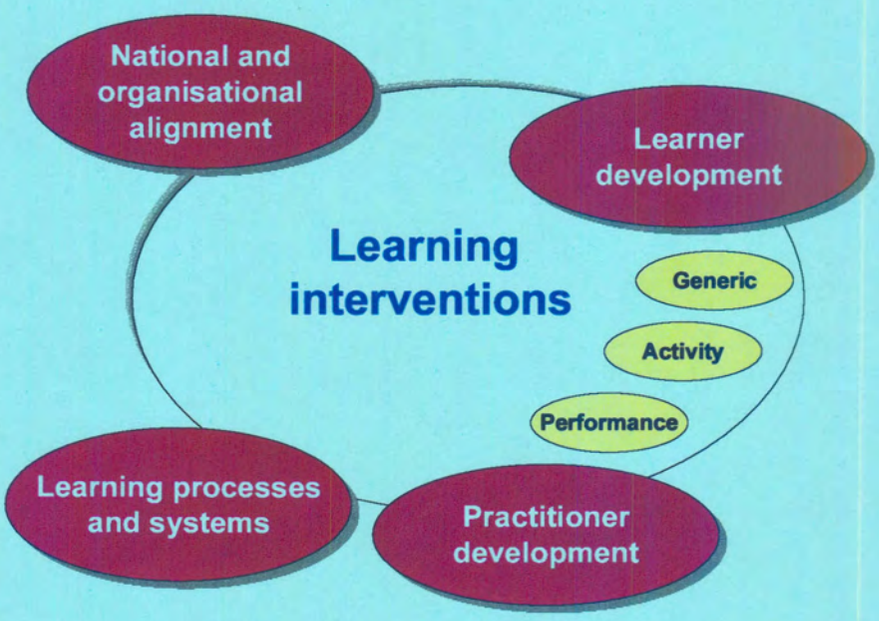
Chapter 1
Overview



An experiential learning process for the advancement of previously disadvantaged employees in an industrial context – W.J. Cilliers

1 OVERVIEW

One of the focus areas of the Skills Development Act is to provide a "skills development strategy which is flexible, accessible, decentralised, demand-led and based on a partnership between the public and private sectors" (South Africa, 1997: 2a).

1.1 INTRODUCTION

This thesis reports on the development of an integrated experiential learning process for the advancement of previously disadvantaged employees in an industrial context. The *Green Paper on Skills Development Strategy* (South Africa, 1997:6c) proposes a new "approach to skills development which complements the formal education system. It links skill information to the requirements of a growing economy and extends education and training to people both within and outside formal employment. It is primarily concerned with industry-based training, improving the intermediate level skills base of the country and labour market training for target groups". In order to provide a holistic approach to skills development and experiential training, attention needs to be given to an integrated approach to the design, development and implementation of a total outcomes-based training and development system within a process-driven industry.

Eskom supplies well over 90% of the electricity consumed in South Africa. It is also Africa's largest utility and accounts for more than half of the electricity generated on the entire African continent. Its 25 power stations are mainly coal-fired, but include Africa's only nuclear power station, the world's largest dry-cooled power station and two hydro-electric and two pumped storage schemes (Eskom, 1998e). Eskom also has unique expertise in burning coal with an extremely low calorific value. Eskom is an independent, self-financing

undertaking. It has no shareholders and is funded entirely from debt and retained earnings (Eskom, 1996).

Eskom employs 56 000 workers and develops its employees in terms of competence, skills and self-confidence. In 1994 Eskom committed itself to changing its staff profile so that 50% of management, professional and supervisory staff would be black South Africans by the year 2000; three years later the figure already stood at 35% (Eskom, 1998e). All employees are encouraged to develop their potential through internal and external training and development programmes. Lifelong learning programmes include literacy and numeracy training. Eskom has spent approximately R400 million per year on the training and development of its employees (Eskom, 1998e). The organisation is also responding to the unfolding economic and political frameworks in South Africa by creating a workplace that is representative of the population and required work skills through implementation of the *Skills Development Act* (South Africa, 1998b) and development of its human resources.

1.2 RESEARCH PROBLEM

The current training and development processes in use within Eskom and industry do not comply with the requirements of national and organisational alignment, learner development, practitioner development, and learning process and systems expected from a holistic training and development approach. Reasonable developmental requirements in Eskom and industry relate to the following:

National and organisational alignment

- Legislation requires other processes to be used and implemented; current processes are not aligned with national and legal requirements (South Africa, 1995a; South

Africa, 1997a; South Africa, 1998a).

- Learning is not co-ordinated and effective in meeting current industry needs in the light of the changes in and demands of industry and legal bodies (South Africa, 1995a; South Africa, 1997a; South Africa, 1997b; South Africa, 1997c; South Africa, 1997d).
- This problem should be addressed within the context of the requirements of industry and education (Eskom, 1997a; Eskom, 1997b; Eskom, 1998a).

Learner development

- Learning does not complement or fulfil the current needs of learners in that it is not outcomes-based and no recognition is received for prior learning (South Africa, 1997a; South Africa, 1998a; South Africa, b).

Practitioner development

- Practitioner development is not aligned with national development of the ETD / HRD practitioner roles (Eskom, 1997a; Eskom 1997b; Eskom 1998b).

Learning processes and systems

- Learning is fragmented and not integrated with other systems (South Africa, 1995a).
- There are no methods of assessment leading to a declaration of competency and no formal link exists between remuneration and skills demonstrated and applied in the workplace (South Africa, 1995a).

Learning interventions

- Organisational development processes do not support a culture of lifelong learning (South Africa, 1997a).
- The framework in which current training and development are functioning is discipline-orientated, functional, hierarchical, silo-effect-driven and not effective and it does not focus on the other support functions within a human resources environment (Eskom, 1997b).

Essentially the problem concerns the development and implementation of an experiential learning process for the advancement of employees in industry, with the appropriate learnerships to support legislation. This process must be in line with the *Skills Development Act* (South Africa, 1998b) and the *Higher Education Bill* (South Africa, 1997b) in order to provide the trainees with a training and development programme applicable to their discipline and established on an outcomes-based approach. However, to support this, the *Skills Development Act* (South Africa, 1998b) and the *Higher Education Bill* (South Africa, 1997b) require a new approach to outcomes-based human resources development.

1.2.1 Aim of the research

The aim of the research is to focus on the experiential learning process and to devise a framework to enhance the development of skills and competencies for the advancement of employees in industry. Industry currently lacks a holistic training and development process to accommodate the enhancement of the required competencies (South Africa, 1997a; Eskom, 1997b).

1.2.2 Objectives of the research

The objectives of this study focus on the integration of the following into the learning interventions (Figure 1.1):

- National and organisational alignment
- learner development
- practitioner development
- learning processes and systems

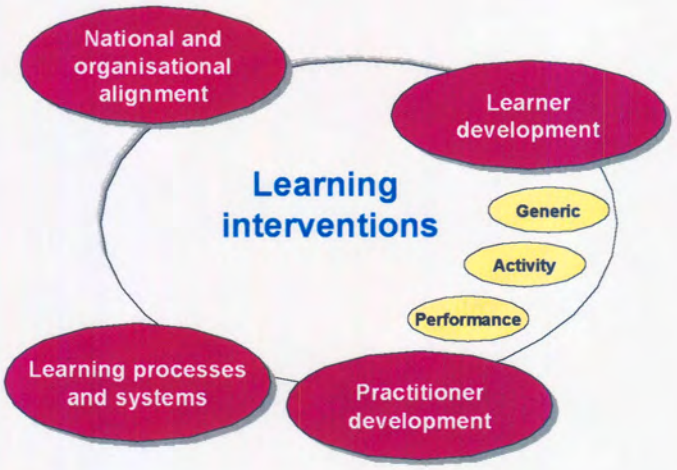


Figure 1.1 – The focus areas for this research project

Table 1.1 indicates the actions undertaken in each focus area to support the learning interventions.

Focus area	Actions
National and organisational alignment	• The implications of the legal requirements for an organisation and the training process were determined.
Learner development	• An outcomes-based training and development interventions process was provided to support career and learning pathways for groups of previously disadvantaged employees in specific disciplines within the parameters of the National Qualifications Framework (NQF). • The current status of training in South Africa was evaluated. • ABET within Eskom was audited. • A selection of literacy training service-providers in South Africa were evaluated.
Practitioner development	• The development necessary for the practitioners involved in training and development was provided.
Learning processes and systems	• The intent of the learning environment at an organisational level was determined. • Such a process was benchmarked for later implementation in industry.

Table 1.1 – Focus area actions

In addition, the learning interventions included the following actions:

- *Designing* and *developing* a process-orientated, outcomes-based training and development process to address *generic*, *activity* and *performance* training and development of competencies and skills in industry.
- Determining the *suitability* of such an outcomes-based training and development process in Eskom.
- Establishing the *foundations* of the integrated learning process.
- Developing the *fundamentals* of the learning process.

1.2.3 Research question

The following research question was formulated:

> How can national and organisational alignment, learner development, practitioner development, and learning processes and systems be integrated into an experiential learning process for the design of learning interventions?

In order for the researcher to answer this question, further subsidiary research questions needed to be asked:

Focus area	*Subsidiary research questions*
National and organisational alignment	• How *closely* is the learning environment aligned with the national and organisational policy requirements?
Learner development	• How *efficient* is the delivery of training

interventions?

Practitioner development	• How does practitioner development influence the *quality* of *learning*?
Learning processes and systems	• How *can* learning processes and systems assist the advancement of employees?

In order to answer the subsidiary questions, the following information had to be incorporated into each one:

- What is the current status in terms of national and organisational alignment, learner development, practitioner development, and learning processes and systems?
- What is wrong with the current practices regarding national and organisational alignment, learner development, practitioner development, and learning processes and systems?
- What should the ideal process look like in order to address the research problems?
- What learning interventions need to be implemented to address the research problems?

1.2.4 Previous research

In order to put this research into the context of research conducted in South Africa, a review of the NEXUS database was undertaken. The information obtained from this search, conducted in November / December 1997, was as follows:

Topic	*Author*	*Qualification*
An evaluative study of a university course for professional adult educators using an experiential learning methodology.	Saddington, A. (1985)	MPhil (*completed*)
An illuminative evaluation of the mini co-operative experiential approach to learning based on a case study at a school.	Naidoo, D. R. (1997)	MA (*current*)
Development of a lower-level advancement process as part of an overall organisational manpower plan.	Van Graan, A. (1990)	M Com Industrial Psychology (*completed*)
Locus of control and achievement of unskilled coloured Eskom employees to participate in training and advancement programmes.	De Wet, M. A. (1992)	MA Social Science (*completed*)
The role of sense of coherence in human relations training through experiential learning.	Rabichund, S. (1997)	MA (*current*)

Table 1.2 - Summary of the results of the NEXUS database search

1.3 MOTIVATION FOR THE STUDY

In South Africa, owing to labour inequalities, unemployment and the history of education, training and development, previously disadvantage employees seldom had access to information, training and development interventions enabling them to establish, develop and compete on career paths in an organisation. Development initiatives have been inadequate and sometimes inaccessible to a large number of marginalised employees. In an effort to redress these inequalities, integrated learning processes and systems are fulfilling a crucial role. Unfortunately, national and organisational alignment, learner development, practitioner development, and learning processes and systems indicate that the current processes and systems fail to adequately address the need for learning and process system support for learners.

1.4 RESEARCH METHODOLOGY

The research methodology adopted for this research is *action research* undertaken on a specific, focused target population to investigate the merits of the current and the improved approach to this experiential learning process for training and development in industry. The research methods are discussed in detail in Chapter 3.

1.4.1 Type of research: action research

Action research can be seen as pedagogical, scientifically grounded, innovative research by means of communication between all role-players with regard to practices in a specific educational situation (Landman, 1988). Furthermore, action research can be seen as:

- the application of principles of group dynamics in the implementation of research innovations (Sax, 1979);

- designed to develop new skills or approaches to solving problems, for direct application in the classroom (Amabile & Stubbs, 1982);
- a type of research that is normally undertaken by practitioners, i.e. it calls for the researcher's involvement in the action process;
- research concerned with the immediate application of the results in a specific situation (Verma & Beard, 1981).

The following are the advantages of this type of research (Cohen & Manion, 1998; Mouton and Marais, 1996):

- Everybody can learn from this research.
- All those involved are committed to the research project.
- Problems are solved in the learning process.
- Research results lead to concrete, immediate and practical implementation strategies and actions.

Through "systematic, controlled action research, higher education teachers can become more professional, more interested in pedagogical aspects of higher education and more motivated to integrate their research and teaching interests in a holistic way. This in turn can lead to greater job satisfaction, better academic programmes, improvement of student learning and practitioners' insights and contributions to the advancement of knowledge in higher education" (Zuber-Skerritt, 1982:15).

1.4.2 Subjects of the research

The subjects of the study were drawn from a convenient sample of previously disadvantaged employees and identified practitioners in industry:

- A and B-band workers (workers of the lowest skills level employed by Eskom) from the Eskom Transmission Group.

- Eskom human resources development practitioners, who assisted with this research project on a part-time and full-time basis and in a specialist capacity.

Eskom was used as the focus group to fulfil and integrate the three dimensions as described in Figure 4.1 in accommodating the national and organisational, transformational and social implications of the study.

1.4.3 Data collection methods and instruments

The data collection methods and instruments used in this research serve to triangulate the data in order (Cohen & Manion, 1998; Mouton and Marais, 1996):

- to gain a more holistic picture of the results;
- to bring out different perspectives of the results;
- to increase the reliability of the study.

The data collection methods and instruments used in the research are set out in Table 5.1 and discussed further in Chapter 3 and in Chapter 5. They include:

- surveys to determine the perceptions of the learners, practitioners and service-providers;
- a journal kept by the researcher to capture events in the cycles of the action research spiral;
- interviews with various employees at different levels in the organisation;
- electronic mail as a medium of communication;
- the use of the Eskom Human Resources database to obtain employee information; and

- the use of practical training programmes and plans.

However, this study is primarily a qualitative study. The primary data collection methods and instruments are those listed in Table 5.1. In order to triangulate the data (Mouton & Marais, 1996; Cohen & Manion, 1998), quantitative measures were taken from the results obtained from the Eskom Human Resources database and record-keeping system with regard to employee progress during the advancement programme.

1.4.4 Data collection plan

The data collection included various levels of data capturing to enable the triangulation of the data used in this research (Mouton & Marais, 1996).

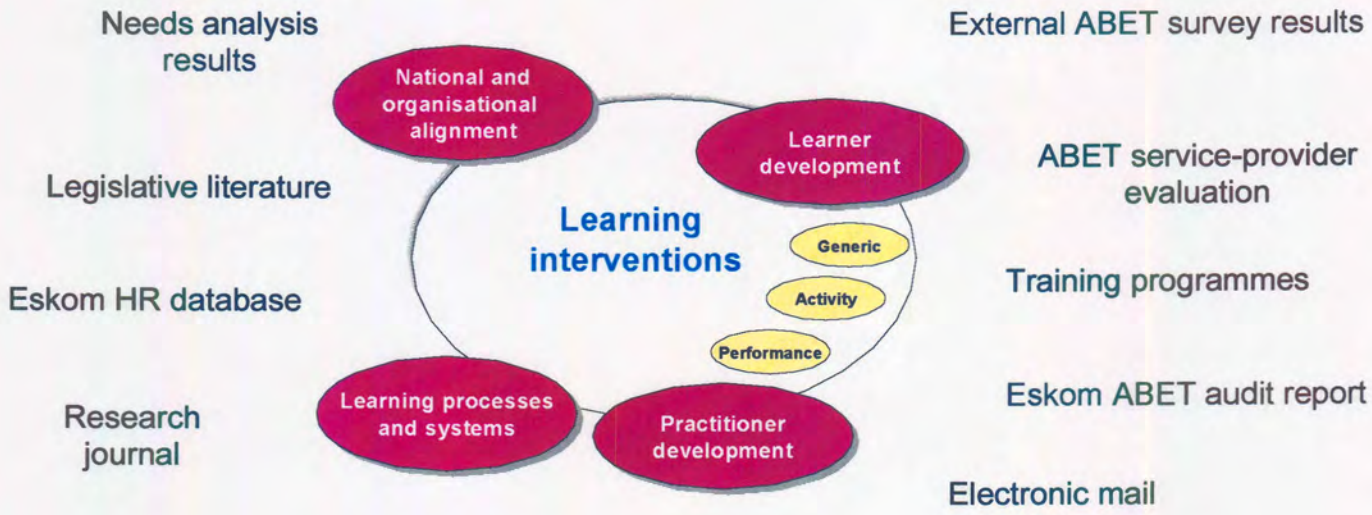


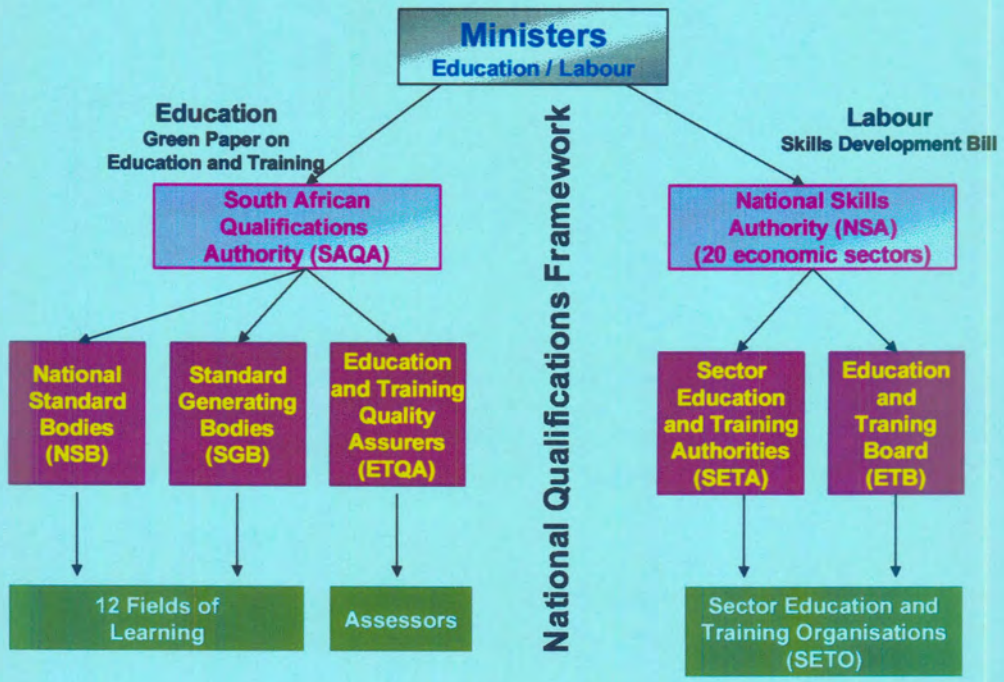
Figure 1.2 – Range of data collection

The range of the data collection used in this research project as indicated in Figure 1.2, Table 5.1 and Table 5.3.

