning and knowledge. I shall address these epistemological questions at both meta and methodological levels before presenting my conclusions and findings.

6.2 Meta Questions

Some of the critical questions at meta level in contemporary epistemology relate to questions such as the justification of knowledge, the foundational / non-foundational nature of knowledge and sources of knowledge. The question remains whether a pluralistic epistemology, as I am proposing, provides any answers to these questions.

In Chapter 1 I proposed a solution to the Gettier problem by suggesting that knowledge is justified when we add the fourth condition based on action, that is, a person (P) knows something (P), if, and only if: S believes it, it is true, the belief is justified and if S has acted on it. The empirical findings have also underscored the importance of pluralistic action. Action in the Gettier context does not only refer to a specified, that is, physical action, but rather to the pluralistic nature of action. Stated differently, a person will know something if he/she has acted using the action learning approach. This action includes aspects such as the identification of a problem, collecting and interpreting information related to that problem, and acting and reflecting on the action taken. The approach includes both individual and collaborative actions in which language plays a central role. Action learning in this context thus implies pluralistic action.

If I argue that a pluralistic epistemology reflects a post-modern character, one should also assume that such a post-modern epistemology is non-foundationalist. This is, however, not the case. Although epistemology is continuously developing and is not static, and in this sense non-foundationalist, it also provides us with criteria in developing organisational knowledge. This ambivalent approach appears in contrast to what I am proposing, but is simultaneously also a characteristic of a post-modern approach.

The third aspect, namely sources of knowledge, has been explored in Chapters 1 and 2 and I concluded that there is a strong similarity between organisational sources of knowledge and the general view of knowledge. It is especially the distinction between tacit and explicit knowledge which has had a major impact on the development of organisational knowledge, something which has been underscored throughout this dissertation.

A fourth aspect relates to ontology. In following Giddens' (1991: 201) concept of structuration, it means a conceptual investigation of the nature of human action, social institutions and the interrelations between action and institutions. The relationship between human action (agency) and structure (team or organisation) is therefore of central importance. Extending the concept of duality, I

contend that relationships and interactions are rather pluralistic and systemic in nature, and that relations are established with all three worlds (domains) as in a Habermasian fashion. These relationships are strengthened through communication such as reflection (your own inner self), language (with team members) and explicit knowledge (symbols, rules and written forms of communication) with the organisation. In organisational context, technology plays an important role in enabling communication. For organisations an important focus point is thus the interaction between people, processes and technology, something which I will take up again later in this chapter.

Constructing knowledge in organisational context exhibits important characteristics which need to be considered if organisations want to be successful in constructing organisational knowledge. This dissertation has firstly highlighted the importance of organisational epistemology as the primary driver in constructing knowledge and secondly identified enabling factors which could either facilitate or impede knowledge construction. The relevance and importance of epistemology informing organisational knowledge and knowledge management are growing. This is reflected by both an expanding body of knowledge on these subjects, notably in the recent comprehensive work done by Dierkes *et al.* (2001) and new theories such as the second-generation KM school of McElroy (2003) and Snowden (2002). In designing and implementing an organisational knowledge strategy, it is therefore important to have a clear understanding of existing epistemologies and how paradigms influence the construction of organisational knowledge.

In this dissertation I explored some of the most important epistemologies and how they shape organisational knowledge, and reached the conclusion that a pluralistic organisational epistemology is the most appropriate way of constructing organisational knowledge. A question that has now emerged at the dawn of the knowledge economy is simultaneously also applicable to pluralistic epistemology: Are these traditional theories of knowledge still relevant to a post-modern society? If not, what are the criteria for a post-modern epistemology and how do they impact on organisational epistemology?

In Chapter 4, I state that although the ideas in the post-modern response (also with respect to learning and knowledge acquisition) are dynamic, controversial and still 'in the process of becoming', they generally represent a position that requires:

- (1) a critical analysis of existing theories and models in order to arrive at new interpretations;
- (2) a transdisciplinary and interdisciplinary approach that requires one to be constantly aware of the different possibilities and their differences; and
- (3) an evolutionary and questioning approach where one is constantly on the move, dealing with uncertainty and doubt (Skinner 1998: 269; Van Niekerk 1998: 213).

Drawing from disciplines such as philosophy, sociology, organisational development, organisational epistemology and information technology, I use a transdisciplinary and interdisciplinary approach to

explore different possibilities, reflecting a post-modern approach. In critically analysing these existing theories, as well as conducting an empirical investigation, I arrived at an advanced interpretation of organisational epistemology, that is, organisational knowledge cannot be constructed through a single restrictive paradigm. Rather, organisational knowledge is constructed in an emerging manner through a pluralistic epistemology at all systems levels of organisational learning: individual, team, organisational, and inter-organisational levels. Such a pluralistic epistemology incorporates both scientific and interpretive paradigms and succeeds in integrating action and systems theory. Furthermore, a pluralistic epistemology also reflects an evolutionary and questioning approach, is open to renewal and is well suited to deal with the challenges and demands of a post-modern epistemology. Pluralistic epistemology, informed by Parsons' general theory of action, Habermasian theory of communicative action and Giddens' structuration theory, has emerged as an appropriate theory of knowledge in a post-modern era. Action learning is shaped by such a pluralistic epistemology. True to the nature of an evolutionary approach, a pluralistic epistemology is not definitive in character, but will evolve with time. Indeed, as Holsapple and Joshi (2002: 240) correctly state, each framework is a candidate for further development or modification and can serve as starting point for the better appreciation how to construct and manage organisational knowledge. This dissertation is therefore only a starting point in exploring the development of a pluralistic epistemology as a framework for business philosophy. I shall now summarise the salient features which a framework for constructing organisational knowledge should have before proposing my own improved model for organisational knowledge construction.

6.3 Action Learning as an Enabler of Organisational Knowledge

6.3.1 A pluralistic approach to knowledge construction

Zuber-Skerritt (1999:5) acknowledges that "action learning and action research may be informed by many theories of learning and creating new knowledge". However, the emphasis of action learning still remains on "learning from action or concrete experience, as well as taking action as a result of this learning" (Zuber-Skerritt 1999: 1). I contend, on the other hand, that the power of action learning lies in its ability to synthesize various theories of knowledge into a coherent pluralistic epistemology which does not only succeed in integrating theory and practice (which has been a quest for many centuries), but also provides a post-modern framework for constructing knowledge. The empirical results (refer Annexure D) have also clearly shown that the integration of theory and practice is perceived as one of the single most important aspects of action learning.

The empirical findings in Chapter 5 substantiate my contention that individuals construct knowledge in a pluralistic fashion (refer Figure 5.3 and Annexure C.1). Individuals not only use a variety of approaches to construct knowledge, but also construct knowledge through a collaborative approach. Communication plays a central role in these approaches which include procedural or explicit knowledge (or in the context of action learning called programmed knowledge), questioning and

empirical research, experience or tacit knowledge, taking action, and reflection. This pluralistic approach used by individuals also corresponds to the organisational learning process as explored in Chapter 3. This process is characterised by the collection and interpretation of information, its dissemination and application, a review process, and re-cycling, which continue the knowledge construction process. This process needs to be embedded in the organisation and enhanced by information technology which enables knowledge workers to quickly access explicit knowledge and/or information, as well as to quickly distribute and apply that knowledge. An action learning approach, which is similar in the individual and team/organisational context, provides the link to integrate the individual (actor) and the organisational process (structure) into a coherent process without giving primacy to any of them. However, the individual's knowledge is more tacit in nature and if the organisational culture does not enhance virtues such as trust, openness and deliberation, knowledge will not easily be shared.