1.5 STRUCTURE OF THE RESEARCH REPORT

Chapter 1	***Overview*** – introduction and overview of the research problem.
Chapter 2	***Literature review*** – review of current literature available on development processes. Identification and analysis of international processes and trends.
Chapter 3	***Research methods*** – research methodology used for this research project (action research).
Chapter 4	***National and organisational alignment*** – alignment of the training and development learning process at the national, organisational and social levels. ***Learner development*** – brief overview of the development of the learner. ***Practitioner development*** – the development of a practitioner framework. ***Learning processes and systems*** – the development of a learning process framework for the integration of learning interventions and management of information systems. ***Learning interventions*** – learning interventions in the training and development process in context.
Chapter 5	***Implementation and findings*** – the implementation and findings of the learning intervention processes with a selected target population.
Chapter 6	***Summary, conclusions and recommendations***
	References **Appendices** **Index**

Chapter 2
Literature review



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2 LITERATURE REVIEW

Various authors express specific concerns relating to the inadequacy of solid research on the development of theory on *training and development* interventions and the uneven amount of attention practitioners and students give to training events (Camp, Blanchard & Huszczo, 1986)

2.1 INTRODUCTION

The purpose of this chapter is to review the literature relating to the development of a training and development process suitable for use in industry. The learning process model should include the theoretical and practical depth of the literature in relation to the development of such a practical experiential learning process for industry. In addition, the literature research focuses on the learning interventions as the overarching and integrating factor in the following areas:

- National and organisational alignment requirements – to align with national and international trends;
- Learner development – to focus on the development of the learner as a whole;
- Practitioner development – to identify the skills and competencies required in the ideal practitioner to provide acceptable training and development; and
- Learning processes and systems – to support the training and development process.

Training and development continue to be essential elements for dealing with change and the required consistent improvement in performance resulting from the current changes in the national arena and organisational views of

excellence. With the new emerging organisational reality, where change, competition, competence, an outcomes-based workforce, demographics and cultural changes in business are more prominent, training and development are becoming more important methods for equipping an organisation with the flexibility, adaptability and durability required for survival.

However, various authors (Campbell, 1971; Camp, Blanchard & Huszczo, 1986; Lathan, 1988; Goldstein & Associates, 1989) express dissatisfaction with the theoretical foundation of and conflict among the practitioners on the development of training. Camp, Blanchard & Huszczo (1986) express specific concerns relating to the lack of solid research on the development of theory on *training and development* interventions and the uneven amount of attention practitioners and students give to training events.

Furthermore, the disproportionate amount of attention and time allocated to the training and development processes and environment integral and essential to the use of the learning environment is cause for concern. Attention has been focused primarily on the development of subprocesses explaining the steps involved in training activities, such as training needs assessment, identifying instructional methods and evaluation processes (Annett, 1968; Nadler, 1984; Bushnel, 1990; Erickson, 1990; Brinkerhoff, 1991; Hequet, 1996; Phillips, 1996).

In addition, the accelerated pace of change in technology, for example using multimedia applications and the Internet to provide sufficient learning interventions, does not allow for attention to be given to the development of theory relating to models and systems. Many authors and researchers have called for more focused research on the development of process models in the learning environment as a whole (Camp, Blanchard & Huszczo, 1986; Latham, 1988; Goldstein & Associates, 1989; Patrick, 1992).

2.2 NATIONAL AND ORGANISATIONAL ALIGNMENT

In order to address this issue, the literature review focuses on the subsidiary research question: *How closely is the learning environment aligned with national and organisational policy requirements?*

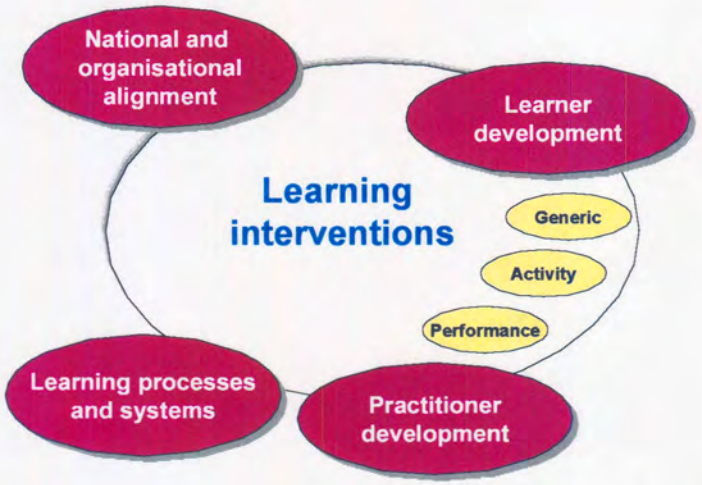

Figure 2.1 – Alignment and legal requirements

Answering this requires focus on the following (Figure 2.1 and Figure 2.2):

- National and organisational alignment;
- legal requirements;
- organisational alignment; and
- learning organisations and organisational learning.

The focus on the above items will demarcate the boundaries within which the research in relation to national and organisational alignment took place. The focus areas are all inter-linked and dependent on one another and cannot be treated as separate issues.

Figure 2.2 – Focus in relation to national and organisational alignment

2.2.1 International and national alignment

The international and national alignment focuses on the following:

- Education in South Africa; and
- Systems of educational reform.

As practitioners, we need to understand that what occurs over the next few years is a segment of a much broader chronology (Sadler, 1996). In the light of this broader perspective, the training and development function will require re-engineering. A rapidly growing global economy generating new organisational realities will require rethinking and changing of the critical mindsets that impact on the training and development efforts to re-engineer the training function. This mindset implies a mutual perception by the individual and the organisation of the business practices of the organisation. The international alignment generates new organisational realities (Sadler, 1996):

Traditional organisational perspective	*The new organisational realities*
Competitive business on an internal basis.	Business generates intense international competition.
Education, training and career advancement segmented and exact.	A complete rethinking and restructuring of education, training and development required.
Gradual involvement with technology in the workplace, with a modest amount of stress on people.	Application of new technologies impacts dramatically on organisations, people, products and services.
Managers control financial resources in a bureaucratic, inflexible environment.	Skilled leaders with expanded competencies are needed to drive change on the basis of new technologies and personal values.
Short-term return on equity measured against quality of outputs.	New workplace increases expectations in relation to productivity, performance and return on investment.
Workers rewarded and trained as required by manager's perception.	Needs of the new worker and learner are challenged by increased competition, new technologies and personal values.

Table 2.1 – Traditional organisational perspective versus new organisational realities (Sadler, 1996)

Often a practitioner, as a professional, can get caught in a prominent training function activity trap where a lot may be going on, but little is taking place.

World standards for systems, products and services are now required to document the quality of training and development interventions. Leaders must be developed to meet the changing, emerging and increasingly complex conditions of the international training and development environment (Schein, 1978). These leaders and professionals need to shift from a narrow and restricted mindset to a global organisational mindset. In addition, to be successful internationally, organisations must gain a competitive edge through the use of strategic training and the development of workforce management (Sadler, 1996; Rothwell & Kazanas, 1994a).

2.2.2 South African education – a historical perspective

Efforts to solve some of the educational problems within South Africa were initiated with a view to creating a workable education system for South Africa at a local level. The initiatives also encourage creativity, professional initiative and proactive leadership at local levels (Coombe, 1996; Lauglo, 1996). The greatest disparity in education in South Africa exists between the different types of schools in the newly established nine provincial governments, with the main question being whether to centralise or to decentralise (Lauglo, 1996). There is a strong community desire to be actively involved in the education system at the local level. The imbalances in the provision of education cannot be redressed overnight, just as it will take time to eliminate the backlogs and bring all educational facilities up to the same level (Coombe, 1996).

2.2.2.1 Systems of educational reform

The following education systems were reviewed to establish what reform has occurred:

- South Africa
- Canada

- Chile
- England and Wales
- India
- Scotland
- United States of America
- Zimbabwe

• Education in South Africa

South Africa's first national education system came into being with the establishment of the Union of South Africa in 1910. Control of education was shared between the new Union government and the provincial administrators (Buckland & De Wee, 1996). It is evident from Table 2.2 that the education system in South Africa has been transformed a number of times to accommodate the changes in the country.

Year	*Era*	*Actions evident*
1910	National system	Compromises between national and provincial governments.
1910 – 1948	Pre-apartheid education	A series of official investigations.
1948 – 1994	Apartheid education	Official investigations and counter-official proposals.
1994 – 1995	Post-apartheid	Official proposals and interim constitution.

Table 2.2 – Actions evident in the different educational eras (Buckland & De Wee, 1996)

As shown in Table 2.2, the various educational eras were shaped by different initiatives, with a wide range of proposals, recommendations and shifts of power from and to government and local or regional authorities. During the apartheid years, the focus shifted to arguments for and against the provision of racially specific education. The interim constitution in 1994 essentially revived the 1910 compromise giving control of education to the provinces (Buckland & De Wee, 1996). Education authorities recently

displayed renewed interest in local involvement in education by government through local taxation and educational levies. The view is also held that local control could facilitate more equitable and cost-effective use of expensive resources.

- **Education in Canada**

According to the constitutional division of powers in Canada, education is a provincial responsibility. Both Ontario and Quebec delegate the authority to school boards and to a lesser extent to other bodies. The stakeholders in education participate to determine the educational direction of Canada, but with no authority to the students and with little input on their part in the educational system (Smith, 1996).

- **Education in Chile**

The Chilean education system moved from a highly centralised and state-regulated system in the 1980s to one that is decentralised and more locally controlled. Decentralisation in Chile has been a continuous process marked by two distinct periods, each reflecting the interests of the government of that time (Hoffman, 1996).

- **Education in England and Wales**

The education system in England and Wales has been subject to a radical reform programme following the 1988 Education Reform Act, and cannot be described as either centralised or decentralised. Responsibilities are being transferred mainly to individual institutions or to central government. Government policies are implemented through new non-departmental public bodies referred to as quangos (quasi-autonomous non-governmental organisations). The reform legislation entails a delicate balance between the national education department and the concerns of the local education authorities (Welton, 1996).

- **Education in India**

India is the seventh largest country in the world in terms of area, and the second largest in population. After independence in 1956, the 25 states underwent major administrative reorganisation at the recommendation of the States Reorganisation Commission. The states vary in demographics, climate, population and size and therefore present a complex picture in terms of diversity and conglomerates (Singh, 1996) in their educational systems.

- **Education in Scotland**

Scotland's education authorities introduced a new approach to bring about the decentralisation of education services in the country. Legislation required new unitary district authorities to be established from April 1996 and to produce new decentralisation schemes for their areas by not later than April 1997. The focus was on bringing the service closer to the communities it served. Locals participate in deciding how the services are to be delivered and the efficiency of delivery. Councils, which are closer to those they serve, are able more accurately to reflect the needs and aspirations of communities (Mulgrew, 1996).

- **Education in the United States of America**

Federal involvement in education in the USA is minimal compared with that in many other nations. America's form of federalism precludes direct participation in and control of the 50 state systems of public education by the national government. Any impact from the national government results primarily from decisions of the United States Supreme Court and the lower courts in the federal system. In addition, Acts passed by the US Congress and programmes resulting from these Acts may impact on the education system. Legislation passed in 1980 created the present configuration and emphasised that responsibility for public education lay with the states, local schools and other mechanisms initiated by the states concerned (Franklin, 1996).

- **Education in Zimbabwe**

Prior to independence, the focus in Zimbabwe was mainly on the education of whites. After independence Zimbabwe was divided into ten provinces, with a resident minister at the head of each province. Currently, the education system is operated by two main bodies at provincial level: the provincial council and the provincial development committee. These two bodies serve the rural district councils, providing developmental initiatives and generating and implementing policy (Rukanda & Chikombah, 1996).

2.2.3 Legal requirements

This section focuses on how legal requirements in the following have influenced national and organisational alignment:

- White Paper on Education and Training (1995) (South Africa, 1995b)
- Higher Education Bill (South Africa, 1997b)
- White Paper on a Programme for the Transformation of Higher Education (1997) (South Africa, 1997d)
- Green Paper on Further Education and Training (South Africa, 1998a)
- Skills Development Bill (South Africa, 1997a)
- Green Paper on Skills Development Strategy (1997) (South Africa, 1997c)
- White Paper on Science and Technology (1997) (South Africa, 1997e)
- South African Qualifications Authority Act (South Africa, 1995a)
- National Qualifications Framework (South Africa, 1995a; South Africa, 1995b)
- Unit standards (South Africa, 1995a; South Africa, 1995b)

2.2.3.1 Introduction

The challenge is to "redress past inequalities and to transform the higher education system to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities" (South Africa, 1997d: 2). The main focus of the alignment and legal requirements is to lay the foundations for a learning environment that can stimulate, direct and create the energies necessary to meet the challenges of reconstruction and development in South Africa. The natural flow for the establishment of legislative requirements includes the following progression:

- Commission or workgroup to investigate current environment.
- Green Paper to propose solutions
- White Paper for final presentation to and acceptance by legislative bodies
- Bill as an accepted law passed through government
- Act as published in the *Government Gazette*

The ministries of education and labour are co-operating to provide the guidelines and framework to promote and establish the proposed new approach to education, training and skills development in South Africa (Figure 2.3) (South Africa, 1997d; South Africa, 1998b).

As shown in Figure 2.3, close co-operation between education and the labour market is essential for the development of the qualifications authority and to enable a qualifications framework that will support the integration of learning interventions into a theoretical and practical environment.

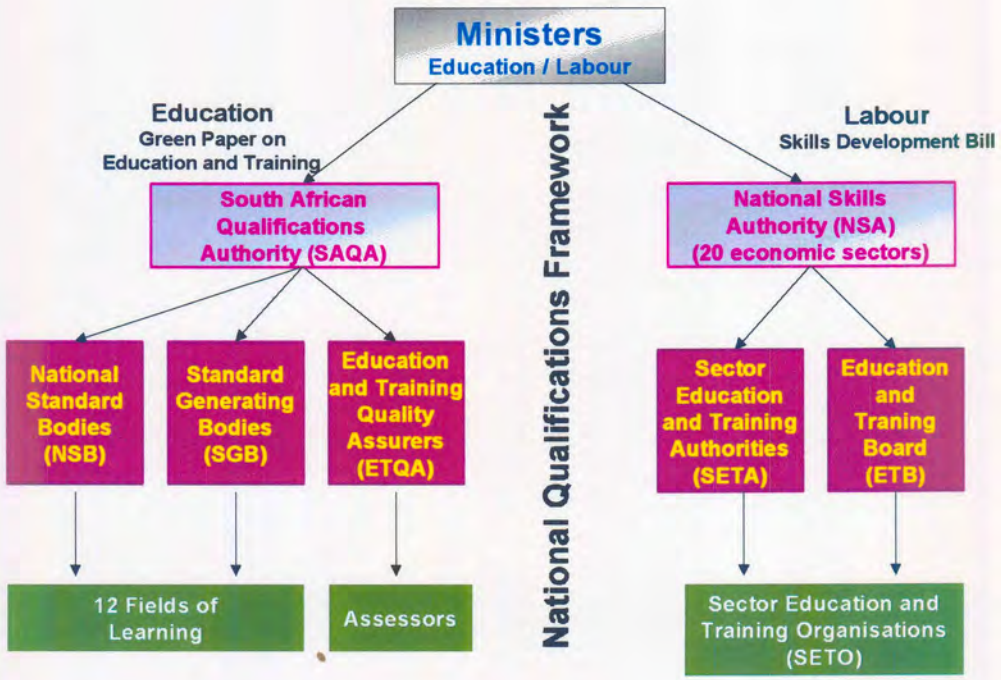

Figure 2.3 – Close co-operation between the ministries of education and labour (South Africa, 1995b; South Africa, 1997d)

An inter-departmental working group has been established to develop common interests in an integrated approach to education and training and a national qualifications framework to clarify education and labour's respective competencies with regard to training (South Africa, 1995d). The integrator between the two ministries will be the National Qualifications Framework, under which all qualifications and learning interventions will be registered and accredited if they comply with the guidelines and requirements of the SAQA Act (South Africa, 1995a).

2.2.3.2 White Paper on Education and Training (Department of Education, 1995)

The *White Paper on Education and Training* (South Africa, 1995a) addresses the reorganisation of the national education system, the dismantling of the old education system and the establishment of new national and provincial education departments. In addition, the White Paper addresses the acceptance of legislative competence and executive authority by provincial

governments. Training is a vital part of learning programmes administered in schools, teacher training institutions, colleges, technikons and universities (South Africa, 1995b). The White Paper also calls for an integrated human resources development strategy and an integrated approach to education and training.

- **Integrated human resources development**

Education and training are essential and integral elements of an integrated human resources development strategy. Such an approach implies a new way of learning that closes the gap between theory and practice and between knowledge and skills. Modern economies and societies require the elimination of artificial hierarchies in the organisation and certification of learning. The new approach requires learners with a strong foundation of general education and the desire and ability to continue to learn, to adapt and to develop new knowledge, skills and technologies. This in fact supports the learner in moving between occupations and taking responsibility for personal performance and development (South Africa, 1995a; South Africa, 1995b).

- **Establishment of a national qualifications framework**

However, an integrated approach to education and training requires the establishment of a national qualifications framework based on a system of credits for learning outcomes achieved. Recognition for prior learning forms part of the emerging consensus on the importance of lifelong learning as the organising principle of a national human resources development strategy, which is not owned by the Minister of Education alone. The Ministers of Education and Labour have formed an inter-ministerial working group to develop common interests in an integrated approach to education and training and a National Qualifications Framework (NQF) to clarify respective competencies with regard to training. The common concerns include the development of international practice in the design and assessment of

development of international practice in the design and assessment of learning programmes related to industry and in educational institutions. This will allow the NQF to be developed in an evolutionary, participatory and consensual way, within clear policy guidelines (South Africa, 1995a).

2.2.3.3 Higher Education Bill (Department of Education, 1997)

The purpose of the *Higher Education Bill* (South Africa, 1997b) is to provide for the establishment of a single, co-ordinated and integrated higher education system for South Africa, but encouraging distinct diversity within the system. There should be optimisation and maximum utilisation of all resources involved in higher education. In addition, the Bill provides the framework for programme-based education with the necessary qualifications framework for certification purposes and assessment to support the Act. The Bill defines higher education as "any learning programme of a level higher than grade 12 or its equivalent" (South Africa, 1997b: 5).

2.2.3.4 A programme for the transformation of higher education (Department of Education, 1997)

The challenge faced by the education department to redress the past inequalities and initiate transformation will require the outlining of a comprehensive set of initiatives to establish the single co-ordinated system that is required, and without the co-operation of the key stakeholders within South Africa this will not become a reality. In the current environment in South Africa, the process of social transformation must be supported to enable it to become people-driven and to lead to a better quality of life for all. The 1997 *White Paper on a Programme for the Transformation of Higher Education* (South Africa, 1997d) describes what is needed to achieve an improvement in quality of life:

- To comply with the learning needs and aspirations of individuals through the development of their intellectual abilities and potential for self-fulfilment;
- To comply with the development needs of the society and related markets for an outcomes-based competency approach towards the required skills;
- To comply with the socialisation needs of the population and to encourage the development and fulfilment of these needs; and
- A continued contribution to the creation, sharing and evaluation of knowledge.

Previously identified elements requiring reform evident from the *White Paper on a Programme for the Transformation of Higher Education* (South Africa, 1997d) include inequitable access and opportunities for learners and staff according to race, gender, class and demographics. This includes the mismatch between the output of higher education and the needs of a rapidly revitalising economy. A major issue for concern is the governance of higher education at a systems level that is characterised by fragmentation, inefficiency and ineffectiveness, with too little co-ordination, few common goals and negligible systematic planning. Despite these negative factors, some higher education institutions have developed internationally competitive research and teaching capacities (South Africa, 1997d).

However, the transformation of higher education is part of the broader process of social, economic and developmental transformation. The economic and technological changes will necessarily have an impact on the integration of competitiveness in the international arena and the delivery of a competent workforce able to compete successfully in the global economy at this level. In addition, higher education and organisational learning interventions need to be internally restructured to meet the challenge of globalisation and the breakdown of national and institutional boundaries. These economic, technological and social changes and requirements create a specific vision,

role and focus for higher education, training and development in the process of reconstruction and development:

- Human resource development
- High-level skills training and development
- Production, acquisition and application of new knowledge

For organisations to comply with these requirements and changes in the education, training and development arena, they need to focus on the following (South Africa, 1997d):

- Increased and broader participation to overcome the fragmentation, inequality and inefficiencies identified
- Responsiveness to the social interests and needs identified and expressed by the population for a restructuring of the higher education system and its institutions to meet the needs of an increasingly technologically orientated organisation
- Co-operation, partnerships and alliances in governance, an enabling institutional environment and culture sensitive to diversity and the promotion of reconciliation and respect for human life and development

2.2.3.5 Green Paper on Further Education and Training (Department of Education, 1998)

Further education and training comprises all the learning and training programmes from National Qualifications Framework (NQF) Level 2 to Level 4, or the equivalent of Grades 10 to 12 in the school system (South Africa, 1998a). This further education and training band is between the NQF's general education and training band and higher education and training band. Learners can engage at this level of education after completion of the compulsory phase of education at Grade 9 or Level 1 of the NQF. As mentioned in the *Green Paper on Further Education and Training* (South

Africa, 1998a), everyone has the right to basic education and to further education, and through reasonable measures this must be made easily available and accessible.

Further education and training is not compulsory education and has no age limit, but promotes lifelong learning and on-the-job training. It is intended that further education and training will have an open learning system, responsive to the needs of individuals and communities. This approach will include flexible, relevant, accessible and high quality programmes progressively available to learners. Further education and training also has the mission of fostering intermediate to high level skills, laying the foundation for higher education, facilitating the transition from school to work and developing learners through opportunities for lifelong learning by way of the articulation of learning programmes (South Africa, 1998a).

Further education and training is also the most complex and diverse phase of education and training, comprising 13 types of learning providers, categorised into four main sectors:

- Secondary schools
- Publicly funded colleges
- Private off-the-job providers
- Work-based education and training

The *Green Paper on Further Education and Training* suggests a framework for achieving success in the following focus areas (South Africa, 1998a):

- Co-operation and partnerships between the government and key stakeholders to design a development system that seeks to balance the roles of the market and government initiative, co-ordination and stimulus

- Co-ordination and strategic planning to produce a national vision, committed leadership and an enabling environment for conductive learning
- Enhanced articulation to provide learners with opportunities to change their direction of personal development and to achieve job enrichment
- Flexibility and responsiveness in relation to the other two bands of education and training for the formation and improvement of the skills base of the country based on the needs of learners
- Institutional diversity so as to recognise and concentrate on scarce resources and to address the development of these needs
- The provision of a framework of quality management and quality assurance as important dimensions of the new further education and training framework

The *Green Paper on Further Education and Training* (South Africa, 1998a) has extreme implications for organisations and provides a qualifications framework for the new educational approach.

- **Extreme implications**

The Green Paper on Further Education and Training (South Africa, 1998a) has extreme implications for organisations and the training and development environment in South Africa, especially regarding curriculum development, funding, governance and institutional and practitioner development. This will include a new curriculum and qualifications framework with the necessary responsive linkage between further education and training, higher education and the practical work situation as it relates to on-the-job training. Any new curricula should remove the existing barriers between academic and applied learning, theory and practice, knowledge and skills, and head and hand. This approach will be based on an integrated education and training system and will be programme-driven (South Africa, 1998a).

- **Qualifications structure**

The proposed qualifications structure will be based on a flexible combination of fundamental, core and elective learning components. The introduction of the new further education and training system will require new strategic planning and programme-based funding, which will be achieved only by well-managed and high quality institutions. The Green Paper acknowledges that institutional and practitioner development is integral to the establishment of a co-ordinated system (South Africa, 1998a).

2.2.3.6 Skills Development Bill (Department of Labour, 1997)

The objective of the *Skills Development Bill* (South Africa, 1997a) is to provide a flexible strategy that is accessible, decentralised and based on partnership between the government, the public sector and the private sector. There are five focused objectives in establishing these partnerships (South Africa, 1997a):

- To establish and improve training and learnerships
- To improve the competency levels of the workforce
- To produce nationally recognised qualifications based on demonstrated and visible evidence of applied competencies
- To provide a flexible skills development strategy
- To provide opportunities for self-development and sustainable self-employment

Skills development in South Africa has become essential and the redesign of the entire field of education, training and development with the integration of the various initiatives was long overdue (Figure 2.4) (South Africa, 1997a). The methods of operation under the old Manpower Training Act and the National Training Board (NTB) were obsolete and the development of a total new training and development strategy was initiated in 1993 (National Training Board, 1994).

Figure 2.4 illustrates the changing approach to the development of skills that became evident with the passing of the new *Skills Development Bill* (South Africa, 1997a). This Bill promotes the formulation of a long-term national skills development strategy with the necessary assessment and evaluation mechanisms to monitor progress. In addition, the Bill advises on the future trends relating to skills needed and provides assistance with skills information and the alignment of training providers with the changing market conditions (South Africa, 1997a).

Figure 2.4 – Comparison of past and present skills development initiatives [Adapted from the *Eskom Practitioner Guide*, (Eskom, 1997a)]

2.2.3.7 Green Paper on the Skills Development Strategy (Department of Labour, 1997)

The underlying purpose of the *Skills Development Bill* (South Africa, 1997a) is not to prepare people to perform routine tasks, but to empower them to perform at a higher standard with the appropriate measurement standards in a specified and dynamic social environment. The term *skills* meaning applied competence (skill) can be seen as the overarching term for three kinds of competencies (South Africa, 1997f):

Practical competence	• Practical competence can be seen as demonstrated ability to perform a set of tasks
Foundation competence	• Foundation competence is a demonstrated understanding of what we or others are doing and why
Reflexive competence	• Reflexive competence is the demonstration of an ability to integrate or combine performance and an understanding/learning of performance with any changes as and when needed to accommodate an unforeseen state of affairs

The need for a skills development strategy is enhanced, as South Africa faces major economic and social changes and constraints. The poor skills profile in South Africa is a major problem and is likely to inhibit growth and development. The skills development strategy argues that skilled people are a fundamental part of any economic and employment growth strategy and that links between learning and the workplace are an essential condition for growth.

However, before the skills development strategy can be implemented, an overarching, integrated human resources development vision needs to be developed and implemented to address the following issues (South Africa, 1997f):

- A new *conceptual approach* based on a demand-led education and training system that is flexible and responsive to the economic and social needs of the country, which stimulate new skills demands - this approach should include the promotion of the economy, employment growth and social development, the achievement of nationally recognised qualifications and an ability to remain

successfully self-employed or employed and to support the improvement of living standards.

- The *establishment of a system of learnerships* as a mechanism to facilitate the linkage between structured learning and work experience in order to obtain a National Qualifications Framework (NQF) registered qualification, which indicates work readiness - this will close the present gap between theoretical education and skills training. The learnership system must in addition provide the bridge between the NQF and economic or social needs. Learnerships will encourage the integration of education and training, life-long learning, quality, and efficiency and sustainability.

- The *new learnership system* needs to be supported by a high quality assessment system, a strategic approach to identifying skills development needs in order to ensure that the needs of vulnerable groups are addressed by a high quality provider sector, and an efficient and effective employment service. The learnerships will promote the following components necessary to the acquisition of competencies: structured learning addressing the learners at fundamental, core and specialisation levels, work experience related to the structured learning, and preparation of the learner for competence assessment.

The skills development strategy will have the following benefits for employers, workers and vulnerable groups (South Africa, 1997f):

Employers

- Employers who are providing a training service will be supported and firms that do not wish to train will be made to contribute to the training effort of those that do train (levy system). The Sector Education and Training Organisations (SETOs) to which they are affiliated will support the organisations. The

SETOs will also help the firms to locate service-providers that can meet their demands.

Workers

- The bargaining influence of workers will increase in direct proportion to their skills. Skilled workers are more expensive and difficult to replace. The quality of the work life of workers with responsibility can be enhanced by the establishment of an associated career path and an individual training plan to promote skills development.

Vulnerable groups

- The level of unemployment in South Africa is high and the strategy offers assistance by expanding the number and range of learnerships equipped to meet the needs of the community as well as of industry.

Educators and practitioners will have the satisfaction of knowing that learners they assist are more likely to achieve the desired outcomes of their learning in terms of growth and prosperity (South Africa, 1997f).

2.2.3.8 White Paper on Science and Technology (Department of Arts, Culture, Science and Technology, 1997)

The development of innovative ideas, products, institutional arrangements and processes will enable the country to address its needs and aspirations towards the demands of a global competitive economy more effectively. The main vision of the White Paper on Science and Technology (South Africa, 1997e) is to establish a well co-ordinated and integrated system of technological and social innovation within which:

- resources are utilised for problem-solving in a multidisciplinary manner;

- stakeholders are involved in policy decision-making and resource allocation for science and technology activities; and
- combined partnerships are established and produced and there is creative interaction with the nation.

Some global trends will affect planning and resource allocation in South Africa (South Africa, 1997e):

- Increased co-ordination of innovation policies and strategies in response to the complex challenges generated by global social and economic changes
- Problem-solving, multi-disciplinary partnerships as an instrument for growth and development
- The knowledge-based transformation of many of the world's societies as a result of the increased availability of information through improved global communications
- The opposing pressures on the South African economy as it opens up to global markets

The need for transformation will give rise to a series of policy initiatives that have a clear and practical impact on what the White Paper refers to as national innovation. To support this drive, public investment in research and development needs to be redistributed away from activities within the government's own facilities and towards research and development in the private sector (South Africa, 1997e).

Research for innovation is an encompassing assumption that is based on the continuous production of new knowledge and its creative application in a number of environments. The promotion of research is crucial to innovation and therefore to both social and economic development. In addition, the support for research and development is evident in the following areas (South Africa, 1997e):

Applied research	• Proven record for the delivery of goods, services and conditions that improve the lives of individuals and societies.
Basic research	• The role of basic scientific research is knowledge generation and the maintenance of educational standards.
Social science research	• The political changes in South Africa provide unique opportunities for social renewal in respect of our value systems, the role of the individual in society and in relation to the government. New knowledge will assist the changes to consolidate democracy and the protection of human rights.

Research activities strengthen the national systems of innovation through a widespread production and delivery of knowledge and the training of new generations of academics and researchers.

2.2.3.9 South African Qualifications Authority (SAQA) (Department of Education, 1995)

The African National Congress (ANC) proposed the establishment of an independent body to oversee the effective implementation of a qualifications framework (African National Congress, 1994) to integrate the educational and vocational interventions in South Africa. The following functions were identified for the South African Qualifications Authority (SAQA) (African National Congress, 1994):

- Maintenance and quality assurance in the qualifications system
- Accreditation, examination and certification authorities for all levels of education and training

- Continued and appropriate research and development
- Co-ordination of all qualifications to an understandable level for the public and learners
- Establishment of mechanisms to oversee the regular review of standards
- Recognisable international and national qualifications

In order to establish the requirements at a legal level, the following will be discussed:

- National Standards Bodies
- Monitoring of standards by the Education and Training Qualifications Authorities
- Standard Generating Bodies

SAQA was formed through the integration of efforts by the education and labour ministries as indicated in Figure 2.5.

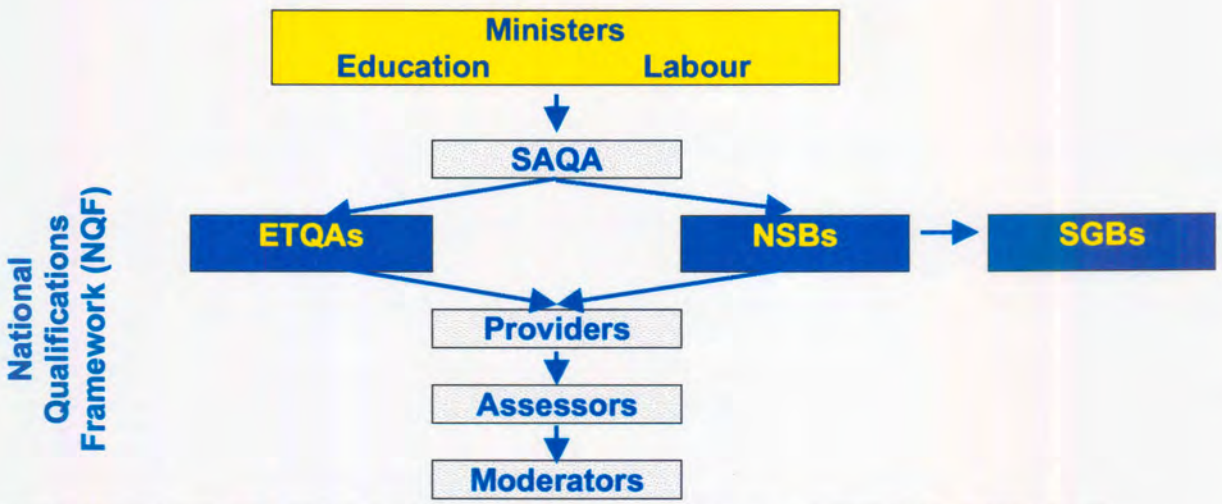

Figure 2.5 – The institution of SAQA [Adapted from the Eskom Practitioner Guide (Eskom, 1997a)]

As shown in Figure 2.5, SAQA's main focus will be to operationalise the National Qualifications Framework (NQF) to ensure the quality, progression

and portability of the system. This process has two distinct phases (South Africa, 1995a):

- In phase one standards will be registered
- In phase two the standards will be monitored

- **National Standards Bodies (NSBs)**

The registration of standards will require the standards to be written and presented in accordance with appropriate curricula and with modules at specific levels for public distribution (South Africa, 1995a). Guidelines must be provided for certification and other forms of formal qualification to ensure that the level of qualification matches the total number of credits achieved. Common rules and criteria for formal certification will be recognised and applied within the learning systems, including the recognition of South African qualifications internationally and locally.

In addition this registration of qualifications should include information about the level of qualifications and the assessment that is collated and co-ordinated in a standardised format. The registration of standards should also include guidelines for the establishment of National Standards Bodies (NSBs). The procedure for the registration of standards and modules will be determined by SAQA (African National Congress, 1994). The standards will be registered and gazetted for a limited period of three years, but may be confirmed for another period (e.g. five years). SAQA will establish one NSB for each of the twelve fields of learning.

The NSB will have the authority to recognise sub-fields of learning, in which the SGBs will work to register the standards. The main functions of the NSBs (Phillips, 1997a) will be to:

- define requirements for the moderation of ETQAs;
- ensure the SGBs meet the requirements of SAQA for the registration of unit standards and qualifications;
- recognise or establish SGBs;
- recommend the registration of qualifications with SAQA;
- recommend the sub-fields for guidance, recognition and establishment of SGBs; and
- monitor standards through the Education and Training Qualifications Authorities (ETQAs)

SAQA will ensure quality and coherence in the registration of standards by accrediting intermediary bodies to carry out this function on its behalf (African National Congress, 1994; Phillips, 1997a; South Africa, 1995a). At present these bodies are collectively referred to as Education and Training Qualifications Authorities (ETQAs) and this phase is referred to as primary accreditation.

The ETQAs could vary from provincial bodies for school-based learning to industrial sector bodies for areas of specialised learning. However, the registered ETQAs should demonstrate the capability to accredit providers, in order to ensure that quality and coherence are maintained. In addition, the ETQAs should have the infrastructure to carry out secondary accreditation, should be legitimately constituted according to establishment criteria and should be able to comply with the NQF requirements.

Frequent audits, within a five-year window, of the registered and accredited providers by specialised committees of SAQA will be made to ensure the secondary accreditation functions of registered ETQAs are being fulfilled and predetermined standards are being met. The primarily focus of these audits and visits will be to establish that the learning outcomes meet the registered standards and the requirements

of the accreditation process. SAQA will accredit ETQA boards to oversee the implementation of the NQF system. Moderation to check the consistency of assessment will occur under the NQF. Moderation will assure the quality of judgements made by assessors and is crucial as part of a quality management system (Phillips, 1997a). In addition, the registration of assessors will form part of the quality management system to monitor the quality of assessment in the workplace, where most on-the-job training will occur.

- **Standard generating bodies (SGBs)**

The main focus of the standard generating bodies (SGBs) will be the preparation of draft unit standards and qualifications. Further functions of the SGBs will be (Phillips, 1997a) to:

- generate unit standards and qualifications according to the SAQA requirements
- recommend unit standards and qualifications to the NSBs
- update and review unit standards

The *South African Qualifications Authority Act* (South Africa, 1995a) supports a planned combination of learning outcomes with the defined purpose of providing learners with applied competence and a basis for further learning. This learning should add significant value to the learner, which in turn provides benefits for the community. The learning should comply with the objectives of the NQF, including the enhancement of learners' access to employment, mobility and progression and the provision of quality education and training that is cost-effective and internationally comparable.