In contrast with the singular paradigms of the positivist and interpretive approaches, the empirical study shows that knowledge is constructed in a pluralistic manner. Furthermore, for organisations to be successful, the same epistemology needs to be applied at all systems levels of learning, that is, individual, team and organisational level. If dissimilar approaches are followed, knowledge construction efforts will be ineffective and uncoordinated, and organisational knowledge will not be fully optimised. As Zuber-Skerritt (1999: 15) also rightly notes, the action learning process of problem identification, collecting of relevant structured and unstructured data through networks, interpretation of such data using a collaborative approach, and application and review of what has been learned, is a process that works well at all levels of organisational learning.

Organisations have different choices in selecting a corporate epistemology. These choices are influenced by the prevailing paradigm of the organisation, which in contemporary business is mainly dominated by a positivist approach. The choice of an organisational epistemology will undoubtedly influence the effectiveness of how organisational knowledge is constructed. However, the paradigm shift which is brought about by emphasising both an interpretive approach and information technology requires corporate strategists to re-evaluate how organisations should construct knowledge. The findings of this dissertation underscore that action learning as a pluralistic epistemology which integrates social action and systems thinking, is a suitable and highly effective methodology in enabling organisational knowledge in a post-modern response to business challenges. The epistemological foundation of action learning provide the intellectual justification for its practices, methodology, tools and techniques.

For action learning to enable organisational learning effectively, it has to build on enablers such as deliberative democracy (honest and open dialogue), trust, collaborative learning and commitment to take action. Although technology as such is not embedded in action learning, it must be embraced by

action learning. If these conditions are not enabled, action learning will only be partially successful as a pluralistic epistemology in enabling organisational knowledge.

6.3.2 Leadership and knowledge workers

The management of knowledge workers requires a move away from the command and control approach to management, to that of a facilitator. Line management has a particular role to play in this regard. Nonaka and Takeuchi (1995: 127) argue that knowledge is constructed by middle management and propose a middle down-up approach, while MacNeil (2003: 301) concludes that the role of the line manager as a facilitator of knowledge-sharing in teams could make a significant contribution to maximising core competence of learning in organisations.

Action learning enhances the development of facilitation and leadership skills. Zuber-Skerritt and Perry (2002: 177) argue that action research is an appropriate and effective method for developing a person's managerial "soft" skills, competencies and other attributes required by managers and leaders within learning organisations in the 21st century. The results of my empirical study underscore these observations, with 92% of the respondents indicating that action learning had developed their leadership skills to a great or very great extent. The empirical results further underscore the relevance of action learning in developing leaders, and strongly promote continuous learning and critical thinking skills. These are all essential in developing knowledge leadership. There are also numerous examples of action learning within organisational context where leaders are developed and organisational knowledge constructed. Action learning is no longer only a problem-solving method or leadership development programme. It has transcended this and now necessitates a resdescription for what it essentially is – a framework informed by a pluralistic epistemology which is highly appropriate for the knowledge society.

Leadership skills, critical thinking and decision-making ability are core competencies which distinguish successful business leaders (Helliwell 2000: 44). The empirical findings underscore the success of action learning in developing critical thinking skills with 92% of the respondents indicating that action learning had developed their critical thinking skills to a great or very great extent. Critical thinking also involves deliberation as the result of the development of the standards of good thinking. Action learning therefore promotes the development of deliberation and critical thinking skills, and this is strongly underscored by the empirical results. There is disagreement amongst educators whether critical thinking skills should be taught as a dedicated course or infused into other courses. Action learning is infused by critical thinking and the strength of this approach lies in the fact that it provides for learning standards and principles of good thinking which are highly relevant to the development of organisational knowledge and learning practices.

Although there are a number of factors that influence the construction of knowledge, this dissertation has also emphasised the centrality of language and has proposed the concept of deliberative organisational democracy to enhance knowledge construction.

6.3.3 Deliberative organisational democracy

Action learning is embedded in the Habermasian concept of communicative action. Bartlett and Barber (1999: 62) state that this kind of discourse happens at the level of practical action and interpretive reason where conventional understandings are developed and expressed. However, to challenge these conventions and sometimes overthrow them, another form of discourse is required, one which Habermas describes as deliberative democracy.

In Chapter 3, I explored the concept of deliberative democracy as an extended concept of dialogue, a prerequisite for enabling organisational knowledge. Dialogue is acknowledged as an effective method of enhancing organisational learning and can “produce an environment where people are consciously participating in the creation of shared meaning. Through this they begin to discern their relationship to a larger pattern of collective experience. Only then can the shared meaning lead to new and aligned action” (Isaacs 1993: 27).

It leaves little doubt that deliberative organisational democracy will enhance organisational knowledge. However, as the empirical findings also underscore, an approach in which language features, faces many obstacles. Organisational power, knowledge hoarding, the lack of trust and an unequal knowledge base of team members are some of the factors that impede effective knowledge construction.

Language plays a significant role in all aspects of constructing organisational knowledge and if communication is absent, it is nearly impossible to build trust which has also been emphasised as a matter of importance in developing organisational knowledge.

6.3.4 Building trust

The importance of trust in fostering learning and the sharing of knowledge has emerged as one of the primary aspects in enabling organisational knowledge. Knowledge sharing, collaboration, innovation and business success all rest on a foundation of trust. Action learning's collaborative approach will promote the building of trust within teams. For trust and knowledge sharing to flourish in organisational contexts, a number of enabling conditions have to be present. The empirical findings show that teams need to be composed of mature individuals who can take responsibility for their learning and have the ability to ask critical questions. Aspects such as communication skills and a general knowledge base are important for effective team learning. From my personal experience of and involvement in action learning sets, one of the major problems that are experienced is that learners do not prepare themselves by preparing for formal sessions where explicit knowledge is to be critically

analysed. If team members do not have a collective understanding of the programmed knowledge (procedural knowledge), communication breaks down, trust is eroded and little knowledge sharing takes place. A lack of explicit knowledge also results in formulating poor or no questions.

Although the empirical findings indicate that 57% of new knowledge was shared across the organisation, interactions across boundaries need to be encouraged. Getting people to communicate across the usual departmental or divisional lines will help to reduce the uncertainty employees generally feel about the behaviour of people outside their usual sphere of reference. Part of the organisational culture must be the development of positive norms and styles of behaviour across the entire organisation. This could include, for example, things such as the prompt return of a colleague's communication, to the establishment of communities of practice.

Thirdly, open and transparent communication plays a major role in fostering trust. Lack of information is a major reason for mistrust between individuals and the larger organisation, or among people from different divisions.

The conditions under which trust is established within teams (and organisations) will differ from situation to situation. The empirical findings underscore that establishing trust remains a difficult task – only 65% of the respondents agreed that trust was important or most important in constructing knowledge within a team. Future research related to this aspect will be required to see how knowledge work will impact on the relations between individuals within team contexts.

Organisational knowledge is not only enabled, but could also be impeded. The outcome of organisational learning is knowledge. A number of barriers to organisational learning exist of which the following are the most important.

6.4 Barriers to Organisational Learning

Antal, Lenhardt and Rosenbrock (2001: 865) posit that explicit barriers to organisational learning have been mainly theoretically derived and have not yet been empirically explored in organisations. Barriers to organisational learning can be grouped into three main categories, namely: interrupted learning processes, psychological and cultural blockages to learning, and obstacles related to organisational structure and leadership. I contend that a fourth dimension must be added, that is, technology. One could argue that technology is included in organisational structure and that a fourth dimension is therefore not needed. However, the paradigm shift we are experiencing is mainly brought about by technology, and the latter should not only be viewed as part of organisational structure, but as an independent barrier.

Interrupted learning processes occur when individuals in an organisation are limited by their role in the organisation and are unable to act on their learning. Secondly, when individuals change their own behaviour, but cannot persuade others to change the organisational rules for behaviour, learning will also be interrupted. A third incomplete learning cycle occurs when organisational members draw incorrect conclusions about the impact of organisational actions in the environment and a fourth interruption occurs when changes in the environment cannot be clearly identified (Antal, Lenhardt & Rosenbrock 2001: 865-866).

The impact and role of anxiety in organisations generated by the success and failure in organisations, the role perceptions play, and communication, are also identified as psychological and cultural types of barriers to organisational learning. Organisational structures and leadership constitute a third main barrier to organisational learning in the knowledge society (Antal, Lenhardt & Rosenbrock 2001: 868).

The empirical findings in this dissertation underscore that organisational learning needs to be linked to a specific business problem and/or challenge which is of sufficient importance to warrant a solution. Real-time, problem-centred business challenges were indicated by 88% of the respondents as of great or very great importance. If this is absent, there is no need for learning, and learning will therefore be impeded. The need for a link between learning goals and knowledge management has also been identified by Davenport, De Long and Beers (1998: 50) as one of the critical factors which lead to successful knowledge management projects.

Many barriers to organisational learning are rooted within the agency/structure dualism. This is underscored by Antal, Lenhardt and Rosenbrock (2001: 869). They posit that the most significant shortcoming of the literature is that each of these concepts has been treated separately, and the interaction of different factors has not yet been considered. The agency/structure dualism presents organisations with very specific challenges, and there are various aspects that need to be explored to maximise organisational knowledge. One such factor is technology. People, processes and technology must therefore be aligned in a pluralistic manner and not in a dualistic manner as suggested by structuration theory.

Castells (2000: 17-18) argues that the technological paradigm will shape the entire realm of social behaviour and we should expect the emergence of historically new forms of social interaction, social control and social change. I contend that this change will also permeate organisational behaviour, which will shape the knowledge organisation. In what follows I shall firstly propose my own model for organisational knowledge construction and secondly address the issue of aligning people, processes and technology to effectively enable organisational knowledge.

6.5 Pluralistic Action Learning Systems (PALS) framework

The different organisational learning models I explored in Chapter 2 are all shaped by a specific epistemology, whether it is informed by an action/process approach, a systems approach or an interpretive approach. Each framework has its own limitations. My main criticism against these approaches is the sharp distinction which is evident between individual and social levels in constructing organisational knowledge. These models also focus primarily on internal learning, neglecting to scan the external environment and learn from it in order to adapt to changing environments. I contend that the Habermasian Theory of Communicative Action (TCA) serves as a better analogy, and by combining TCA with Beer's social system model, a pluralistic epistemology exemplified by action learning emerges. Such an approach provides a more extensive framework for developing knowledge in organisations.

In Chapter 3, I concluded that learning is a process which consists of a problem identification phase which triggers the need for learning, followed by various actions including collection of information, analysis and interpretation, application and dissemination, and reflection. This process is also similar in the implementation of competitive intelligence programmes in a business environment (Herring 2001: 243; Marceau & Sawka 2001: 148). This learning process strengthens the PALS model in the sense that it is not limited to only internal system levels of learning, but also builds on inter-organisational learning.

The PALS learning process, although partly shaped by a technical process, is simultaneously firmly embedded in a social, interpretive process. Drawing on an action learning framework it includes individual and team learning facilitated through language, thereby transforming individual knowledge into social knowledge to construct organisational knowledge. However, as underscored by Giddens's (1991) structuration theory, and made explicit by Beer's (1980) social systems theory, there are a number of enabling factors which can either impede or enhance this social process. These enablers include culture and values, leadership and management, learning, technology and organisational structures and processes. The learning process therefore needs to unite the various learning processes at individual, group, organisational and inter-organisational systems levels into a cohesive learning approach. Yolles (2000: 1203) argues that the idea of knowledge construction is closely related to that of learning. As I have shown in Chapter 3 action learning does not only succeed in constructing knowledge, but also uses the same process associated with knowledge management. Action learning, therefore, succeeds in integrating both organisational learning and knowledge management. The latter issue is currently receiving much attention and as Hackett (2000: 24) states, "knowledge management and organisational learning may have different definitions and approaches at strategic level, but they are increasingly similar in terms of the tactics and tools they employ. Rapid deployment of technology, coupled with rapid changes in the work patterns of large companies (e.g. cross-functional teams, inter-organisational projects), has provided a fertile ground for weaving knowledge management and

organisational learning approaches into the fabric of the enterprise". Similarly, with its focus on the importance of relations between agents of learning, complex adaptive systems theory also offers a foundation for the convergence of organisational learning and knowledge management (McElroy 2003: 45-49).

It appears, therefore, that a convergence between these two streams of thought will most likely occur sooner, rather than later. I contend, therefore, that action learning, both as a learning process supporting KM and as a heuristic approach enabling knowledge construction, provides this important link between organisational knowledge as an outcome of organisational learning, and knowledge management as a process-driven approach.

The following integrated framework (Figure 6.1) for organisational learning and knowledge management, which I call the Pluralistic Action Learning Systems (PALS) framework, is proposed as a conceptual model for developing and constructing organisational knowledge. It follows a social systems approach by including the primary internal factors impacting on organisational knowledge, as well as the external, environmental factors. It furthermore builds on multiple actions to construct organisational knowledge, using communication in fusing actions and systems together. Organisations do not only construct knowledge by looking inward, but also have to monitor changes around them. Choo (2000: 19) believes that "sensemaking", that is, scanning the external environment, is the key driver of organisational knowledge acquisition. Although I agree that sensemaking in the form of competitive intelligence is indeed an important aspect of organisational learning, it would be a mistake to emphasise only this aspect. Such an emphasis is in contrast with the systems thinking which includes all systems levels of learning, that is, individual, group, organisational and inter-organisational systems levels.

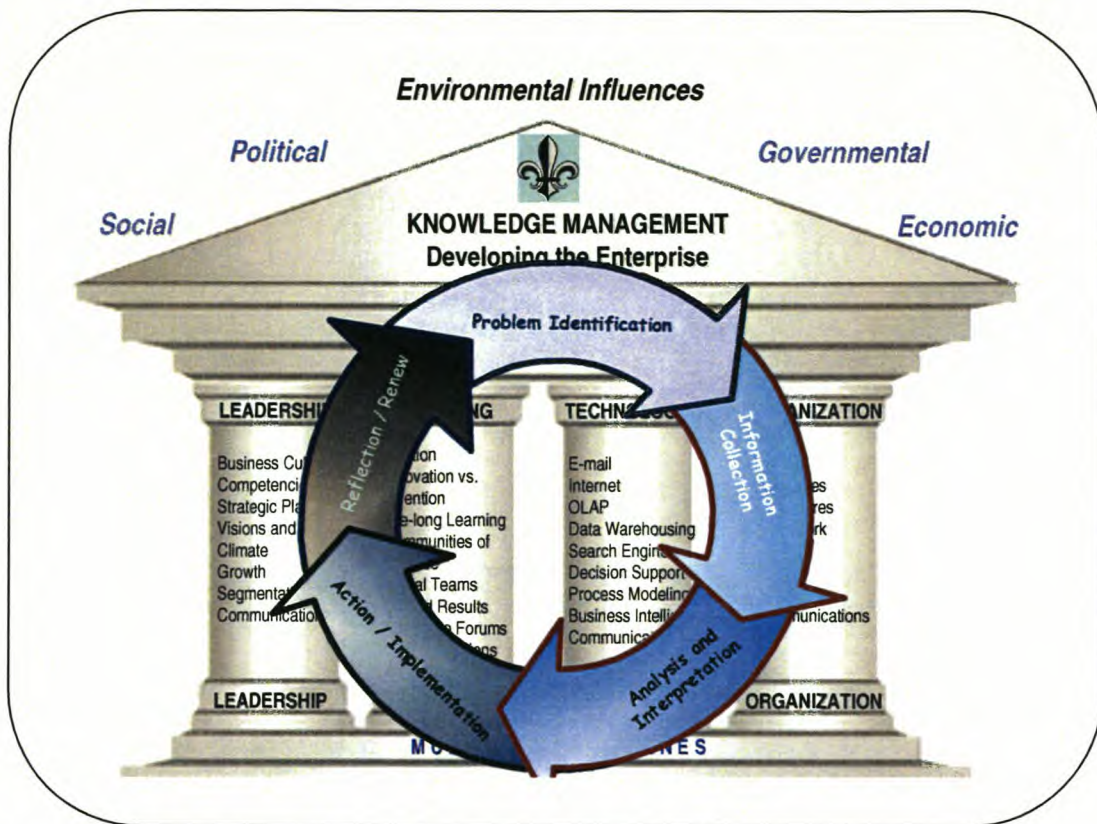


Figure 6.1: Pluralistic Action Learning Systems (PALS) Model⁴¹

This model draws on the Habermasian theory of communicate action which is personified in action learning and shaped by a pluralistic epistemology. It furthermore also draws on an extended framework of Giddens' structuration theory, namely duality as opposed to dualism, whereby people, processes and technology are aligned to achieve optimal organisational knowledge construction.