SAQA has defined a qualification as comprising three components (South Africa, 1995a):

Fundamental learning

- Fundamental learning forms the grounding or the basis needed to undertaken the education, training or further learning required in obtaining a qualification.

Core learning

- Core learning is compulsory and is contextually relevant to a particular qualification on a theoretical and practical basis.

Elective learning

- Electives are specialised additional credits selected at the specified level of the NQF, to ensure that the qualification is competency and outcomes-based in both theory and practice.

It will be through the combination of fundamental, core and elective learning that the detail and depth of learning programmes will be determined. SAQA has identified 12 organising fields of learning within the NQF, which are based on the integration of fundamental disciplines and areas of study with key occupational clusters (South Africa, 1995a). These 12 fields of learning are as follows:

- Agriculture and nature conservation
- Business, commerce and management studies
- Communication studies and language
- Culture and arts
- Education, training and development
- Health sciences and social services
- Human and social studies
- Law, military science and security
- Manufacturing, engineering and technology
- Physical planning and construction
- Physical, mathematical, computer and life sciences

- Services

• National Qualifications Framework (NQF)

The social and economic environments in South Africa are undergoing dramatic and rapid change as the country re-enters the international arena (Phillips, 1997a). To develop sound, high quality education and training systems, organisations need to provide high levels of skill and knowledge. The National Qualifications Framework (NQF) is designed to support the focus on and shift to quality. The objectives of the National Qualifications Framework (South Africa, 1995a) are to:

- accelerate education, training and employment opportunities;
- contribute to the personal development of learners;
- create an integrated framework for national learning achievements;
- enhance the quality of education and training; and
- facilitate elements within education, training and career paths.

The principles on which the National Qualifications Framework is to be based as discussed in the implementation plan for education and training (African National Congress, 1994) emphasise the future and functions of the national learning system as follows:

- Development of a national curriculum based on integrated academic and vocational skills
- Development of a national standards and qualification structure that will reflect the achievement of learning outcomes, defined at different levels from beginner to postgraduate, in terms of uniform national standards
- Integration of education and training systems at both formal and non-formal levels

- Development of methods and systems for learners to accumulate credits for learning towards a national qualification
- Participation by all stakeholders in the education and training system
- Recognition for prior learning
- The right to individual lifelong learning and the promotion of career paths

The purpose of the qualifications framework is to integrate all learning in South Africa into a uniform acceptable framework (Figure 2.6) in order to promote the culture of lifelong learning and to provide learners with a nationally and internationally recognised qualification (South Africa, 1995a).

NQF level	Band	Types of qualifications and certificates	
Higher education and training certificates and degrees			
8	Higher education and training	Doctorates; further research degrees	
7		Higher degrees; professional qualifications	
6		First degrees; higher diplomas	
5		Diplomas; occupational certificates	
Further education and training certificates and degrees			
4	Further education and training	School; college; training certificates; mix of units from all NGOs	
3		School; college; training certificates; mix of units from all NGOs	
2		School; college; training certificates; mix of units from all NGOs	
1 = general education and training certificates = 4			
1	General education and training	Senior phase	ABET level 4
		Intermediate phase	ABET level 3
			ABET level 2
		Foundation phase	ABET level 1
		Pre-school	

Figure 2.6 – Proposed structure for the NQF (South Africa, 1995a: 12)

As shown in Figure 2.6, a coherent framework of eight levels encompassing all types of learning and levels of achievement will be a major feature of the NQF. The NQF will:

- define clear learning pathways for development;
- define the purpose of qualifications and the relationship among qualifications;
- provide a system of credit accumulation for flexibility and progression within the system; and
- recognise skills, knowledge, attitudes and values of all learners.

2.2.3.10 Unit standards

Various techniques are used to analyse what is needed in the learning environment in order to incorporate these aspects into the unit standards for their sector or specific field of learning. The techniques used include the establishment of required outcomes together with the related assessment criteria for measuring the specific learning outcomes. National standards bodies (NSBs) and sector education and training organisations (SETOs) will be able to design and develop qualifications to satisfy their specific needs and still fit into the national framework for these qualifications (Phillips, 1997a).

Completed unit standards will be endorsed by the NSB, registered with SAQA and then published in the public environment. A unit standard can be seen as a "nationally registered set of specific learning outcomes with their associated assessment criteria and other technical information required by SAQA" (Phillips, 1997b). A unit standard describes the outcomes of learning and the standard of performance, which will be assessed against these standards. A unit standard will describe the result of learning and not the process of learning.

2.2.4 Organisational alignment

This section will focus on the following:

- Background to organisational alignment
- Profoundness of organisational alignment
- Theoretical foundations of alignment
- Organisational alignment in context

2.2.4.1 Background to organisational alignment

Organisational alignment is a concept often mentioned in organisational development models, but there is rarely any detailed explanation as to how and where it fits into the models. Organisational alignment refers to the extent to which an organisation's strategy, structure and culture create an environment that facilitates the achievement of its goals (Rothwell & Kazanas, 1994b). The concept of alignment lends itself to high-performance work systems by explaining how the interdependent elements of the organisation can achieve greater individual and organisational efficiency and effectiveness. Well-aligned organisations operate on well-designed practitioner models and performance enhancement.

- **Well-aligned organisations**

  Well-aligned organisations apply effective leadership and training and development processes to create systematic agreement among strategic goals, tactical behaviours, behaviours, performance and reward systems and the organisational culture (Armstrong & Long, 1996). This agreement helps people to remove barriers to co-operation and performance and thereby increases the performance of individuals, processes and the organisation as a whole. In organisations practice often leads the development of theory and reflective practitioners frequently seek to develop convincing and effective models that will

help them understand and address organisational performance issues (Pearce & Robinson, 1994).

- **Practitioner-driven models**

Practitioner-driven models have solid foundations in experience, but often lack a theoretical basis to explain how, why and under what conditions they work. In order to develop better models, practitioners and learners must be able to test existing designs thoroughly. The practitioners need to develop a culture of basing their work on theoretical and proven models to enable them to identify the strengths, weaknesses and limitations of models in use to generate the information needed to refine and improve the practical application of those models (Pearce & Robinson, 1994).

- **Performance improvement**

Performance improvement models that rely on the concept of organisational alignment have lacked this necessary theoretical background. Organisational alignment is the degree to which an organisation's design, strategy and culture co-operate to achieve the same desired goals. Almost by definition, an organisation that is well aligned is efficient (Rothwell & Kazanas, 1994b; Pearce & Robinson, 1994).

2.2.4.2 What is organisational alignment?

The predecessor to alignment was congruence, a process model of the organisation developed by Nadler & Tushman (1989) as an open system composed of interdependent inputs, process components and outputs. The whole system functioned with greater or lesser effectiveness depending on the degree of congruence, consistency or fit between each pair of system components. The external environment was viewed as process input and strategy as the collective first-order input into the working elements of the

organisation. Nadler & Tushman described the function of the model as follows: "The aggregate model, or whole organisation, displays a relatively high or low degree of system congruence in the same way that each pair of components has a high or low degree of congruence" (Nadler & Tushman,1989: 100).

- **Descriptive concept**

Organisational alignment is a descriptive concept referring to the extent to which the strategy, structure and culture of an organisation combine to create a synergistic whole that makes it possible to achieve the goals set out in the organisation's strategy. The definition is a combination of several other explicit and implied descriptions of alignment (Bennett, Fadil & Greenwood, 1994; Kiefer & Stroh, 1984; Merron, 1994; Nadler & Tushman, 1989; Tosti & Jackson, 1994) and reflects the use of the concept as found in training and development theory and practice.

- **Positive alignment**

Some development models suggest that linking activities and processes to organisational strategy can create positive alignment. Supporters of these models suggest that improved performance can be achieved by ensuring that the output of each organisational process assists in meeting the organisation's strategic goals (Robinson & Robinson, 1995; Rumbler & Brache, 1990; Swanson, 1994). Because performance at the organisational level is guided largely by strategy (Pearce & Robinson, 1994), the component activities and processes in the organisation should be designed to contribute to the achievement of strategic objectives.

- **Agreements**

Other models examining organisational alignment look at the agreement between an organisation's culture and its chosen strategy, goals and planned activities (Bennett, Fadil & Greenwood, 1994; Tosti & Jackson, 1994). In these models the goal of development activity is to increase the

agreement between the levels of organisational strategy and their corresponding levels of cultural belief and activity. This increased agreement leads to increased individual, team and organisational performance through general harmony between culture and strategy. As in other models, alignment revolves around a link between strategy and behaviour. Merron (1994) considers alignment to be a means to achieve the goal of organisational quality performance as "clarity and alignment among the five aspects of organisational life, purpose, objectives, strategy, structure and culture" are key to the proper direction of the organisation (Merron, 1994:52).

- **Characteristics and current models**

Kiefer & Stroh (1984) emphasise in their work the characteristics of an organisation capable of inspired performance: "... in most organisations, people have a fundamental agreement on organisational goals, and yet one still finds these organisations lacking alignment. Alignment deals with the more inspirational aspect of organisational purpose and vision, while agreement deals with the mechanics of goals and objectives. People who agree are saying no more than we share the same good ideas" (Kiefer & Stroh, 1984:175). As practitioner research and practices have advanced, they have left behind earlier work on alignment.

Current models that incorporate the concept of organisational alignment offer simplicity and common sense, but they do not explain why alignment works, how it can be measured or how it can be created or improved. Although these models may help organisations measure and improve performance in a general sense, their assumption that strong alignment is desirable has not been backed up with either theory or accurate research.

2.2.4.3 Theoretical foundations of alignment

Training and development is an applied field in an organisation. Theory often lacks related practice, as practitioners build informal models and make

innovations to improve performance, but either do not reflect on their practice or fail to offer explanations for their reasoning (Jacobs, 1989). The reflective practitioner is the greatest source of knowledge about organisational performance and improvement. As Argyris & Schon (1978) argue, thoughtful practice relies on both theory and experience evident in the learning interventions. The practitioner builds on experience to facilitate and select change and to select and implement tools that are appropriate for the learning and alignment situation.

Reflection on the effects of the training and development process or model used often suggests improvements or refinements to the process. With this approach, experience develops judgement and reflection develops knowledge. The action-reflection process can be very effective for developing knowledge in the field as a whole if it moves from the informal level of reflective thinking to the formal level of theory-building (Argyris & Schon, 1978; Jacobs, 1989).

Two difficulties have been identified with training and development practices implemented and applied in an organisation (Jacobs, 1989):

- The reflective practitioner is often isolated and narrow-minded, as practitioners do not share their learning experiences with other practitioners in the training and development environment. The result is that practitioners regularly reinvent the wheel, because they are unaware of existing solutions to their problems as they duplicate others' efforts.
- Reflective practitioners are often wrong in their approach to solving problem situations. Individual practitioners are limited to their own experiences and often lack a theoretical foundation to explain the root causes for success or failure in their work. They cannot always provide reasonable explanations for their methods of solving training and development problems and these solutions can seldom be generalised to other situations.

Theory is so important (Jacobs, 1989) because it takes the reflection on the solution of problems and the implementation of practice from an informal to a formal level by sharing it with the wider community. Theory should be useful to practitioners, allowing them to explain how something works or why it happens in the field of organisational training and development (Jacobs, 1989). With a well-founded explanation in place, practitioners are better able to predict and control the learning situation. As Jacobs (1989) puts it, "in its simplest form, a theory is an attempt to explain why some event or phenomenon occurs in our real world. Theory is more than a collection of facts or a summary of what is known about an event. It also represents an attempt to organise and integrate that knowledge into something useful. Theory allows us to understand the event, to predict the conditions under which the event will reoccur and to test hypotheses about the event." (Jacobs, 1989:31) A theory of organisational alignment is relevant to practice for two reasons (Jacobs, 1989):

- It serves to explain a complex phenomenon that has important implications for organisational performance. It identifies the factors involved in producing alignment, why the alignment is desirable, how it may be measured and how practitioners can increase its strength within organisations.
- It provides a basis on which further improvement and development in the technique can be built. By making explicit the relationships involved in the alignment of organisational strategy, culture and structure, future models can build on a common body of knowledge that offers stepping-stones to additional advantages in performance improvement technology.

A systems perspective grounds this theory and provides a proper paradigmatic frame within which to view it. Good theory building begins with practice. The researcher analyses broad observational and case study data to identify any patterns or themes that seem to emerge from the occurrence

under study. Giving clarity and explication to the patterns helps the researcher develop a theory that explains the circumstances in detail. Dubin lists the basic features of formal theories as (Dubin, 1969):

- a set of defined relationships between the elements of the theory, stated in principles of correlation or causation;
- a set of operational concepts or variables that comprise the basic elements of the theory;
- an explicit set of assumptions that apply to the theoretical situation; and
- constructs from which a testable hypothesis may arise.

These sets of conditions establish the basic knowledge by which researchers may test theory, which in turn guides future research and the generation of knowledge.

2.2.4.4 Organisational alignment in context

Organisational alignment is the extent to which there is systematic agreement among strategy, structure and culture within an organisation. This agreement creates an internal environment that facilitates achievement of the organisation's strategic goals by removing internal barriers to co-operation and performance that could otherwise reduce the efficiency and effectiveness of work towards goals (Rothwell & Kazanas, 1994b). If organisational leadership and training and development processes can systematically create agreement in each of the aspects of alignment, then the organisation should enjoy a high level of internal organisational performance as a result of the benefits of such co-operative activity.

Organisational alignment is a state rather than an outcome (Jacobs, 1989). The broad concept of organisational alignment operates in distinct but complementary aspects (Schein, 1990) such as the structural aspects of

alignment, reward systems, cultural aspects, performance, goal-directed behaviour and environmental aspects of alignment:

- **Structural aspects of alignment**

Agreement between the goals of different levels of activity within the organisational structure describes the structural domain of alignment. Well-aligned organisations create a rationale of filtering down goals for key processes, subprocesses, teams and individual jobs. These goals and the outputs of each of the processes or activities contribute directly to the achievement of the ultimate goal of the process level of which they form part (Rumbler & Brache, 1990; Swanson, 1994). Members of the organisation systematically design the organisational processes in this way to maximise efficiency and reduce barriers to performance.

- **Reward systems**

The reward systems are an additional structural aspect of the alignment between the strategic goals, values and tactics of the organisation. The policies that reward, punish and offer incentives to people create a motivational structure within organisations that exerts a great influence on the individual and on team behaviour. Bechet & Walker (1993) recommended linking compensation and staffing systems to the strategic business plan. Managers cannot control the actions of individuals, but they can implement organisational structures in the form of reward systems that encourage or discourage specific behaviours.

- **Cultural aspects of alignment**

Well-aligned organisations use an effective leadership process that sets strategic goals, suggests appropriate tactical behaviours to achieve the goals and influences the organisational culture to support the strategy. Because cultural values and norms have a stronger, more pervasive effect on actual behaviour than rational planning does

(Pearce & Robinson, 1994; Schein, 1990), the degree of agreement between the organisational culture and the strategy directly influences the ease with which the organisation may achieve its goals.

- **Performance aspects of alignment**

Agreement between the actual behaviour of the individuals and processes within an organisation and the behaviour that is required for attainment of the strategic goals is another aspect of alignment (Tosti & Jackson, 1994).

- **Goal-directed behaviour**

Alignment of this aspect is an indicator of the degree of operational goal-directed behaviour demonstrated by members and processes within an organisation. This aspect is more of a measurement of alignment than something that organisational leadership and training and development practitioners can manipulate directly (Schein, 1990; Bechet & Walker, 1993).

- **Environmental aspects of alignment**

Environmental alignment represents the external aspect of organisational alignment. It reflects the strategic fit between the demands of the external environment and the selected vision, goals and tactics of the organisation (Pearce & Robinson, 1994).

This theory is based on a set of assumptions about system characteristics and behaviour in relation to organisational alignment paraphrased from Jacobs (1989) and McLagan (1989) and uses general items in the field of systems theory as an underlying framework for training and development:

- All organisations are made up of systems and subsystems (processes) and components (sub-processes, individuals and jobs).

- All organisations and subsystems have goals, which direct activity and whose contributions to the larger organisation determine their perceived value.
- Systems must be managed intentionally and designed to meet the goals set for each system reliably.
- The use of both a systems approach and a systematic method is necessary to design systems with intentional, rather than random, goals.
- Individuals and groups will respond to the conditions in a system with some degree of reliability and predictability determined or constrained by boundary conditions (Tannenbaum & Schmidt, 1973).
- The external environment will dictate a set of conditions, seemingly external to the boundaries of the organisation, that impact on the organisation (Bennett, Fadil & Greenwood, 1994; Nadler & Tushman, 1989).
- Leadership will set strategic goals and directions for the organisation and act according to the values that support the organisational strategy (Pearce & Robinson, 1994; Tannenbaum & Schmidt, 1973).
- Performance can be improved through the development of human resources by unleashing experience through training and development, organisational development or a combination of the two at the individual, process and organisational level (Harrison, 1984; Swanson, 1994).

2.2.5 Learning organisation, organisational learning

A clear distinction must be made between a learning organisation and organisational learning in order to establish the effect thereof on national and organisational alignment. This section on organisational learning and a learning organisation will focus on the following:

- Background to learning organisations and organisational learning
- What are learning organisations and organisational learning?
- What is the difference between a learning organisation and organisational learning?

Researchers are in agreement that one of the major focuses in the future should be process-based approaches, with an emphasis on holistic skills that highlight the importance of leadership in training and development in the organisation and the underlying concept of 'human capital' development (Hales, 1986). This argument concurs with Reich's (Reich, 1984) position on the importance of individual learning and development, in which he states that the next frontier for organisations is one in which nations' primary assets will be citizens' skills and insights.

Organisational learning is a concept that has been widely researched, and yet it still lacks a strong consensus definition. Individual learning, however, has been shown to be a necessary but insufficient factor in organisational learning. Simon (1969) initially defined organisational learning as the growing insights and successful restructuring of organisational problems reflected in the structural elements and outcomes of the organisation itself.

Learning occurs when organisations interact with their environment, including other organisations. Imitating the behaviour of other organisations and accepting their behavioural repertoires is an important source of organisational learning (Hedberg, 1981). Although organisational learning can be considered a process rather than an outcome, Levit & March (1988) argue that learning furnishes an organisation with the ability to act on stimuli, which may be either internal or external to the organisation. In addition, Meyers (1990) states that an organisation learns by processing information, which then changes potential behaviours. The outcome of a successful learning process may thus be long-lived competencies, providing the firm with the potential to adapt to dynamic conditions.