6.5.1 Aligning people, processes and technology

Baker *et al.* (1997: 64) and Holsapple and Joshi (2000: 239) underscore the importance and necessity of aligning people, processes and technology. Davenport (1999a: 49) also includes organisational structure as a fourth implementation lever which will build critical capabilities to bring organisations a competitive advantage. In Chapter 3, I concluded that to construct organisational knowledge, learning must occur at all systems levels, that is, individual, team, organisational and inter-organisational. However, systems thinking by nature also demands that we need to align organisational resources of people, processes and technology in a holistic whole. From an ontological perspective this triangle of people, processes and technology are critical to drive business success, and imperative to optimally enable organisational knowledge construction as reflected in the PALS model. In order to optimise the benefit of any knowledge development programme, the PALS model should consider this triangulation of people, processes and technology.

⁴¹ The basic idea of this figure was obtained from a website www.gvu.edu. It was adapted and extended to represent the PALS model.

6.5.1.1 People

People, or human capital, are arguably the most important asset of the modern organisation. Developing this human capital through both formal and informal learning is regarded as one of the primary objectives of the modern organisation (Davenport 1999a: 14). Formal and informal learning are closely related to the interplay which exists between tacit and explicit knowledge as reflected by Nonaka's theory of organisational knowledge creation. As I have argued in Chapters 2 and 5 of this dissertation, action learning is equally, and arguably even better suited to achieve a similar dynamism. To achieve this objective organisations need to create a culture where teamwork is paramount, trust and openness are established, critical questioning is allowed, and employees are allowed to take calculated risks. Employees need to be aligned with this new learning process as most workers do not understand the paradigm shift which is taking place. Therefore an awareness programme related to the concept and importance of knowledge must be implemented in any company that wishes to embark on a knowledge management programme.

In addition to such an awareness campaign, knowledge workers need new competencies in order to achieve this alignment between people, processes and technology. Personal computer (PC) literacy such as end-user training of KM software, Internet research, word-processing skills and written and verbal communication skills are required to assist the transition to the new paradigm.

In order to achieve this objective I propose that organisations implement a change management programme which I call a Knowledge Development Enterprise Programme (KDEP). Such an awareness programme would hopefully sensitise knowledge workers to the changes that are required in both their practice and the contexts in which they daily construct knowledge.

6.5.1.2 Processes

In order to successfully construct organisational knowledge, organisational strategists need to clearly conceptualise knowledge management. In this process, they need to exercise pertinent choices regarding organisational epistemology, as this is the foundation for both organisational learning and knowledge management. This dissertation proposes the Pluralistic Action Learning Systems (PALS) approach as an appropriate choice. Through a single integrated framework, both organisational learning and the primary knowledge management elements are incorporated to construct organisational knowledge and sustain continuous learning.

As reflected in Figure 6.1, the PALS model's learning process is the conduit which triangulates people, processes and technology in a strategic framework to optimise knowledge construction within organisational context.

6.5.1.3 Technology

The learning process as defined in Chapters 3 and 4, that is, the collection of information, the analysis and interpretation of information, application and dissemination and review/reflection and storage of information, needs to be supported and aligned with information technology. Such technology must include search capabilities, data retrieval, communication, collaboration, dissemination of information, and storage.

Although there is not yet one product on the market that has succeeded in integrating all these functions into one software product, a number of vendors are providing KM software products that facilitate organisational knowledge. Products that are considered need to have the ability to integrate document and document management for easy storage, search and retrieval, as well as a communication, collaboration and sharing ability. Besides these criteria, software should also meet the accepted criteria of scalability, price and end-user acceptability.

Incorporating people, processes and technology with the PALS model, I conclude that a Triangulated PALS framework is required to optimally enable organisational knowledge.

This model can be presented schematically in the following manner:

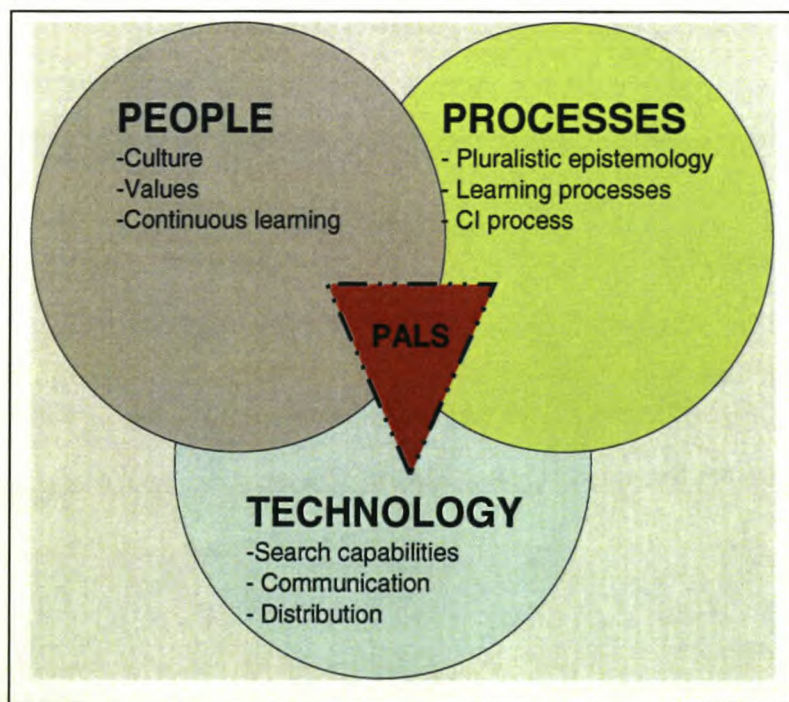


Figure 6.2: Triangulated PALS model

A number of models for organisational learning and knowledge construction exist, notably Nonaka and Takeuchi's (1995:59) model of Organisational Knowledge Creation, also known as the SECI model, and Schwandt and Marquardt's (2000: 53) Organisational Learning Systems Model (OLSM).

While the latter is primarily based on Parsons' General Theory of Action, I integrated various theories such as Beer's social systems, the foundational principles of Revans's action learning, Habermasian theory of communicative action and a systems approach to strategy to arrive at the PALS triangulated framework. This approach reflects the essence of a post-modern approach which critically evaluates existing theories to arrive at a new interpretation. However, this approach does not allow absolute answers and a number of new research opportunities may emerge from this dissertation which may open new possibilities.

6.6 Research Implications

Although not uniquely different in underscoring that organisations need to learn in a number of ways, this study is one of the first to explore the importance and impact of a pluralistic corporate epistemology as a relevant epistemology in post-modern era. Wiig (1999: 1) states that "we must rediscover the power of past thinking as well as understand opportunities that lie ahead". Action learning certainly reflects the power of past thinking, but by redescribing and acknowledging it as a pluralistic epistemology, we shall discover different opportunities it presents. The concept of pluralistic epistemology needs to be researched in more depth to determine its relevance to a post-modern society. This is work in progress and we might discover ways that are not known. An example of such research is artificial intelligence, and determining an epistemological framework which underpins artificial knowledge.