It is quite clear that the idea of the learning organisation has become fairly well established to the extent that an organisation that does not attempt to develop itself into a full learning organisation will remain "an unfinished business" (Jones & Hendry, 1992).

2.2.5.1 Background to learning organisations and organisational learning

The term *learning company* or *organisation* appeared in the literature comparatively recently when Hayes, Wheelwright & Clark (1988) and Pedler, Bodydell & Burgoyne (1988) adopted the concept. Its roots may be traced to early 1950s and 1960s, when ideas about learning started to emerge. Out of these various thought processes and movements arose the concept of the learning organisation.

However, while the concept is fairly well established within academic and practitioner circles, it is still under development. As Senge (1990) describes it, the concept has been invented but not yet innovated, and thus a certain amount of ambiguity and confusion surrounds it. As Jones & Hendry (1992) explain, it is not clear what circumstances trigger the creation and development of a learning organisation, how change is then implemented and what the benefits are to the organisation and the individual people who work in it.

The challenge to the researchers and developers is therefore to develop an understanding of the concept of the learning organisation to the point at which it is possible to begin to understand the implications for practice.

2.2.5.2 What is a learning organisation and organisational learning?

Although different definitions of the concept reflect varying emphases, the shared historical context has meant that a number of common themes are readily identifiable. These include:

- change
- self-development
- employee participation
- adaptation of leadership systems and structures
- changes in the processes of delegation
- power and control

Senge (1990) defined a learning organisation as one that facilitates the learning of all its members and continuously transforms itself. Furthermore, according to Pedler, Bodydell & Burgoyne (1988), a learning organisation is one in which people continually expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. However, some authors view learning as a change in behaviour in response to a stimulus (Cyert & March, 1963; March, 1991).

Other authors suggest that learning requires some conscious acquisition of knowledge or insight on the part of the members of the organisation (Argyris & Schon, 1978; Hedberg, 1981). Fiol & Lyles (1985) argue that organisational learning means the process of improving actions through better knowledge and understanding. This should include cognitive and behavioural elements in the definition of organisational learning.

While these definitions view learning organisations as places where training, personal development and learning are an integral part of the business, theorists and academics also recognise that factors such as sympathetic

leadership, changing power and organisational structures and the creation of a suitable culture are all vital for the development of a learning company.

2.2.5.3 What is the difference between organisational learning and the learning organisation?

Just as the concept of the learning organisation has gained recognition in recent years, so has the concept of learning been accepted as a fundamental organisational process that has become integral to the effectiveness, adaptability and success of organisations (French & Bazalgette, 1993). However, Jones & Henry (1992) and Calvert, Mobley & Marshall (1994) have argued that the two terms, though closely related, are not the same thing.

Organisational learning	*Learning organisation*
• Highlights formal and structural issues, such as human resource management, training and knowledge and skills acquisition. These issues tend to obscure the real issues behind the learning organisation (Jones & Hendry, 1992). • Uses methods of collective learning. • Improves actions through better knowledge and understanding (Fiol, 1985).	• An organisation that excels at advanced, systematic collective learning. • Systems thinking, personal mastery, mental models, building shared vision, team learning and leadership are important. • Individual performance is linked to organisational performance. • Creates structures and procedures that support the learning process. • Values how and what it learns. • Turns data into useful knowledge, quickly and at the right time and the right place.

Table 2.3 – Organisational learning versus learning organisation (Jones & Hendry, 1992; Fiol, 1985)

2.3 LEARNER DEVELOPMENT

This section of the literature review focuses on learner development in order to answer the subsidiary research question: *How efficient is the delivery of training interventions?* The section on learner development thus reviews the following items (Figure 2.7 and Figure 2.8):

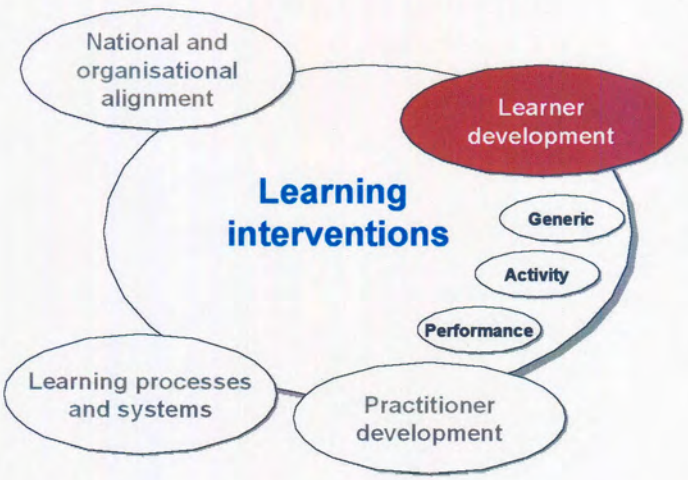

Figure 2.7 – Learner development

- Adult learning
- Learning pathways
- Career anchors
- Qualifications and learning programmes

Adult learning, learning pathways, career anchors and qualifications form integral parts of the individual learner's lifelong career development and training programme.

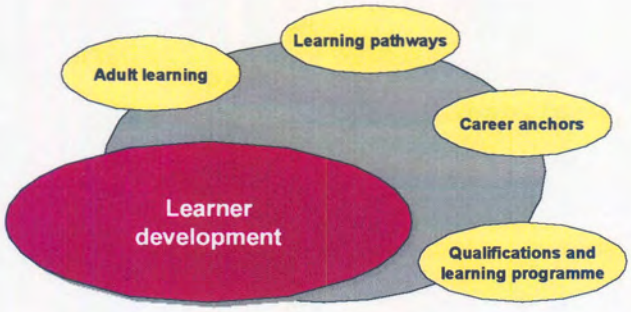

Figure 2.8 – Focus of learner development

2.3.1 Adult learning

Adult learning focuses on:

- The vulnerability of the learner
- Learning styles

Practitioners need to be more flexible, adaptable and resourceful to be competitive and prepared for the next millennium. The best way to develop these qualities is through experiential learning. A variety of social and organisational pressures have led to the development of various training and development interventions and a focus on the outcomes-based educational approach. For purposes of clarity, a brief discussion on problems inherent in the learning situation will follow. Spady argued that "outcomes are clear learning results that we want to demonstrate at the end of significant learning experiences" (Spady, 1994: 2).

2.3.1.1 The vulnerability of the learner

According to Kurt Lewin (as cited in Margulies & Raia, 1972), all learning begins with some form of discomfort. The learning process follows three stages (Figure 2.9):

- Unfreezing
- Change
- Refreezing

Learning is motivated by a drive to regain lost equilibrium occasioned by some form of disharmony, such as a realisation of a lack of knowledge, skills and competence (Figure 2.9). During the process of change, new behaviours or knowledge can be explored and tested, but dysfunctional defensive learning can occur as the self protects its perceived equilibrium from disconfirming information by rejecting it, suppressing it and distorting it. This coping behaviour is learned as surely as any other is (as cited in Margulies & Raia, 1972).

Recognising such dysfunctional responses in individuals or groups at an early stage poses a consummate challenge for the practitioner, even in an interactive situation. In addition, learners do not learn in isolation; their learning is inevitably influenced by other family and work communities of which they are part, and within which they will use particular individuals as key resources for discussion, comment and support (as cited in Margulies & Raia, 1972).

As shown in Figure 2.9, the learner may either be driven by a hunger for knowledge, skills and competencies or may feel his/her individual identity threatened by a state of disequilibrium and choose rejection, suppression or distortion as the way out.

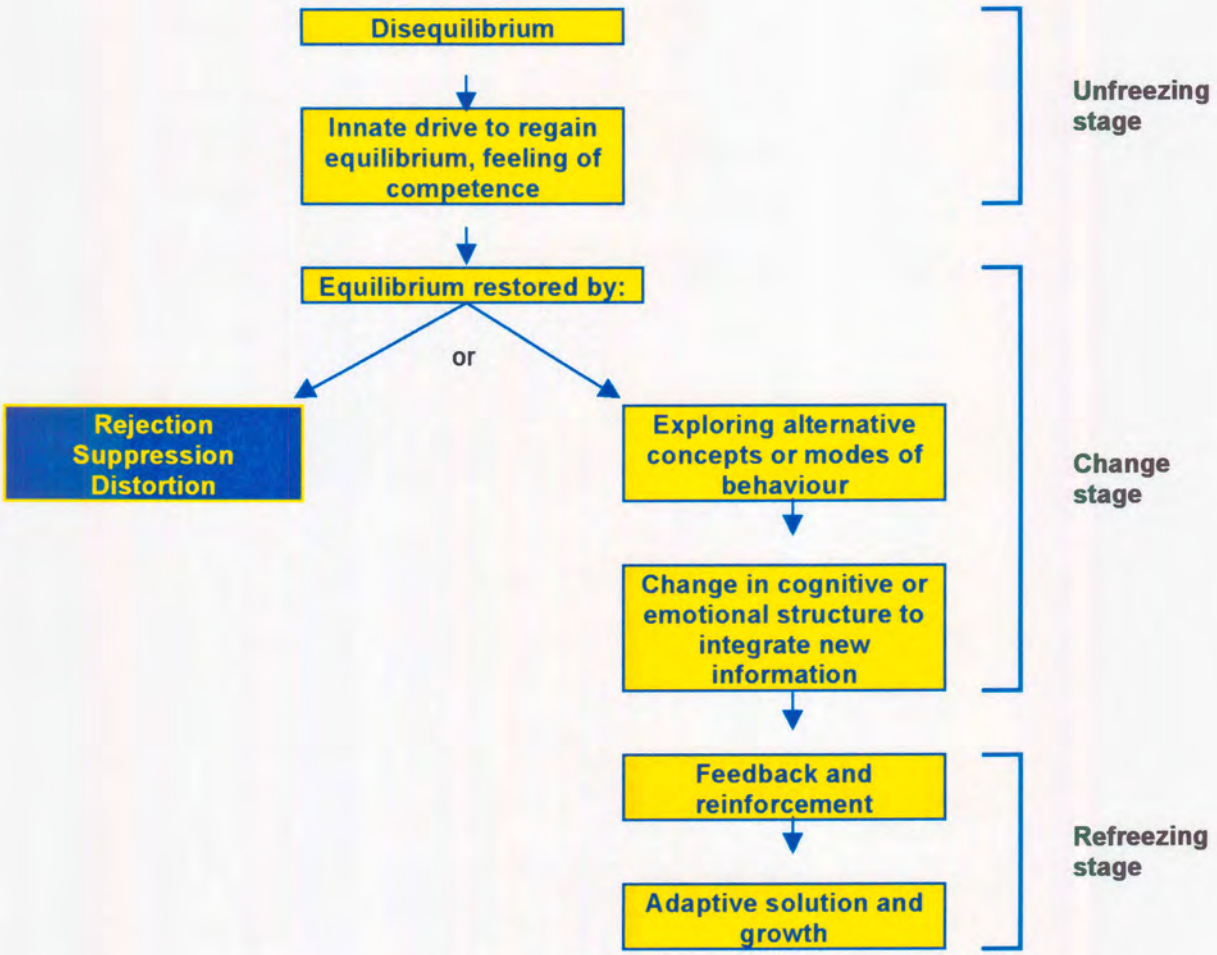

Figure 2.9 – Lewin's learning process (Margulies & Raia, 1972)

2.3.1.2 Learning styles

Lewin's model of learning (Figure 2.9) is not incompatible with Kolb's influential model of the learning cycle (Kolb, Rubin & McIntyre, 1971) (Figure 2.10), as this could be seen as an expansion of the change area in the linear representation. Kolb expands the process and Lewin reminds us that learning might have different outcomes. Any learning experience will move around this cycle, although habit, education, personality and circumstances will conspire to make learners feel comfortable at one particular point in the cycle (Kolb, Rubin & McIntyre, 1971; Margulies & Raia, 1972).

The learners' preferences or a combination of preferences will constitute their preferred learning styles, which may be one of four main types: accommodator, diverger, assimilator or converger (Figure 2.10). Effective learning needs to feature all of these aspects, but traditional learning addresses itself primarily to the assimilator and converger quadrants.

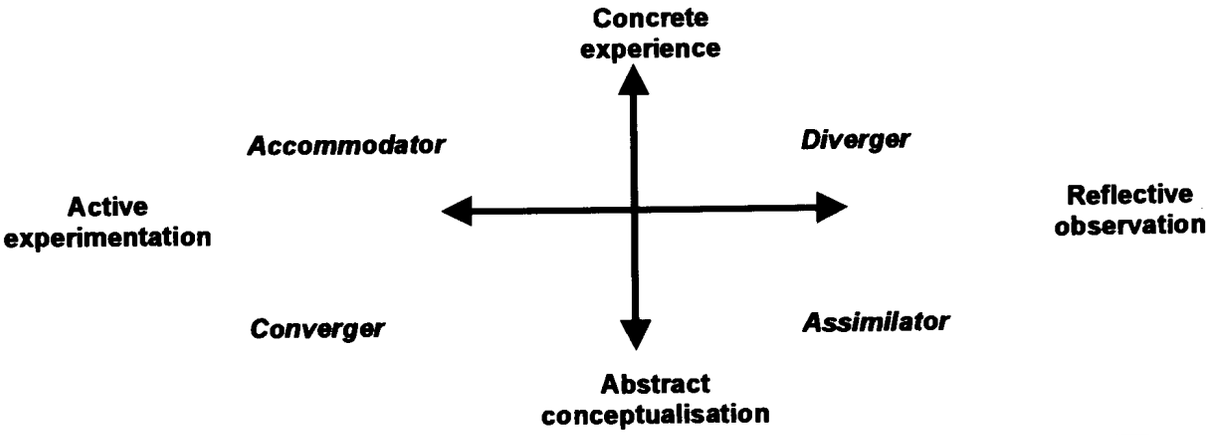

Figure 2.10 – The four learning style preferences (Kolb, Rubin & McIntyre, 1971)

Organisations expect leaders to take on board new concepts of leadership and implement them without any opportunity for experimentation or even any assistance with the new processes required. An effective programme must provide practitioners with the opportunity to experiment (Kolb, Rubin & McIntyre, 1971).

Kolb (Kolb, Rubin & McIntyre, 1971; Kolb, 1984) has identified similarities between his work and that of Piaget in his learning cycle in Figure 2.11, which provides a model for teaching interventions. The two ingredients essential for effective learning are the time and space to reflect on performance and to experiment with new ways of achieving it. Both time and space must be present for a programme to be effective, because learning occurs only after practice.

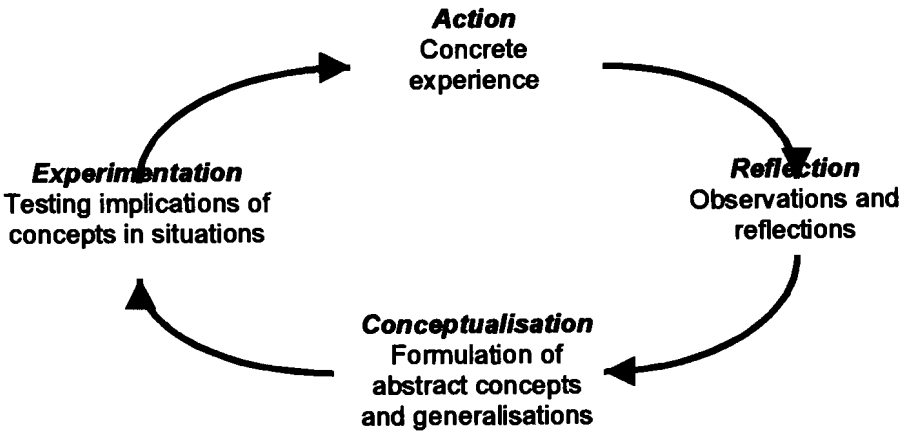

Figure 2.11 – Kolb's experiential learning model (Kolb, Rubin & McIntyre, 1971)

Figure 2.11 shows the learning cycle for experiential learning as Kolb (Kolb, Rubin & McIntyre, 1971) distinguishes the progression of learning as the learner moves through the learning experience. As McCarty (1979) says, the difference between learning at the bottom and the top of the cycle is the difference between institutional and experiential training.

2.3.2 Learning pathways

To design and develop outcomes-based educational programmes as part of learning pathways requires a focus on:

- Institutionalisation of learning interventions
- Skills training and levels
- Skills and competency grouping relevant to the learner
- Career anchors
- Qualification and learning programmes

2.3.2.1 Institutionalisation of learning interventions

The concept of institutionalisation goes beyond the simple transfer of training. As Michalak writes, "Successful training involves two phases: the acquisition and the maintenance of behaviours" (Michalak, 1981:22). Training and

development programmes often ignore the need to take steps towards the long-term maintenance of newly acquired skills and competencies.

2.3.2.2 Skills training and levels

An effective training programme will ensure that learners take the competency test only when they are competent to pass it. The following elements form the core of skills training:

- A positive model
- Practice with feedback
- A competency test

Throughout the training process, an atmosphere of support and encouragement must exist for adult learners. Learning new skills and changing old habits takes a long time.

2.3.2.3 Skills and competency grouping relevant to the learner

The learners need to develop high-performance skills to cope with the demands of the organisation. For a long time the corporate view of work, the workplace and the worker was rather limited and negative, and these work outputs were measured in terms of quantity of output. In the new workplace learners and workers need to make a 180-degree turn in a more responsive direction. Practitioners and learners need to move beyond the idea of training adults to that of assisting adults in a continuous learning process. Herr writes about assumptions the learner needs to encounter to create a culture of lifelong learning (Herr, 1995):

- Adult learners, as they mature, tend to prefer self-direction on their development pathways.
- Adult learners' experiences are rich resources for learning.

- Adult learners are aware of specific learning needs generated by real-life events.
- Adults are competency-based learners, meaning that they want to learn a skill or acquire knowledge that they can apply pragmatically to their immediate circumstances.