Another critical factor for organisational knowledge construction is the relevance of collaborative learning and teamwork. Research needs to be undertaken to determine under what conditions collaborative learning will be successful. Only 55% of the respondents in this research (67 out of 120 respondents) viewed it as of importance, while the remainder were undecided. If collaborative learning is important in organisational context to construct knowledge, and is the primary vehicle to do so as contended by Senge (1990), Nonaka and Takeuchi (1995) and others, this aspect needs to be explored in more depth. Within the context of the agency/structure debate, the interaction between individual and team, and individual and technology, the agents of organisational learning remain a significant research area. I am in agreement with Dierkes *et al.* (2001: 931) who conclude that the emerging challenge to research in this area is to explore the range of agents of learning as they interact in different constellations of organisation, including networks, communities of practice and imaginary organisations.

Furthermore, the enabling conditions as identified in this dissertation to construct organisational knowledge are other areas for future research. Antal, Lenhardt and Rosenbrock (2001: 865-869) state that far too little is known about how various leadership models can block or enable organisational learning. I have also concluded in Chapter 5 that the role of leadership in the knowledge society

requires new competencies. Traditional management theories and approaches of command and control are not suited to the new world of knowledge work. New management competencies are required and this opens a whole new world of research possibilities which could include the following:

- Leadership challenges and new competencies required by knowledge leaders.
- Management and knowledge worker competencies in a knowledge organisation.
- The interaction between knowledge worker and information technology.

In addition to the above, this dissertation has also emphasised the importance of developing questioning skills, critical thinking and deliberative organisational democracy in enabling organisational knowledge, and identifies these areas for future research. Reflection is also a potentially powerful source of organisational knowledge which is under-utilised. More in-depth research into the role and use of reflection as a source of organisational knowledge will contribute to a better understanding of the role of reflection in constructing organisational knowledge.

Dilworth (1996: 53) argues that with the added pressure of globalisation, universities will be increasingly challenged to have curricula consistent with the business ecology of the times and that action learning will increasingly become the agent of choice in promoting individual and organisational learning. This dissertation does not only underscore this statement, but has grounded action learning in an epistemological framework within which future research work might be undertaken.

The research agenda for organisational learning and the construction of knowledge is multiple and extensive and will address issues such as how organisational learning becomes embedded as a process to enabling conditions conducive to knowledge construction. Focus on these research areas will only increase with time as the importance of knowledge in the knowledge society deepens.

6.7 Summary

This dissertation has underscored the strategic importance of knowledge construction for organisations to remain competitive in today's unpredictable and fast-changing world. Corporate strategists have identified knowledge as a critical resource for organisations in the knowledge society. Furthermore, learning as a competence, and knowledge as a resource, are key factors not only for economic competitiveness, but also for access to participating in many dimensions of social, cultural and political life (Dierkes *et al.* 2001: 937). Organisations need to adopt a learning methodology which does not only allow them to adapt quickly to changing circumstances, but also enables them to learn continuously. Learning and knowledge construction must become embedded as an organisational process, and through its pluralistic character action learning provides the vehicle to realise this objective. Furthermore, the epistemology informing the learning methodology of choice must be compatible with other knowledge-related efforts such as knowledge management and competitive

intelligence frameworks. In other words, the same epistemology must inform all knowledge efforts in an organisation, otherwise these efforts will be uncoordinated and ineffective if they differ from the primary epistemology prevalent in an organisation..

The importance and choice of epistemology in constructing organisational knowledge has been emphasised throughout this study. Similar to the Habermasian theory of communicative action, action learning is grounded in both action theories and systems thinking. Actions are taken to be a series of events resulting in learning occurring in the agent. The locus of learning occurs at individual, team or organisational systems level. The action learning process as described in Chapters 4 and 5 is similar at all these systems levels, and learning (and communication) therefore joins action and systems in a unified and cohesive framework. Action learning is informed by a pluralistic epistemology, which seems to be the most appropriate epistemology for constructing organisational knowledge. Furthermore, action learning displays many virtues that are indispensable for enabling organisational knowledge. The choice of action learning, and the virtues ingrained and promoted by action learning, thus make it a suitable choice to respond to the challenges of constructing knowledge in the knowledge society.

6.8 Reflection

The main purpose of the process of reflection, reviewing and making sense out of what has been done is essential if real learning is to take place (Kemmis & McTaggart 1992: 132). Furthermore, in an action-learning context, it is important to reflect on my own practices and learning in order to start a new cycle of learning and knowledge construction.

Reflection is usually aided by discussion among participants, which in my case is absent, as the study was not part of an action research programme. Discussion was limited to conversations with the promoters, fellow action learning facilitators and students participating in an action learning management development programme. Discussions with promoters assisted me in structuring my thoughts and logically developing my arguments. From this interaction, I learned to be more precise in my written communication and committing my thoughts to paper. Discussions with fellow facilitators and students assisted me in formulating the questions I wanted to research, and were in most cases a confirmation of my own thoughts, or a confirmation of my interpretation of the literature, and did not contribute substantially to the development of my knowledge. The limited number of people in South Africa with knowledge of action learning, both in depth and scope, was somewhat of a disappointment, and in most cases I had to rely on my own individual research and interpretation.

The study of organisational knowledge, as many experts have correctly emphasised, requires a multi-disciplinary approach. Such an approach requires in-depth knowledge from different disciplines,

especially organisational science, social science, philosophy, education and a number of management disciplines such as strategic management and information management. To have expert insight into all these disciplines is hardly possible and makes a study of this nature very difficult. When attempting a study with a multi-disciplinary character one should therefore carefully consider how one is going to approach it and what subjects and areas of study are of primary importance.

When I commenced with this dissertation, the question of language was not one of my research priorities. However, concluding this study has stressed the importance of language in the construction of knowledge. This is a neglected aspect in the construction of organisational knowledge and should receive far greater attention. Communication, in whatever form, is the essence of collaborative and action learning. The quality of conversations and that of questions asked play an important role and should be the subject of further research. The Habermasian theory of communicative action underscores this, and Senge's (1990) concept of creating a shared understanding is further evidence of the importance of language. Effective knowledge construction can therefore not take place if participants cannot express themselves clearly.

The focus of the questionnaire as a research instrument was on the relevance of action(s) in constructing knowledge at the various organisational systems levels. I would subsequently structure the questionnaire slightly differently to explore the importance of language in constructing organisational knowledge, both within team and organisational contexts.

I contend that my personal computer (PC) competence and skills, the use of the Internet, and my ability to find and retrieve information quickly, greatly assisted me in completing this study. These skills also allowed me to benchmark myself against other studies that have been done. In conclusion, this study broadened my knowledge in both depth and scope and gave me the confidence to engage with knowledgeable experts anywhere in the world on the topics of organisational knowledge and learning, action learning, knowledge management and competitive intelligence.

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Action Learning Survey

Annexure A

The following questionnaire has been designed to help **assess the effectiveness of action learning as a method of executive managerial and organisational development**. It is primarily a personal, opinion-based questionnaire, and there are no rights or wrong answers; your own personal conviction in answering the questions truthfully is the only criterion.

The questionnaire has been divided into three parts: **Part A** relates to demographic details about you and your managerial position. **Part B** comprises your responses to specific questions related to the processes and your involvement in an action-learning programme. **Part C** contains an opportunity for you to provide open-ended comments on the processes and practice of action learning as you have experienced it as an individual, part of a team and as part of your organisation.