Competency modelling is required to drive organisational performance and achieve competitive advantage. The focus of the practitioner should be expanded through the introduction of programmes that prepare learners by giving them the basic skills. "The commitment to lifelong learning permits them to rapidly change in ways required by new organisations or content changes in the processes and performances of work" (Herr, 1995:5). Many educational approaches emphasise the importance of having students take charge of their own learning. Through experiential or on-the-job training, students can enhance their awareness of themselves for their own career development (Lester & Perry, 1995). Adult learning characteristics, as described by Ference and Vockell (1994), must be recognised if effective learning interventions are to be provided:

- Adult learners are active and willing to participate.
- Adult learners bring real-life experiences into the classroom.
- They are experts in many fields.
- They are independent and self-reliant and want to accomplish things for themselves.
- They want hands-on experience.
- They are life-centred and focus their attention on real-world situations.
- They are task-centred and wish to achieve goals.
  (Adapted from Ference & Vockell, 1994)

A competency-based approach to learning provides learners with opportunities to demonstrate an ability to assess what needs to be learned, to select appropriate learning techniques and to apply the newly acquired skills

to their work. Specific skill development may be required in certain skill development areas (Table 2.4):

Competency	*Skills required*
Academic basics	• Reading skills • Writing skills • Computational skills
Adaptability	• Problem-solving skills • Creativity skills
Communication	• Speaking skills • Listening skills
Development	• Self-esteem skills • Motivational and goal-setting skills • Personal skills • Career development skills
Group effectiveness	• Interpersonal skills • Negotiation skills • Team-work skills
Influencing people	• Organisational effectiveness skills • Leadership skills
Learning to learn	• Foundation skills

Table 2.4 – Competency and skills required (South Africa, 1997a)

2.3.3 Career anchors

Organisations are undergoing a metamorphosis and profound changes are occurring worldwide. These changes in the work environment have implications for career development in the future. Schein (1978) wonders whether there will even be such a thing as an organisational career or will careers become a more fragmented set of jobs held over one's working life. It has become evident that most people form a strong self-concept, a career anchor, which holds their internal career together as they experience dramatic

changes in their external career. A person's career anchor can be seen as his or her self-concept, consisting of:

- self-perceived talents and abilities
- basic values
- an evolved sense of motives and needs as they relate to the career

Career anchors evolve only as the person gains occupational and life experience. However, once the self-concept has been formed, it functions as a stabilising force or an anchor. Most people are unaware of their career anchors until they are forced to make a choice pertaining to self-development, family or career. Although individual needs may change over the learning pathway, Schein (1978) believes that there are stable aspects to a learner's career and also argues that when career choices are made, each learner will consistently seek to implement his or her own career anchor. In addition, Schein has identified certain distinct career anchors that he claims will probably be found in all occupations and will influence learner development:

- Autonomy and independence
- Entrepreneurial creativity
- Managerial/leadership competence
- Security and stability
- Technical/functional competence
- Service or dedication to a cause
- Pure challenge
- Lifestyle

The concept of career anchors has become applicable in today's turbulent world as more and more people are laid off and have to figure out what to do next in their lives. Schein (1978) emphasises that career anchors will continue to shift as we speculate about the 21st century. The career anchors (security, autonomy, lifestyle, technical competence, leadership competence, entrepreneurial creativity, service and pure challenge) have shown dramatic

shifts in structure and content in recent times, as Schein (1993) has explained:

- **Security/stability**

The most severe problems have been experienced with this anchor because of the shift in organisational policies. This shift implies that the only thing the career occupant can really expect of an organisation is the opportunity to learn and gain experience in the organisation in order to make him/herself more employable.

- **Autonomy/independence**

Individuals anchored in autonomy will find the occupational world an easier place to navigate. The self-reliance that may be needed in the future is already part of the psychological make-up of this group of people. As their need for autonomy increases, they have fantasies of opening up their own businesses, becoming consultants, working part-time and reducing their dependence on any particular organisation or job.

- **Lifestyle**

Lifestyle has shown the greatest amount of change. Most people in this group are concerned about economic security, but a few talked about stabilising their life patterns by settling in given regions and refusing to be moved every few years. The trend towards autonomy and lifestyle as anchors is a healthy development, with advancement being defined in terms of what one knows and the skills one possesses and based less and less on seniority or loyalty.

- **Technical/functional competence**

While there is an awareness of the increasing importance of knowledge and skills, this group is at a disadvantage in that knowledge and skills rapidly become obsolete in a dynamically changing technological world and it is not clear whether organisations will guarantee continuing education and retraining. To remain technically and functionally competent will require constant updating and relearning in an organisational world that may not wish to bear the cost of this updating in terms of money and time.

- **General managerial and leadership competence**

These anchors will continue to attract career occupants who understand what is really involved. The need for general management and leadership will unquestionably increase and will be pushed to lower levels in organisations. As work becomes more technically complex, it requires more co-ordination and integration at lower levels. In today's organisations whole layers of management are being cut out and organisations are being flattened and re-designed around multiple shifting project teams. These teams are described as self-managed and consist of team managers, project managers and programme managers. With general management and leadership skills extending beyond a technical understanding of the tasks at hand, Schein (1990) argues that general management might cease to be a role or a position and become more of a process skill that will be needed in all kinds of roles and positions.

- **Entrepreneurial creativity**

More people are drawn to the idea of developing their own business, and as the world becomes more dynamic and complex, the opportunities for individuals with this anchor will increase dramatically.

The dynamic complexity of industry will put a premium on creativity and it is creativity that is the core of this anchor.

- **Service/dedication to a cause**

As the world becomes more conscious of large-scale problems such as environmental issues, the gap between developed and underdeveloped countries and factors related to health and welfare, new kinds of organisations and careers are being created to address these issues.

- **Pure challenge**

There has always been a small group of people who defined their careers in terms of overcoming impossible odds, solving the unsolved problems and winning out over competitors.

Each of the categories above still attracts a set of people, and the working out of a given anchor may become problematic as the world of work and organisational structures become more fluid. An ability to analyse and to figure out what kinds of jobs are available and how a particular job will evolve becomes a critical skill.

2.3.4 Qualifications and learning programmes

The *Green Paper on Further Education and Training* (South Africa, 1998a) distinguishes and acknowledges the diverse needs of learners and the different contexts of learning. The work of SAQA in developing the NQF forms the basis upon which the curricula, programmes and qualifications for training and development should be built and focused. One of the major requirements is to address the goals of lifelong learning, which will place their own demands on curriculum development for any future training and development interventions.

Learning outcomes, as defined by SAQA, are the contextually demonstrated end products of the learning process. Outcomes include knowledge, skills

and values that are recognised to be critical to the future success of learners. The critical outcomes have been defined as follows (South Africa, 1998a; Table 2.5):

Critical outcomes	*Developmental outcomes*
Problem-solving skills	Learning skills
Teamwork	Citizenship
Self-responsibility skills	Cultural and aesthetic understanding
Research skills	Employment-seeking skills
Communication skills	Entrepreneurship
Technological and environmental literacy	
The development of macro-vision	

Table 2.5 – Critical and developmental outcomes (South Africa, 1998a)

2.4 PRACTITIONER DEVELOPMENT

Practitioner development is an essential component in learning interventions and the training and development process. The literature related to practitioner development has been reviewed in order to answer the subsidiary research question: *How does practitioner development influence the quality of learning?* Practitioner development focuses on the following issues (Figure 2.12 and Figure 2.13):

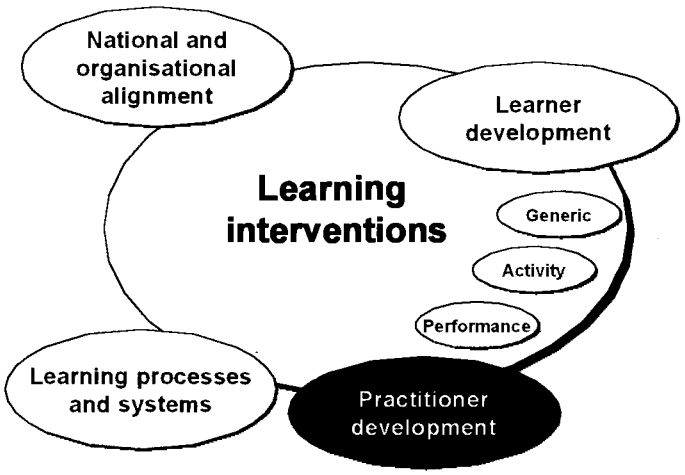

Figure 2.12 – Practitioner development

- Why practitioner development?
- Behaviour of practitioners
- Frequently used skills

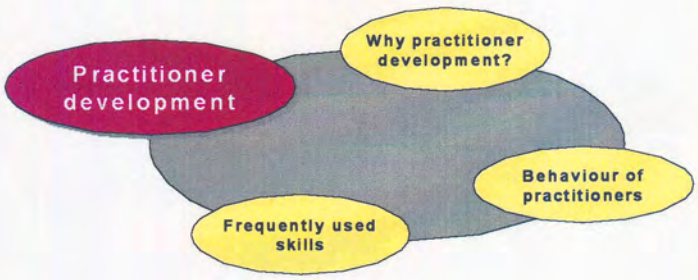

Figure 2.13 – Focus of practitioner development

2.4.1 Why practitioner development?

There are two vital objectives that should be recognised in the development of staff:

- The need for skilled workers; and
- The influence that will be exerted on the organisation

Practitioners need to be developed to ensure that organisations have more skilled and productive employees working within the different processes. In order to be competitive, organisations need to be efficient and this depends on the ability of the practitioners involved in the processes to influence the organisation creatively. Processes that enhance the creative thinking and problem-solving skills of employees are not regarded as functional aspects of the organisation. The questions below are frequently asked about the role and place of the practitioner in an output-focused environment where the employees need to make productive contributions to the organisation and business (Kolb, Rubin & McIntyre, 1971; Kolb, 1984):

- What are the competencies required for practitioners to help the learners?

- What kind of knowledge is required from the practitioners to do their work well?
- What kind of training and development is required to prepare the practitioners for effective training and development interventions?

With the necessary clarity about his/her role, skills and competencies, the reflective practitioner can train learners in the following way:

- First go through the relevant basic science.
- Then teach the relevant applied science.
- Finally, provide or develop a curriculum in which learners practise applying that science to the problems.

2.4.2 Behaviour of practitioners

Rothwell & Kazanas (1994a) argue that many research studies have attempted to describe the activities, roles and competencies needed by HRD practitioners and they have identified the following key activities they are required to perform:

- Provide guidance and plan instruction for those who want to participate as a practitioner.
- Explain and justify HRD to others in organisational settings.
- Provide guidance for HRD leaders in selecting, developing and evaluating HRD practitioners.
- Provide other practitioners with career path direction and development in the field of HRD.

The American Society for Training and Development, as cited in Rothwell & Kazanas (1994a), gives the 15 key roles of HRD practitioners (Table 2.6) as the following:

An evaluator	• To identify the extent of the impact of a programme, service or product.
A group facilitator	• To manage and facilitate discussion groups.
An individual development counsellor	• To help individuals assess personal competencies, goals and values and to plan individual development.
An instructional writer	• To prepare written learning and instructional materials.
An instructor	• To present information for individuals to learn in the form of a structured learning experience.
A manager	• As a training and development manager to plan, organise, administer staff, control the training and link training and development with other organisational interventions.
A marketer	• To sell the training and development viewpoint, learning packages, programmes and services to a wide range of participants in and outside the organisation.
A media specialist	• To produce software for and to use applicable multimedia applications and related technology for training and development.
A needs analyst	• To define deficiencies between ideal and actual training and to specify the cause of the gaps.
A programme administrator	• To ensure effective utilisation and administration of programmes and to ensure that other components of learning are present during the implementation and presentation of programmes.
A programme designer	• To prepare objectives, define content, select and sequence activities for specific programmes.

A strategist	• ı plans and action to accomplish training and development goals and objectives.
A task analyst	• To identify activities, tasks, subtasks, human resources and support requirements necessary to achieve specific results in the organisation.
A theoretician	• To develop and test theories of learning, training and development.
A transfer agent	• To help individuals apply learning in the workplace.

Table 2.6 – HRD practitioner roles (Rothwell & Kazanas, 1994a)

Various training and development skills are essential for HRD practitioners to be able to implement training and development interventions in the workplace (Table 2.7).

• An understanding of adult learning	• Model-building skills
• Audio-visual skills	• Negotiation skills
• Career development skills	• Objectives preparation skills
• Competency identification skills	• Organisational behaviour understanding skills
• Computer competence	• Organisational understanding skills
• Cost-benefit analysis skills	• Performance observation skills
• Counselling skills	• Personnel/HR field understanding
• Data reduction skills	• Presentation skills
• Delegation skills	• Questioning skills
• Facilities skills	• Records management skills
• Feedback skills	• Relationship versatility
• Futuring skills	• Research skills
• Group process skills	• Training and development understanding
• Industry understanding skills	• Training and development techniques understanding
• Intellectual versatility skills	• Writing skills
• Library skills	•

Table 2.7 – Training and development skills (Rothwell & Kazanas, 1994a)

2.4.3 Frequently used skills

The following are the skills most frequently used and in which training is most frequently offered by American companies (Table 2.8):

Skills used	*Percentage*
Basic computer skills	88%
Communication skills	83%
Management skills/development	84%
Supervisory skills	81%
Technical skills/knowledge	85%

Table 2.8 – Skills usage in the USA (BMI Issues Management, 1997)

The focus of skills training in South Africa versus that in the United States of America is reflected in the next table (Table 2.9):

Skills training	*South Africa*	*USA*
Computer skills	76%	88%
Management training	78%	84%
Supervisory training	80%	81%
Technical skills	72%	85%
Total budget for formal training	R2,344 billion (up by 7%)	$59,8 billion (up by 15%)

Table 2.9 – Skills trained in South Africa (BMI Issues Management, 1997)

As reflected in Table 2.9, the focus of skills training in the two countries also differs in terms of the amount of money spent on training and development in the last financial year (BMI Issues Management, 1997), with the difference in the case of computer skills (12%) and technical skills (13%) being notable.

2.5 LEARNING PROCESSES AND SYSTEMS

This section on learning processes and systems reviews the literature in order to answer the subsidiary research question: *How can the learning processes and systems assist in the advancement of employees?* The literature review therefore focuses on (Figure 2.14):

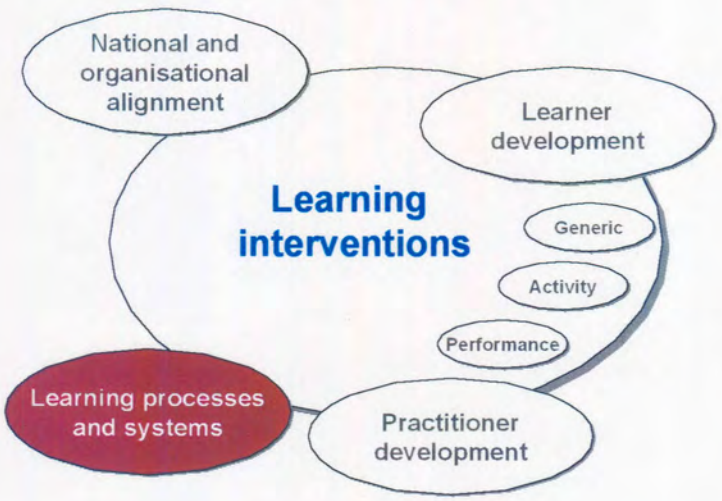

Figure 2.14 – Learning process and systems

- Programme design and development
- Effective learning
- Approach to learning interventions
- Delivery of learning interventions
- Modes of learning
- Technological approach for training and development
- Outcomes-based education
- Development of competencies
- Transformation

2.5.1 Delivery of learning interventions

Currently, the concepts of the learning organisation (Garratt, 1987) and open learning are being more widely embraced, including as they do flexibility in pace, an element of individual choice and discretion over the learner's own development, career-specific and otherwise. Increased demand has been accompanied by an increase in the understanding of how learning takes place and the availability of technology to achieve and enhance learning.

2.5.2 Other forms of delivery in training and development

It is clear that in the longer term the structures of most organisational systems will undergo profound modification under the impact of advanced re-engineering and process development changes (Kolb, Rubin & McIntyre, 1971; Kolb, 1984). Other developments are taking place in the structure and process of organisations to enable them to provide the training and development necessary to address identified training needs in the organisation:

Outsourcing

- This is a recent trend. Organisations will contract out to external firms activities in which they are not leaders in delivering the required outputs. Quinn (1980) and Drucker (1994) forecast that ten years from now companies will outsource all work not on a career ladder up to senior management.

Modular operations

- Ideas of outsourcing and being the best in the world are taken further in the modular organisation, where, as Tully (1993) explains, selected core activities and competencies in which one is better than anybody else in that specific field are nurtured.

Strategic networks

- Strategic networks can be defined as long-term arrangements between two or more organisations. Such networks, in the form of alliances between organisations, are forming and transforming at an increasing rate. Highly complementary strengths are united and such co-operative arrangements can give organisations competitive strength (Jarillo, 1988).

Virtual organisations

- The idea of virtual organisations is an emerging concept. By utilising its core competencies, a virtual organisation should be capable of fulfilling its potential in virtually any form. This approach can include virtual products available at any time or place and in whatever size is required (Davidow & Malone, 1992).

Looking at these forms of delivery of training and development interventions, it is clear that strategic networks and virtual organisations, in particular, require heterarchical rather than hierarchical structures and modernistic approaches to knowledge and skills management (Sadler, 1996; Quinn, 1980).

2.5.3 Programme design and development

Effective programmes generate a high degree of motivation for action and intentions to act and the potential for the conversion of this motivation into actions that measurably affect the performance of the organisation. Effective programmes attract and retain learners' interest rather than merely their attention. Those who feel motivated to learn do learn, so the primary task of the designer is to arouse that motivation. A major requirement for an effective programme is that it should stimulate the learners to want to do something with what they have learned (Tully, 1993). The learners and participants need

to have more of a say in the design and delivery of the programme, so that they can relate it directly to themselves and their own working situation and learning environment. Programmes capable of generating a high intention to act are those that (McLagan, 1989):

- are relevant to the problems faced in the work situation;
- attract and retain learners' interest; and
- draw on experience.

Programmes that meet the three criteria mentioned above seem to give participants a real incentive to change thing in the workplace. But an intention to act does not necessarily imply an ability to act. Programmes capable of generating high action are those that (Billett, 1994):

- contain understandable concepts;
- give people confidence in their mastery of the skills required; and
- help people translate these concepts into action.

Simple rather than complex, experiential rather than cognitive, supportive rather than didactic – these programmes should provide simple and elegant concepts that learners can grasp and use immediately in the workplace to prevent over-complicated, over-analysed material that looks good in the workbook but confuses the learner (Anderson, 1982). Designers should avoid attempting to put everything they know into their programmes.

Print-based resources often accompany these programmes or modules, with learners being encouraged to use them independently. This approach is attractive to those who seek to find training solutions to secure the development of vocational knowledge (Billett, 1994). However, questions remain unanswered about the effectiveness and consequences of this approach to instruction.

2.5.4 Effective learning

Hand in hand with the design criteria, the boundaries of the learning situation and the environment go the learner and effective learning. Learners expect to gain something very positive from the time allocated to the programme. Effective learning occurs when the learning climate is (Sadler, 1996):

- a challenging mix of cognitive and experiential material;
- related to the learning interventions identified;
- safe for the learner in terms of assessment; and
- surprising in the sense of changes of pace and type of learning material used.