The questionnaire uses a five-point scale where 1 is the **LOWEST** and 5 indicates **VERY HIGH**. For each statement, please tick the number that corresponds to your level of agreement and ensure that ALL statements are rated by ticking ONE response only per question. The questionnaire should take approximately 10-15 minutes to complete. All information will be treated with the utmost confidence. If you prefer to remain anonymous, you may do so by omitting your particulars.

Thank you very much for your assistance in this research. Your contribution is important to the global development of management education to bring about a better understanding of organisational development.

Herman van Niekerk (+27 21 423 4747 or herman@bsn.co.za).
Business School Netherlands/ South Africa

PART A:

Personal details					
Date:					
Name:					
E-mail:					
Phone:	Area code:	Phone number:			
Company:					
Position:					
Country:					
1. South Africa	2. Netherlands	3. In-company	4. Internet-MBA	5. Other	
Industry:					
1 Government	2 Education	3 Financial Services	4 Business Owner	5 Information & Communication	6 Manufacturing
7. Tourism	8. Other				
Region: (South African students only)					
1. Gauteng	2. Western Cape	3. Eastern Cape	4. Free State	5. KwaZulu Natal	
6. Mpumalanga	7. Northern Province	8. Northern Cape	9. North Western Province		
Category:					
1. Graduate	2. Dissertation phase	3. Completed four or more modules		4. Completed fewer than four modules	
5. Diploma studies					

PART B

Question	Please rank in order of importance: [1 – Not at All] to [5 – Very Great Extent] To what extent (does / did ...)	Not At All	Very little	Somewhat	Great Extent	Very Great Extent
		1	2	3	4	5
Individual		1	2	3	4	5
1.a	Did an awareness of the strengths and weaknesses of your learning style (Mumford and Honey) contribute to your learning development?					
2.b	Did the programmed knowledge (P) of plenary sessions contribute to your learning development regarding the various management disciplines?					
3.c	Did your own empirical research (observation and questioning) contribute to the development of your knowledge for management challenges?					
4.d	Taking action by implementing the Action Learning Projects (ALP) improve your knowledge of management?					
5.e	Reflecting on the project implementation improve your knowledge of that management discipline?					
6. f	Assessment feedback on your ALP's improving your understanding of that subject?					
Team (to what extent does/did...)		1	2	3	4	5
7.g	Subset members contribute to your learning/knowledge development?					
8.h	Were subsets composed of self-managed individuals capable of learning from each other?					
9.i	Subset members freely share their individual knowledge?					
10.j	Subset members have the ability to ask relevant and penetrating questions?					
11.k	Teamwork establish trust within the subset?					
12.l	Subset / team interaction improve your ability to direct conversations to maximize learning opportunities?					
Organisation (to what extent does/did...)		1	2	3	4	5
13.m	Does your organisation apply traditional learning methods?					
14.n	Does / did your organisation support you in implementing your project?					
15.o	Are your project findings shared with other relevant departments?					
16.p	Were your projects (problem identification) aligned with the business strategic objectives?					
17.q	Was your organisation prepared to allow calculated risks to be taken in order to learn from the project implementation?					
18.r	Does your organisation have technology in place to manage information? (i.e. collect, share and distribute information within the organisation)					
To what extent did/does Action Learning ...		1	2	3	4	5
19.s	Contribute to your development as a leader?					
20.t	Contribute to sharing information within the organisational context?					
21.u	Contribute to establish a learning culture in your organisation?					
22.v	Improve your problem-solving techniques?					
23.w	Assist in changing the corporate culture (i.e. to create trust)?					
24.x	Contribute in fostering creativity and innovation (i.e. related to new products, improved services, etc)?					
25.y	Improve your ability to learn compared to current practices of learning?					
26.z	Contribute to an awareness to become a life-long learner?					
27.AA	Improve your critical thinking skills? (i.e. asking relevant, penetrating questions)?					

Please rank in order of importance: From [1 - least important] to [5- most important]		Least important				Most Important
Where did you personally learn and increase your understanding the most?		1	2	3	4	5
28.BB	During plenary sessions where the tutor provided a theoretical framework (programmed knowledge).					
29.CC	During subset discussions and interaction with fellow students.					
30.DD	During own individual literature research.					
31.EE	Own personal observation and empirical investigations (i.e. interviews, questionnaires).					
32.FF	Your own experience and working environment.					
33.GG	Intentional, purposive action taken by you to implement project findings.					
34.HH	Reflection (i.e. learning from actions undertaken).					
Please rank in order of importance: From [1 - least difficult] to [5- most difficult]		Least Difficult				Most Difficult
Which part of the ALP is the most demanding and difficult from a learning perspective? (i.e. NOT practical considerations such as finding time, making appointments etc)		1	2	3	4	5
35.II	Identifying a clear problem that is linked to the business strategy.					
36.JJ	Collection of information (i.e. literature study, attending sessions, using the Internet, etc).					
37.KK	Collection of empirical data (i.e. questionnaire design, interviews, group discussions, posing relevant questions).					
38.L	Analysis and interpretation of information (i.e. using conceptual frameworks and statistical analysis of empirical research).					
39.MM	Implementation of findings (i.e. get corporate support, own commitment to implement and drive project).					
40.NN	Reflection (i.e. writing the logbook capturing key learning moments and what you have learned from that).					

PART C

Additional comments:

(OO) C.1 Would you recommend that your organisation implement action learning as the primary learning methodology?
(Please mark with an X)

YES	NO
-----	----

C.2 Please substantiate your answer in a few sentences.

C.3 What is the single most important aspect of action learning which impresses you and which has contributed the most significantly to your development as a manager?

C.4

Any additional comments:

Focus Group Discussion: 29 November 2002

1. Details of participants

Name	Position	Company
Marlize Kingma	HR Manager: Coastal Region	Securicor Gray
Mike Hill	Business Development	PIC Solutions
Winston Khuzwayo	HR Manager	Tomka Tools
Michelle Augustine	HR Manager	Buffalo City Municipality
Deon van Rensburg	Business Owner	Remax Properties
Premilla Hamid	PR Communications Manager	Ekurukheleni Metro Council
Harold Moses	Procurement Manager	Engen Oil
Gary Ferguson	Business Consultant	Independent consultant
Eddie Tsitsimbi	Regional Manager	Old Mutual

2. Overview of questions

Main Focus: Under what conditions are subset / team learning successful / not successful? What are the important attributes of a well functioning subset?

2.1 Group dynamics

- Are individuals coming prepared to the subset meeting?
- What is the level of commitment to learning in the subset?
- What is the quality of contribution of subset members?
- What is the level of trust within the subset?
- Are subset members committed to action learning principles?

2.2 Structure of subset

- Do subset members have clarity on the individual roles in a subset?
- What is the role and contribution of the facilitator / is one required?
- Quality of listening and reflection taking place.
- Quality of questions being asked.
- Quality of problem-framing.

2.3 Individual competency

- Individual competency.
- Personal motivation.
- Intellectual capability.
- Level of business experience / exposure.
- Resolution to take action.

3. Summary of main points under which subsets are functioning successfully

Participants in the focus group all agreed to the following:

3.1 Primary conditions for subsets to be successful

Individual students have to be highly committed to their studies and learning.

Clear objectives need to be set, individual roles to be defined and ground rules established to prevent subsets from becoming social events.

Honesty and respect for each other is of utmost importance.

3.2 Attributes of successful subsets

Commitment: to attend, be prepared, to share, learn, and honesty and respect.

Establish clear ground rules.

Strong facilitation.

Diverse group compilation is beneficial for good interaction.

Most important benefit of subset is the interpersonal interaction which promotes a depth of learning and knowledge-sharing to take place.

3.3 Group dynamics

In some cases group dynamics / strong personalities dominate subsets which are not conducive to effective learning to take place. A lack of understanding of the true nature of action learning and its role and function is also an impediment to effective learning.

3.4 How to improve subsets

Subsets need to be properly facilitated and should initially be done by an outsider and expert in action learning facilitation to guide the group to independent facilitation.

4. Conclusion

If subsets were taken away it would be highly detrimental to the quality of learning taking place.

ANNEXURE C

Annexure C.1

Please rank in order of importance: From [1 - least important] to [5- most important]	Least Important	Very little	Somewhat	Important	Most Important
Where did you personally learn and increase your understanding the most?	1 %	2 %	3 %	4 %	5 %
Tutor instruction providing a theoretical framework (P - programmed knowledge).	0.84	7.56	27.73	44.54	19.33
Discussions and interaction with fellow students.	3.33	8.33	32.50	35.00	20.83
Individual literature research (Programmed knowledge)	0.0	2.50	7.50	47.50	42.50
Personal observation and empirical investigations (i.e. interviews, questionnaires - Q: asking questions)	0.0	0.83	15.83	40.83	42.50
Own experience and working environment.	0.0	2.50	16.69	45.83	35.00
Intentional, purposive action taken to implement project findings.	0.84	3.36	11.76	52.10	31.93
Reflection (i.e. learning from actions undertaken).	0.84	1.68	21.85	43.70	31.93

Annexure C.2

Please rank in order of importance: From [1 - least difficult] to [5- most difficult]	Least Difficult				Most Difficult
Which part of the ALP is the most demanding and difficult from a learning perspective? (i.e. NOT practical considerations such as finding time, making appointments etc)	1 %	2 %	3 %	4 %	5 %
Identifying a clear problem that is linked to the business strategy.	10.83	15.83	30	28.33	15
Collection of information (i.e. literature study, attending sessions, using the Internet, etc).	17.5	21.67	30.83	21.67	8.37
Collection of empirical data (i.e. questionnaire design, interviews, group discussions, posing relevant questions).	12.5	13.33	20.83	35.83	17.5
Analysis and interpretation of information (i.e. using conceptual frameworks and statistical analysis of empirical research).	8.4	16.81	25.21	33.61	15.97
Implementation of findings (i.e. get corporate support, own commitment to implement and drive project).	11.02	9.32	21.19	32.2	26.27
Reflection (i.e. writing the logbook capturing key learning moments and what you have learned from that).	11.67	25.83	29.17	24.17	9.17

Annexure C.3

<i>Please rank in order of importance: [1 – Not at All] to [5 – Very Great Extent]</i>					
To what extent (does / did ...)	Not At All	Very little	Somewhat	Great Extent	Very Great Extent
Organisation (to what extent does/ did...)	1	2	3	4	5
Does your organisation apply traditional learning methods?	5.08	11.86	27.97	36.44	18.64
Does / did your organisation support you in implementing your project?	5.83	11.67	22.5	32.5	27.5
Are your project findings shared with other relevant departments?	8.33	11.67	22.5	35	22.5
Were your projects (problem identification) aligned with the business strategic objectives?	2.52	1.68	7.50	44.54	43.7
Was your organisation prepared to allow calculated risks to be taken in order to learn from the project implementation?	7.5	20.83	28.33	28.30	15
Does your organisation have technology in place to manage information? (i.e. collect, share and distribute information within the organisation)	4.2	12.61	26.99	28.57	27.73