The style of the practitioner is crucial to effective learning. Success is achieved when the learners believe that they have created the outputs and the potential for new action themselves (Glaser, 1990). An outstanding practitioner is a true leader, someone who gives the learners a vision of what they might achieve, sets an example of the behaviour likely to lead to that achievement and gives a lot of support and feedback along the way. Apart from the practitioner's role in teaching the content, his/her other tasks are to (Berryman, 1993):

- challenge;
- coach;
- counsel;
- criticise;
- listen; and
- set an example.

Designers and practitioners in the learning situation should focus on effective development programmes (Stevenson, 1991):

- They must be focused.

- Their impact must be capable of measurement.
- The design must be clearly structured to address the values and beliefs of the learners.
- The programme must include cognitive and experiential elements.

The objective of the practitioner and the programme designer is to affect the performance of the organisation in a positive manner. They do this by benchmarking the original situation, both for use in the programme and for subsequent evaluation, and then designing and implementing the programme using the effective processes outlined above (Perkins, Jay & Tishman, 1993).

2.5.5 Approach to learning interventions

A rapid increase is currently being experienced in interest in practice and learning in the workplace as a site for securing vocational knowledge and enabling interaction between learning outcomes through print and text-based resources and an alternative approach to learning through participation in everyday work practices (Billett, 1994). The researchers have identified two major focus points for securing vocational knowledge:

- Instructional media
- Everyday practice (on-the-job training)

The instructional media include print-based modules, computer-based learning, mentors and instructional videos. This approach to amassing vocational knowledge is contrasted with everyday practice on the job, comprising participation in everyday workplace activities. Everyday practice or on-the-job training emphasises ongoing participation in work activities. It is not part of any formal curriculum, but exposes the learner to topics covered by the instructional media or at formal institutional training. Two forms of

knowledge are referred to in this study (Anderson, 1982):

- Propositional or conceptual
- Procedural

2.5.5.1 Propositional or conceptual knowledge

Propositional knowledge or conceptual knowledge can be seen as including facts, concepts, information and statements (Stevenson, 1991). Propositional or conceptual knowledge can be acquired at different depths, from simple factual knowledge to deep conceptual understanding. The depth of understanding allows rich linkages with other concepts, which permit vocational experts to address complex problems successfully (Anderson, 1982; Perkins, Jay & Tishman, 1993).

2.5.5.2 Procedural knowledge

Procedural knowledge can be seen as including techniques, skills and the ability to achieve goals. Procedural knowledge is concerned with achieving goals, accomplished through specific procedures used to undertake specific tasks with higher-order procedures guiding, monitoring and regulating these activities. The deployment of procedural and propositional knowledge is seen as being interrelated and interdependent (Stevenson, 1991).

In addition, factors such as values, attitudes and interests are seen as having a keen role in underpinning the development and subsequent deployment of these forms of knowledge in the practical experiential training phase (Perkins, Jay & Tishman, 1993; Grusec & Goodnow, 1994; Tobias, 1994). Within any particular domain, a highly developed base of these forms of knowledge is viewed as being a key attribute of expertise (Glaser, 1990).

In combination, these forms of knowledge offer the depth of understanding and adaptable procedures required for complex performance, including the

ability to deploy knowledge effectively to resolve new problem situations. The workplace is characterised by self-managed work-teams, a lack of demarcation between tasks and a flat organisational structure, which encourages and permits a sharing of knowledge about work.

2.5.6 Delivery of learning interventions

The two ways in which the main types of learning delivery take place will be discussed, as will the way in which these approaches contribute to effective learning in the workplace (Stevenson, 1991).

The two main types of learning interventions researched can be classified as:

- Instructional media
- On-the-job training

2.5.6.1 Instructional media

Various instructional media can be used to develop and deliver learning interventions, such as print-based modules, computer-based learning and videos.

- **Print-based modules**

  Learners can use the print-based modules in different ways. They may read through them and then use them in conjunction with work activities. Some learners may use the modules as a reference or as a backup for reinforcement (Glaser, 1990). These modules are generally used for providing information related to non-skilled, propositional knowledge and in situations of uncertainty in order to clarify meaning and remove uncertainty.

- **Computer-based learning**

Computer-based learning material provides greater depth of understanding in some areas than the print-based modules (Billett, 1994; Berryman, 1993). It has been found that the use of computer technology may cause concern, frustration and, occasionally, anger among the learners and also restrict the opportunities to access the knowledge in the computer text.

- **Videos**

Videos are used in conjunction with the text-based modules as a visual stimulant and to provide access to information not easily available to the learners through normal plant operations (Billett, 1994).

The instructional media can be seen as providing access to non-skilled propositional knowledge and a basis for the development of specific procedures.

2.5.6.2 On-the-job training (everyday practice)

On-the-job training includes aspects such as other workers, work activities, observing and listening, and direct instruction.

- **Other workers (mentors and coaches)**

The use of mentors and coaches to provide learning opportunities and activities seems to be very useful. The monitoring of activities and the progress of the learner provides close guidance, which is conducive to effective work performance (Tobias, 1994; Stevenson, 1991). Mentors and coaches are able to explain and make explicit that which is not immediately observable, thus usefully contributing to the development of the learners' conceptual understanding of the work requirements and activities.

- **Work activities**

Ongoing work practice and activities provide an opportunity for work tasks to become second nature, and this process is referred to as knowledge becoming procedurally driven or compiled for smooth performance (Anderson, 1982). Activities are contextualised by the requirements of the work practice and this type of learning is useful for making explicit the standards and values associated with work practices. Factors associated with on-the-job training are appropriated by learners through engagement in workplace activities and guided support from the other workers.

- **Observing and listening**

The guidance of other workers does not always involve direct interaction, with more indirect forms of guidance reported as being important. Observing and listening are described as providing a bridge between knowing about something and knowing how it can be undertaken. Whereas observing and listening during lectures might be seen as passive, in the workplace this is proposed as an active mode of engaging knowledge, as it is linked to actual on-the-job training (Billett, 1994; Anderson, 1982).

This ongoing and indirect form of guidance is essential for the sharing of knowledge, which could not be accessed or communicated in other ways. Moreover, the informal nature of learning from others can be illustrated by communication between workers in non-work situations, suggesting that accessing knowledge is not forced, but is a normal component of dialogue between workers, even during work breaks.

- **Direct instruction**

Direct instruction offers access to knowledge that would otherwise have been inaccessible. According to Berryman (1993), this type of

instruction is used increasingly in skilled occupations as the nature of the work becomes more complex. Explanations of an explicit nature are said to be very useful when knowledge is inaccessible.

The text-based modules and computer-based learning arrangements offer access to activities in the form of descriptive accounts, thereby developing non-skill-based knowledge. However, little evidence is offered that they provide access to the forms of knowledge required for complex work performance. The characteristics described above suggest that the use of print-based and text-based learning only, without associated on-the-job training, would result in superficial outcomes (Billett, 1994). On their own, instructional media are not sufficient for the development of skills – they have to be integrated with real activities and the guidance of experts involved in the process.

The following are the most common instructional methods and media used for training and development in the United States of America (Table 2.10):

Instructional methods used	*Percentage*
Business books and guidelines	55%
Classroom programmes	91%
Overhead transparencies	56%
Role-play	55%
Video tapes	79%
Workbooks and manuals	77%

Table 2.10 – Instructional techniques used (BMI Issues Management, 1997)

2.5.7 Modes of learning

The following modes of learning represent a configuration of mutually supportive elements and the significance of these modes is that they reveal a wide range of common learning processes identified by the literature:

- Analytic learning
- Synthetic learning
- Experimental learning
- Interactive learning
- Structural learning
- Institutional learning

Although one or two modes of learning may dominate in organisations, several modes may easily co-exist.

2.5.7.1 Analytic learning

Rational analysis is a well-known form of methodical learning (Allison, 1971; Ansoff, 1965). Learning occurs through intensive and systematic information-gathering from both within and outside the organisation. Operations are analysed and the environment is scanned to determine the key problems and opportunities. In making decisions, practitioners evaluate a variety of alternatives and a few key objectives are identified (Grandori, 1984), usually including aspects such as profitability and growth.

Much of the information gathered is quantitative and is monitored through formal systems. The emphasis is on hard intelligence data, deductive logic, numerical calculation and even optimisation (Ackoff, 1971). Most analytical learning is diffused only selectively to lower levels of the organisation. Although the results of learning are implemented through detailed plans, programmes and routines, lower levels may not always be made aware of the underlying rationales of the learning interventions or intentions.

2.5.7.2 Synthetic learning

Compared with analysis, learning by synthesis is a less systematic but more emergent, intuitive and holistic mode of learning. It combines different bits of

knowledge in a new way so that unique relationships or patterns are revealed and the whole becomes greater than the sum of the parts. Concepts may be reconfigured to display harmony and consistency (Mintzberg, 1989). Focal themes, critical relationships or systematic properties may be identified to reveal new possibilities (Nonaka, 1988).

The standards of evaluation used in the synthesis are largely aesthetic and subjective. Synthesis is normally a product of a single creative mind and results in products like configurations and systems thinking. Synthetic learning pulls together information in a way that gets rid of extraneous details and concentrates on what is most important (Radnitzky, 1968; Palmer, 1969). Another application of synthetic learning is the use of systems thinking (Beer, 1981) to understand the underlying dynamics of the systems, processes and organisations in question (Mintzberg, 1989; Senge, 1990).

2.5.7.3 Experimental learning

Practitioners have noted that the analytical model ignores limitations in decision-makers (March & Simon, 1958) and have suggested that overcoming these limitations and constraints requires a simpler, more incremental approach to learning through the performance of small experiments and monitoring of the results (Quinn, 1980). Practitioners can explore complex environments in a gradual and more focused way instead of making long-term plans (Burgelman, 1990). Experimental learning is also more spontaneous than analytical learning, as it is not governed by detailed plans and changes and is based on feedback from the processes and systems.

Like analysis, experimental learning is an intentional, rational, methodical approach to learning. There is a deliberate effort systematically to gather and interpret information in the hope of improving the behaviour of the organisation as needed (Weick, 1979). Experimental learning is especially likely to occur during efforts to adapt or renew an organisation, as changes

are made to products, services and methods to bring about a better way of doing things (Zaltman, Duncan & Holbek, 1973; March, 1991).

2.5.7.4 Interactive learning

Like experimentation, interactive learning involves learning by doing tasks and working simultaneously in many parts of the organisation. Instead of systematically experimenting with practices, practitioners learn in a more subtle and implicit way by negotiating and dealing with the stakeholders (Cohen, March & Olsen, 1972). Learning occurs in the exchange of information and the evaluation of transactions and interventions within or external to the organisation (MacMillan & Jones, 1986; Pfeffer, 1981).

Interactive learning is more intuitive and inductive than methodical and relies on hunch, political instinct and analysing or reading people. This approach to learning typically sees an individual or department trying to achieve local objectives (Cyert & March, 1963; March & Olsen, 1976). Interactive learning is widely used in organisations where goals are vague and power is broadly distributed.

2.5.7.5 Structural learning

Structural learning is one of the most pervasive forms of methodical learning and occurs through organisational routines (Cyert & March, 1963; Nelson & Winter, 1982; Perrow, 1986). Routines are products of analytical learning and design; they codify prior learning by specifying how tasks and roles should be carried out and played efficiently and guiding learning implicitly and explicitly, spelling out methods for improving efficiency, correcting errors or refining existing processes and systems (Nelson & Winter, 1982). Routines also teach by directing attention, institutionalising standards and assumptions, and even creating basic vocabularies (Hedberg, 1981).

2.5.7.6 Institutional learning

Institutional learning is an emerging inductive process by which organisations assimilate values, ideologies and practices from their environments (Scott, 1995). The learning is done by a large group of participants from the organisation, so that knowledge can be widely diffused. Instruction and indoctrination may occur openly, as a leader teaches his or her vision of the mission of the organisation and disperses it to members through formal symbolism, charismatic persuasion or example (Berger & Luckman, 1966; Deal & Kennedy, 1982).

Institutional learning harmonises the values of a leader, community or stakeholder with those of the broader membership of an organisation (Clark, 1956; Selnick, 1957). It also creates coherence among the beliefs of the employees, making it easier for them to work together (Whitley, 1991). Such learning tends to sanction organisational efforts in the eyes of powerful external parties.

2.5.8 Technology in training and development

Abetti (1989:37) defines technology as a "body of knowledge, tools and techniques, derived from both science and practical experience, that is used in the development, design, production and application of products, processes, systems and services". Technology transfer is defined as the process by which knowledge contained within one organisation is acquired by another organisation (Cutler, 1989). However, in the field of training and development a wide variety of practices are used to deliver training and development interventions (BMI Issues Management, 1997).

2.5.8.1 Training and development and the Internet

Classroom training is becoming expensive and in some instances ineffective, and also requires people to be removed from their workplace to attend training and development courses (BMI Issues Management, 1997). With new learning technologies such as Internet-based and computer-based training, learners decide what they want to learn and at what speed. These technologies were designed to improve performance and not necessarily for training. Technological applications include electronic performance support systems (EPSS) to assist learners with routine but complex decisions in the work situation using computer applications (BMI Issues Management, 1997).

The ability to access information world-wide practically immediately means that learning no longer needs to remain solely in a classroom and other means can be used to complement the traditional training interventions. With the Internet, training becomes more dynamic, personalised and interactive and can be delivered remotely. The most frequent ways in which the Internet is used in training and development include (Cilliers, 1997):

- Bulletin boards
- Discussion groups
- Electronic mail
- Interactive learning materials
- Real-time video conferencing
- Use of the World-Wide Web (WWW) to download information

The impact of technology and the Internet will force current practitioners to remain up to date with new technology and to adapt to the new trends in the use of technology to enhance their teaching and instructional skills.

2.5.9 Outcomes-based education

This section focuses on:

- Objectives of outcomes-based education
- What is outcomes-based education?
- Why do we need outcomes-based education?
- Focus areas of outcomes-based education
- What is needed for outcomes-based education?

One of the most significant shifts in the educational paradigm has involved the focus on outcomes-based education. The restructuring of academic curricula to include the basic concepts of outcomes-based education is increasing rapidly. Pressure from society to improve the levels of knowledge and skills of learners and overall dissatisfaction with the status of public school education have combined to alter the way forward for students in industry.

Outcomes-based education is founded on three basic principles, according to Spady, Marshall & Rogers (1994):

- All learners can learn and succeed, although not necessarily in the same way
- Success breeds success
- Institutions control the conditions of success

Outcomes-based education is education that is learner-centred, results-orientated and founded on the belief that all individuals can learn. As Spady (1994) argues, "Those who are slower never get the opportunity to truly catch up because their record of earlier mistakes cannot be erased. But what is almost never assessed or documented is what either kind of student ultimately can do successfully to match this accumulation of grades" (Spady, 1994: 7).

2.5.9.1 Objectives of outcomes-based education

Students and practitioners who are exposed to outcomes-based educational activities learn (Spady, 1994) to:

- identify the basic principles of outcomes-based education;
- explain terminology common to the outcomes-based education framework;
- describe the impact of the outcomes-based educational paradigm within the total educational experience; and
- develop appropriate learning interventions within the related educational content areas, which will meet the stated learning outcomes.

In implementing outcomes-based education, educators and practitioners are trying to make themselves more accountable for the whole person (Spady, Marshall & Rogers, 1994). In addition, the goal of outcomes-based education is to make sure that when expectations are presented to learners and responsible practitioners, there is a focus not only on the basics but also on the entire picture of what it takes for a learner to be able to function in a society. The following points must be made clear (Spady, Marshall & Rogers, 1994):

- The teaching of basic core knowledge is not dispensed with with the implementation of outcomes-based education. These basics are the core of the curriculum and are built upon and enhanced by current research and teaching strategies.
- Formal institutions have always addressed the whole learner, but never put these expectations down in objective terms. Objectively stating behavioural expectations enables productive communication with students and responsible persons in training and development.

2.5.9.2 What is outcomes-based education?

In outcomes-based education practitioners begin by determining the knowledge, competencies and qualities they want learners to be able to demonstrate when they finish the learning intervention and need to face the challenges of the organisational world (Towers, 1992). Exit outcomes therefore need to be established that are appropriate for the required work. In an outcomes-based educational system, the following concepts are emphasised (Towers, 1992):

- What is to be learned has been clearly identified.
- Learner progress is based on a display of competence and achievement.
- Multiple instructional and assessment strategies are available to meet the needs of each learner.
- Time and assistance are provided for each learner to reach his/her maximum potential.

Credibility, like respect, is earned and not granted. It is earned on the basis of the practitioner's professional knowledge, business experience and track record.

Spady, Marshall & Rogers (1994: 29) define outcomes-based education as a "comprehensive approach to focusing, defining and analysing all aspects of a school's instructional and credentialing systems. The instructional system includes things like goal-setting, planning curricula, teaching, instructional tools and resources, assessment of student learning. The credentialing system includes things like evaluating, grading, credit, record-keeping and transcripts, reporting, promotion and graduation standards".

Helsby & Saunders (1993) refer to outcomes-based education as:

- creating a desired state in individual students by describing what they should know and be able to do or be like as a result of their education;
- making use of class, institution or systems level performance indicators such as the distribution of results, course completion rates, measures of student alienation or post-course destination of students.

In this usage the learners' outcomes are performance indicators that either provide evidence of what has happened with respect to a group of students or define a desired state with respect to that group of students (Helsby & Saunders, 1993). With outcomes-based education the practitioner needs to clearly define the desired outcomes in terms of what the learners are to learn, measure their progress based on actual achievement, meet their needs through various teaching strategies, and give them enough time and help them to meet their potential.

2.5.9.3 Why do we need outcomes-based education?

Two of the most common concerns relating to outcomes-based education and the teaching of values and morals are:

- Whose morals and values should the practitioner teach?
- Should the practitioner teach these values and morals at all?

Values and morals are learned whether the practitioner teaches them directly or not. If the practitioner does not address them, they are adopted in a second-hand manner by observing the way others behave and interact. Ensuring that values and morals in training and development are covered in a

well-planned and deliberate fashion can best be accomplished by designing outcomes to organise this process (Spady, 1994).

What needs to be more specifically established are the behaviours and beliefs the practitioners want the profession to share with the learners (Spady, Marshall & Rogers, 1994). Acceptable behaviours have never been adequately identified for learners. The practitioners have been quick to let learners know when they do wrong, but the real question is whether practitioners have let learners know up front what was expected from them? Identifying acceptable social behaviours and incorporating these into the learning situation and the pre-determined standards will produce successful well-rounded students. Learning interventions with high standards, both academically/practically and socially, will be successful in creating confident and prosperous learners.