ANNEXURE D

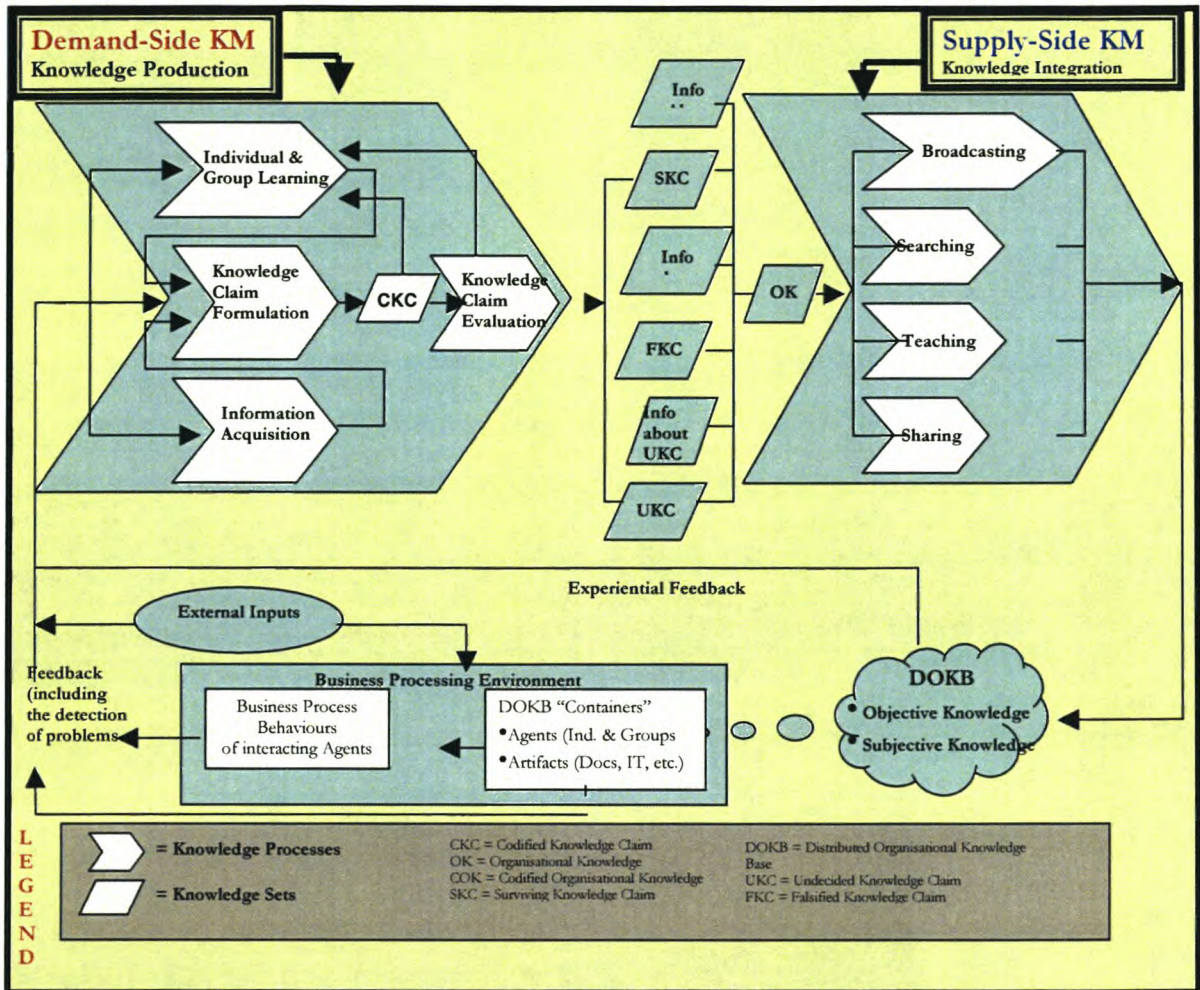
Summary of open-ended questions

Ref. No.	Motivation for action learning	Single most important aspect of action learning	Additional comments
1.	Create trust	Improve critical thinking skills	Difficult to accept for traditional thinkers
2.	Practical implementation	Force to act/implement	Must be at management level
3.	Continuous improvement	Learn from experience	Develop a learning culture
4.	Deal with real issues	Implement research part	Implement ALP is most difficult
5.	Faster way of learning	Research and implementation	Way of the future
6.	Use of all aspects of learning	Practical implementation	Systems approach
7.	Appropriate method for LO	Asking questions and team learning	Subsets' functioning is a problem
8.	Practical learning	Problem solving	N/A
9.	N/A	Tackling real problem	Did not get company support
10.	Focused learning	Implementation/action	N/A
11.	Forces one to think	Organisational wide implementation	N/A
12.	Back to basics of learning	Practical daily application	N/A
13.	Wide learning exposure	N/A	N/A
14.	Create culture of learning	Practical application	N/A
15.	Team learning	Doing the action learning project	Development of learning culture
16.	Practical implementation	Research and analysis part	Implement ALP is most difficult
17.	Benefit to organisations	Process of doing an ALP	N/A
18.	Bring about change	Learn problem identification	Will be beneficial to country
19.	Real learning for situation	Practical nature of learning	N/A
20.	Actionable learning	Value of team learning	N/A
21.	Question traditional learning	Exploring body of knowledge	Sharing of different views helps
22.	Encourage learning & change	Theory and practice integration	Good methodology
23.	Generation of fresh ideas	Theory and practice integration	Focus on financial management
24.	Problem solving nature	Collection of information	Time allocation for study is wrong
25.	N/A	Reflection and subset learning	Encourage tutors to do AL
26.	Problem solving	Theory and practice balance	N/A
27.	Learning relevant to business	Action / implementation	Extend to other disciplines
28.	Support change management	Meeting senior people from industry	Practical intervention
29.	Relevant to OBE	Logical thinking & collection of info.	Companies need AL
30.	Company already doing AL	Action and practicality	N/A
31.	Support Cont. improvement	Address practical realities	Needs to be facilitated
32.	Learn from actions	Force to align with reality	N/A
33.	N/A	Value of Set meetings	N/A
34.	Promotes personal learning	Subsets enhances experience	Improve tutor feedback
35.	N/A	N/A	N/A
36.	Combination of theory & practice	Collection of information	N/A
37.	Practice is better	Balance of theory & practice	Subsets support
38.	Problem solving nature	Planning improved	N/A
39.	OBE supportive	Case problem identification	Facilitation of subsets
40.	Problem solving nature	Sharing across organisation	N/A
41.	Tackles real problems	HR focus	N/A
42.	Supportive of KM	Use of case studies	N/A
43.	Innovation & creativity	Problem solving	Introduce to government
44.	Theory and Practice balance	Real problems solved	Admin to be improved
45.	OBE and critical thinking	Problem identification and solution	Improve admin
46.	Individuals involved in change	Improve critical thinking	Balance between theory & practice
47.	Practical application	Operations management	Problems with bursaries
48.	Learning from actions	Collection and analyses of data	N/A
49.	Integration of theory & practice	Application of theory	Clearer understanding of concepts
50.	Bridges gap between theory & practice	Analyse solutions and select the best option	N/A

Ref. No.	Motivation for action learning	Single most important aspect of action learning	Additional comments
51.	Practical application benefits learners	Practical research supports effective problem solving	Reflection and life long learning are promoted
52.	AL benefits small organisations	Analysing theory to improve	Subset members can prevent learning
53.	AL needs constant revision	Whole AL process	Failed subsets: not trust and sharing
54.	Practical methodology	Implementation of solutions	N/A
55.	Empower individuals through finding own solutions	Reflection and planning for future action	AL builds trust, respect and confidence to solve problems
56.	Best way to improve learning	Action-reflection	Great methodology
57.	Application to work situation	Learning to identify problems and solving them	Company did not meet personal expectations
58.	Internet provides opportunities to learn	Ability to share experiences and promote openness and trust	Continue with doctorate
59.	AL needs commitment of learner and organisation	Cannot think of anything	N/A
60.	Identification of business problems	Identify causes of business problems	See business in different perspective and also improve one's theory
61.	Low educational environment necessitates practical approach	Access to electronic libraries	Poor distribution of background and experience have negative impact
62.	Powerful change methodology	Provide holistic framework	Improve confidence in learner
63.	AL requires high degree of maturity	Way AL permits growth of the individual	Requires emotional maturity
64.	Real life management issues	To understand real issue involved	N/A
65.	Action, reflection, experience lead to deeper understanding	Questioning and reflection process	Testing learner's knowledge as they implement
66.	Great success achieved with AL	Practical exposure and experience	N/A
67.	Relevant for educational field	N/A	N/A
68.	Address problems and change	Practical and problem solving approach	N/A
69.	More holistic learning	Defining the answer	N/A
70.	Best methodology	Balance between theory and implementation	N/A
71.	Critical thinking & decision-making have improved	Whole AL process of learning	N/A
72.	N/A	Critical approach to current theory	N/A
73.	Interactive approach	Cross pollination of ideas	N/A
74.	Better understanding of what should be done	Research of all possible solutions	Can lead to limited focus
75.	Experienced tangible results	Interacting with tutors and students	N/A
76.	Enhance critical thinking, innovation and creativity	Improve interpersonal skills	N/A
77.	Organisations readiness levels should be assessed first	Ability to share ideas and to apply recommendations	N/A
78.	Most effective way of learning	Improve communications skills and self-confidence	N/A
79.	Learn by doing and reflection	Identification of gaps in organisation	Do not compare AL and university students
80.	International consultants are created	Identification of real problems in organisation	N/A
81.	Improve creativity	Increase lateral thinking and management capabilities	AL makes a difference
82.	Expand managers framework	Investigation of problems	Must have confidence to ask "Why"
83.	Difference between teaching and learning	Learning to ask right questions	N/A
84.	N/A	N/A	N/A
85.	Linking of theory and practice	Translating concepts into results	N/A
86.	Problem solving nature	N/A	N/A
87.	Best method	Problem solving	N/A

Ref. No.	Motivation for action learning	Single most important aspect of action learning	Additional comments
88.	N/A	N/A	N/A
89.	Undecided		
90.	Strategy and implementation	Asking questions	Very good
91.	No		
92.	N/A	N/A	N/A
93.	Dealing with real issues	Research and analysis	Not enough time
94.	Learning by doing	Learn from real life problems	N/A
95.	Relevant on-the-job learning	Inter-active contact, solving problem	Subsets need more guidance
96.	Learning organisation	Focus on real issues	N/A
97.	Immediate results and feedback	Problems solving skills improves	N/A
98.	Only for mature individuals	Wide exposure to other disciplines	N/A
99.	Higher awareness of choices	Implementation and analysis	N/A
100.	Problem definition and solution	Studying relevant business issues	N/A
101.	Learning through practical experience	Addressing real problems	Will do it again
102.	Explore strategic opportunities to improve the business	Teamwork	N/A
103.	Teamwork to solve problems	Finding the best solution to problems	N/A
104.	Practical manner of dealing with management issues	Integration of theory and practice	N/A
105.	Holistic combination of theory and practice	Practical, real-life projects	N/A
106.	Practical implementation	Communication strategy	AL is the future
107.	Continuous problem identification and solving	Grown as an individual	Thank you
108.	Learned a lot	Interaction with different disciplines	N/A
109.	Learning through teamwork, experience and reflection	Speed of learning	N/A
110.	Company starts to implement AL	Group interaction	Right solution for SA
111.	Practical alignment with theory	Interaction and sharing knowledge	To become more involved
112.	Will still need theory	Practical hands-on approach	N/A
113.	Best to solve problems	Addressing real problems	N/A
114.	Application of learning	Dealing with real problems and finding real solutions	AL gives measurable results
115.	Provides quick feedback	No single aspect, but whole range is important	N/A
116.	Results/learning can be witnessed directly	Practical application of learning	N/A
117.	Will only succeed if done by senior management	Putting theory into action	N/A
118.	Improve the organisation	N/A	N/A
119.	Real time problems	Develop skills to do proper research	Great MBA
120.	New times require new approaches	Learn to ask right questions	N/A
	LEGEND		
	Theory and practice integration		
	Problem solving		
	Action-reflection		
	Asking right questions		
	NO responses to Action learning		

ANNEXURE E



Knowledge Life Cycle (McElroy 2003: 98)