Outcomes-based education allows practitioners to put the outcomes that are expected into words, helping to make communication more thorough and direct (Towers, 1992). To have a successful outcomes-based programme, it is important to design it around the needs of the organisation, including relevant stakeholders in the process to assist in designing and developing the desired and appropriate outcomes.

2.5.9.4 Focus areas of outcomes-based education

A number of education systems around the world have described student outcomes quite explicitly in terms of the actual learning students should display at the end of planned learning experiences and the development of accountability mechanisms that directly reflect student performance in relation to those outcomes (Helsby & Saunders, 1993). There is wide variation in focus and, particularly, the kinds of student outcomes specified at a systems level, with these generally rather broader in scope than those specified in the objectives.

The focus is on the long-term learning valued by the system rather than more short-term objectives related to specific curriculum components. Systems level outcomes describe characteristics, behaviours or understandings in the learner, which have significance beyond the particular learning sequence or topic, indeed beyond school. Where education systems define student outcomes, they may be at any or all of the three levels of generality. There are many variations in the terminology used to describe the levels of outcomes-based education (Helsby & Saunders, 1993):

Overarching student outcomes	• This is the highest level of student outcomes and these are broad general *exit* outcomes, which apply to the whole curriculum.
Curriculum area outcomes	• Curriculum area outcomes are also broadly defined *exit* outcomes, but they apply to particular activities in the curriculum.
Progressive outcomes	• Progressive outcomes are more detailed and make *explicit* the benchmarks or standards by which student progress towards the achievement of the curriculum area outcomes may be mapped.

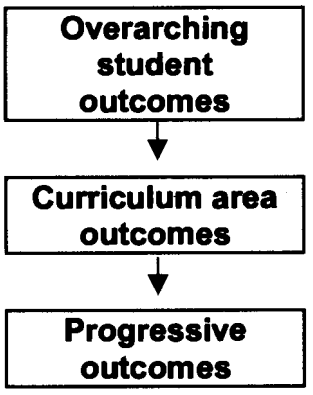

Figure 2.15 – Progression steps for an outcomes-based educational approach (Helsby & Saunders, 1993)

Education systems make explicit the broad characteristics or attributes they wish all students to exhibit by the time they have completed their training and development. While the precise nature of these overarching learner outcomes varies (Figure 2.15), they tend not to fit within traditional subject areas in the curriculum and may address attitudes, appreciation and values, personal attributes, work and process skills, in addition to academic outcomes. Education systems may also describe outcomes within particular curriculum areas. Like the overarching student outcomes, these are the outcomes the system expects students to exhibit by the time they have completed the common years of education and training.

Variously called learning area outcomes, attainment outcomes or learner outcomes, they are more specific than overarching learner outcomes because they apply to particular aspects of the educational programme. More specific than the curriculum area outcomes are the progressive outcomes, often referred to as attainment targets, attainment levels, student performance standards, learner profiles or curriculum profiles.

2.5.9.5 What is needed for outcomes-based education?

Practitioners should initiate a comprehensive effort to identify standards and outcomes for the development of learners in organisations within the framework of appropriate curricula and assessment methods (Helsby & Saunders, 1993). Performance criteria need to be built in to support the exit outcomes and to provide a framework for developing curricula and assessment as part of the pact of learning between the practitioner and learner. The framework and curricula should contribute to the knowledge, skills and values needed by all the participating learners (Spady, 1994).

The exit outcomes should address the required mathematical analysis, scientific inquiry and engineering design, as appropriate, showing students are able to pose questions, seek answers and design solutions. Mathematics,

science and technology are each distinguished by specific characteristics and processes. They can be used separately, but are more often used together.

Learners would need to understand the scope and limits of the above-mentioned ways of knowing and doing, and to apply these solutions to problems. Learners need to learn when these modes of inquiry and their tools are appropriate and when they are not, what they can solve on their own and what questions require working with others. While mathematics, science and technology are applied differently, each can be enhanced through the others. These disciplines also fit together with other subjects in the curriculum, such as statistics and financial subjects (Helsby & Saunders, 1993; Spady, 1994; Salder, 1996).

The practitioners and the learners need to acquire an understanding of the basic concepts of systems and their uses in the analysis and interpretation of complex interrelated abnormalities in the real world, within the context of the sciences. It is essential to introduce systems analysis to learners to enable them to transfer knowledge from one system to another by recognising commonalities and seeing interrelationships as well as objects and patterns of change. Practitioners and students need to use a full range of information systems, including computer systems, to (Helsby & Saunders, 1993):

- handle information
- communicate information
- model and simulate natural and human-made situations
- measure and control objects, processes and systems
- understand the application and effects of information within the context of the sciences

Processes and systems that have been engaged in articulating learner outcomes (Helsby & Saunders, 1993) enhance what is actually taught to students. Some regard them as a means of ensuring that all students have access to and succeed with high quality outcomes, while others see them as

improving accountability and the distribution of responsibilities within the education system (Darling-Hammond, 1994).

Such a focus on outcomes-based education demands that all learners are taken seriously and have access to a curriculum consistent with the significant or valuable learning. The supporters of outcomes-based education consider that defining the same outcomes for all is particularly important for those students who have traditionally not been well served by schools. As Darling-Hammond (1994) states, "We have entered an era where the goal of schooling is to educate all children well, rather than selecting a 'talented tenth' for knowledge work" (Darling-Hammond, 1994:25).

2.5.10 The development of competencies

Preparing individuals who can reach the competency levels required in the workplace should be the concern of all practitioners within the training and development field, and it is not practice that makes perfect, but practice with feedback that makes perfect. Learning a skill is only half the battle; applying the skill in the workplace is the other half (McLagan, 1983).

2.5.11 Transformation

Organisations have to discover, articulate and realise potential all the time and at all structural levels to develop capacity for learning and new modes of operation. People in companies have mostly looked upward toward their leaders and inward toward their department, but seldom outward toward their customers. This has suffocated creativity and innovation, as emphasised by Hammer & Champy (1993:28): "To cope with change, organisational and business process redesign are essential for many corporations. For this the multilevel logic of management (operational, strategic and normative) must be understood."

Redesign and transformation are often more than a matter of increasing operational efficiency – they are a means of enhancing core competencies or beating the competition on key success factors such as quality, speed or cost. Beyond that, redesign is often critical to the viability and development of an organisation. It entails literally reinventing the mode of doing work and training.

2.6 LEARNING INTERVENTIONS

The learning interventions should integrate the alignment, learning systems, practitioner development and learner development with the following (Figure 2.16):

- Generic training
- Activity training
- Performance training

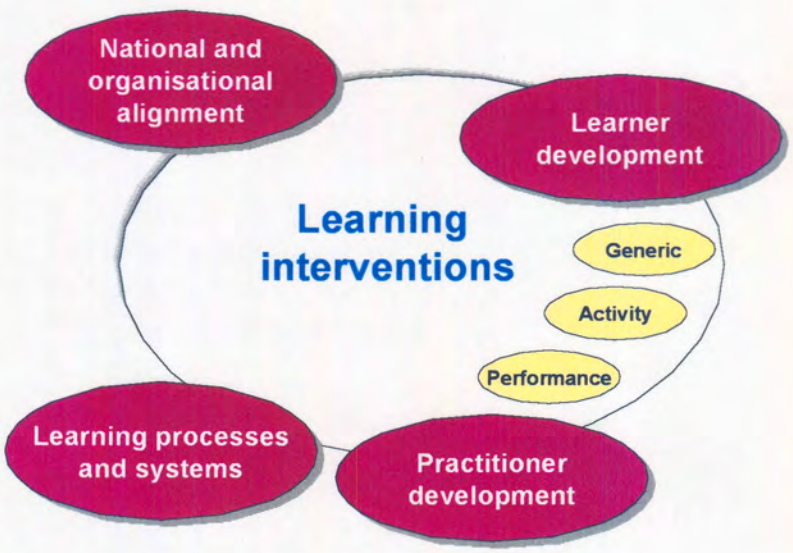

Figure 2.16 – Focus areas for this literature review

In addition, the literature review relating to learning interventions will research:

- Training and development as a whole
- Training and development models
- Expected results from learning interventions

The development of vocational skills is an important national and economic goal. Accompanying this economic goal is a demand for accountability from educators and practitioners, which extends to determining how the educational component of this goal is established. Curriculum development has therefore become increasingly top-down, with decisions about content and approach determined by a government-led and industry stakeholder-based framework that includes the mandatory use of competence-based training.

A characteristic of this accountability model of curriculum development is the use of modularised units of instruction, shaped by behavioural competence formats. The types of knowledge required for skilled work are more likely to be secured through on-the-job training than through instructional media. This does not mean that print-based and text-based resources are without effect, but with this type of approach they would be insufficient on their own.

2.6.1 Training and development

This section will include the following areas of research on training and development:

- Training and development in perspective
- Training and development terms
- Training and development designs
- Training and development strategy
- Training and development policies
- Learning systems
- Learning systems design

2.6.1.1 Training and development in perspective

The philosophical foundation of training and development is derived from the concept of change by learning. Human resources development (HRD) refers

to the set of interventions implemented for the production of desirable behavioural and organisational change and can be seen as an end rather than a means. Training is the organisational means to achieve this end. Katz & Kahn (1978) have argued that training is such a general word that it should immediately be qualified.

The rationale for this statement is the view that a close relationship exists between training, education and development, both operationally and conceptually. This argument is also grounded on the availability of various similar instructional methods and techniques of training and education. However, throughout the literature, various authors define training in very similar ways:

- Training serves to "help increase upward mobility within the organisation, to adjust workers to the technology changes affecting the workplace, and often simply to introduce people to the world of work at the entry level" (Deutsch, 1979:104).
- Werther & Davis (1985) argue that training is the function of helping employees to do their present jobs.
- Training and development involves the development of the individual's knowledge, skills and attitudes (Reilly, 1979).
- Training and development is a human resource development activity that is closely related to increasing or maintaining the productivity of employees (Klinger & Nalbandian, 1985).
- Training and development "activities focus on learning the skills, knowledge and attitudes required initially to perform a job or task or improve upon the performance of a current job or task" (Nadler & Wiggs, 1986:4).

The benefits of an organisation's training and development activities may extend throughout a person's career and may help to develop the individual for future responsibilities. From the above definitions of training and development, the following common characteristics can be identified:

- Training and development is a learning experience for both the individual and the organisation.
- Training and development is a tool for behavioural and attitudinal change.
- Training and development is concerned with equipping practitioners with and exposing them to a new set of knowledge and skills.
- Improved organisational productivity through an increase in individuals' potential performance is the ultimate objective of any training system.

Training and development can thus be seen as a planned learning system aimed at attitudinal and behavioural change by equipping individuals with desired knowledge and skills in order to maximise potential performance to increase an organisation's productivity. Training and development is an integrative system, requiring among other things a high level of collaboration between various human resources activities.

2.6.1.2 Training and development terms

Development and training terms are used in the literature and industry with different meanings and some authors distinguish between training and development using time as the criterion:

- Werther & Davis (1985) explain training as a short-term organisational concern that involves helping employees to perform their jobs, while development is concerned with an employee's future job-related responsibilities.
- Nadler & Wiggs (1986) distinguish between training, education and development at three levels:

Training	• Training is the first and most common HRD activity and is short-term. Training focuses

on the learner learning the skills, knowledge and attitudes required initially to perform the job or to improve and enhance the work performance.

Education

- Education can be seen as a long-term activity that focuses on the learning of new skills, knowledge and attitudes that will equip the learner to assume a new job or to perform a different task at a predetermined time in the future.

Development

- Development is both personal and organisation-orientated as a present and future concern.

- Meyer & Semark (1996) talk about a learning system rather than a training and development system as providing a more holistic approach.

There is no doubt that similarities exist between training and development as a learning experience. Learning is a function of exploring other possibilities and integrating the organisational objectives in a productive and functional framework. Change and transformation are common to both development and training in so far as training and development are successfully planned, implemented and evaluated.

However, the learning methods used to execute training and development are different. While training involves primarily lectures, practical sessions and workshops, development uses methods such as work rotation, learning centres and available literature. Development is also employee-initiated and voluntary. The organisation's role is to provide the learning opportunities.

2.6.1.3 Training and development designs

Training and development models and system designs challenge organisations and include the following focus areas:

- Development of leadership to function in a global economy
- Transformation of work practices
- Development of accelerated development programmes
- Building of constructive relationships and partnerships
- Retaining and retraining of critical skills

The training and development learning process needs to propose a strategy to provide important contextual frameworks and support. To build capacity in the organisation and at programme level will require sound training and development strategies, policy formulation and learning system design. It is important to distinguish between strategy, policies and systems, as each has a unique role in an effective training and development environment.

2.6.1.4 Training and development strategy

The training and development strategy has to do with identifying the priority needs of the individual and the organisation and ensuring that proper resources and processes are put into place to address them. It is therefore output-focused and dynamic, changing as different needs are identified and environmental conditions change. When organisations express dissatisfaction with training and development activities, the cause can often be traced to the process by which the activities were created (Middlebrook & Rachel, 1983; Moore & Dutton, 1978) (Figure 2.17).

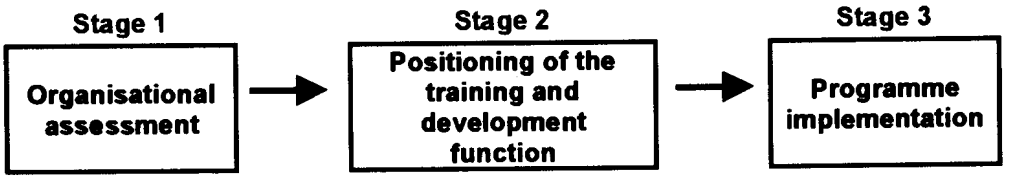

Figure 2.17 – Strategic process model (Middlebrook & Rachel, 1983; Moore & Dutton, 1978)

In Figure2.17, a strategic decision-making process model, organised around three sequential stages, is outlined as one way of approaching a training and development strategy (Middlebrook & Rachel, 1983; Moore & Dutton, 1978).

Stage one

- Stage one emphasises both external and internal alignment and assessment of the organisation's goals, strengths and weaknesses.

Stage two

- Stage two requires decisions to be made about the role and function of training and development within the context of the larger organisation.

Stage three

- Stage three focuses on several basic implementation decisions to ensure that the plan will become part of a general approach to management.

To move beyond this 'quick fix' mentality, a fundamental shift in thinking must occur about ways of developing proactive goal-orientated programmes that can be integrated with other human resources activities (McLagan & Bedrick, 1983).

2.6.1.5 Training and development policies

Training and development policies have to do with the principles that guide decision-making in relation to the development of the learners to suit the identified business goals and objectives of an organisation or business.

2.6.1.6 Learning systems

Learning systems are the processes, structures and mechanisms that need to be created to give effect to strategy and policy and sustain capacity-building (Meyer & Semark, 1996). Learning systems have to do with the holistic relationship between components. It is therefore important to be able to identify, define, apply and evaluate the components of a learning system as well as its relationship to other organisational systems and purposes.

The specific outcomes of learning need to be defined and competencies can be seen as the integration of knowledge, skills and value orientation demonstrated to a defined standard in a specific context (Meyer & Semark, 1996). Multiple categories of competencies may be defined. A frequently neglected component of learning systems is that of support systems to enhance the success of a training and development process. The integration of learning programmes and management information systems is needed with the current change and availability of effective human resources-related systems. Meyer & Semark (1996) state that all experiences are learning experiences.

Within the context of a learning system creative learning experiences are multiple in nature and are systematic in their design. It is here that the concept of learning rather than training becomes important. An organisation that is able to create a learning culture creates a window for innovation and change at both an individual and organisational level. Learning paths supply both focus and flexibility to a learner's personal learning and competency development. Effective learning systems require feedback mechanisms to establish whether the assessment of individual competency or the evaluation of a complex learning intervention or system is essential to the purpose, maintenance and design of such interventions (Meyer & Semark, 1996).

2.6.1.7 Learning systems design

Meyer & Semark (1996) have described a holistic learning system model and emphasise seven primary components in teaching and consulting (Figure 2.18). The model can be applied at national, industry, organisational and individual level. As shown in Figure 2.18, the purpose and context of the system is central to the model. Most learning systems have multiple purposes.

Figure 2.18 – Holistic learning systems model (Meyer & Semark, 1996)

2.6.2 Training and development models

Transfer, evaluation and institutionalisation are three major elements of a training and development model within the training function. Training needs to be transferred to the workplace and its effectiveness evaluated, and the positive elements of training should be institutionalised. These training and development models should include the following elements (Sadler, 1996):

- Determining the organisation's training needs, designing training interventions for the problems

- Assessing the learning and the learners' attitudes towards the training and development interventions
- Assessing the transferability of the training and development to the work situation
- Evaluating on-the-job training
- Institutionalising positive results and outcomes and unlearning techniques with negative consequences

Evaluation of training and development without a transfer of the training to the workplace is clearly lacking in validity.

2.6.2.1 Training and development process

Training and development processes found in the literature are characterised mainly by a systems approach and focus on the sub-processes, which are in turn more conceptually than practically orientated (Figure 2.19). The training field has used systems thinking extensively and there is wide application of a systems approach in training and development (Gague, 1962; Echstrand, 1964; Goldstein, 1974; Hinricks, 1976; Bexley & Latham, 1981; Camp, Blanchard & Huszczo, 1986; Lathan, 1988; Nadler, 1984).

- **Popularity of process training models**

The popularity of this type of training and development approach lies in the fact that systems modelling allows for large-scale design (Cuenod & Kahne, 1973) where various variables are incorporated into local units to achieve complex development objectives. The unique ability of large-scale design may also help in diffusing the cultural and functional difficulties found in today's highly diversified organisational structures.

As shown in Figure 2.19, the training and development process has two focus areas, the main process and the sub-processes within the main process (Nadler, 1984). In studying the sub-processes, the majority of practitioners and specialists focus on a particular training event that analyses and explains

their activities without explicitly accounting for environmental elements surrounding the training activities. For example, the needs assessment phase (Figure 2.19) as part of the training and development process stands as a single event also considered on its own. The main training and development process attempts to account for the internal and external organisational factors that influence the training activities (Goldstein, 1974).

- **Needs identification**

The literature agrees that the needs identification phase should be the starting point in any training and development activity. The needs identification or assessment is not a routine function and should be conducted in a careful, diagnostic manner. It is a collaborative effort between the training and development team and the various line support functions in order to collect, diagnose and analyse pertinent information about the organisation (Casner-Lotto, 1988). The training needs assessment is necessary in order to decide whether training is actually what is needed to solve the problem being confronted and to develop interventions for the subsequent training and development activities (Boud, 1985).

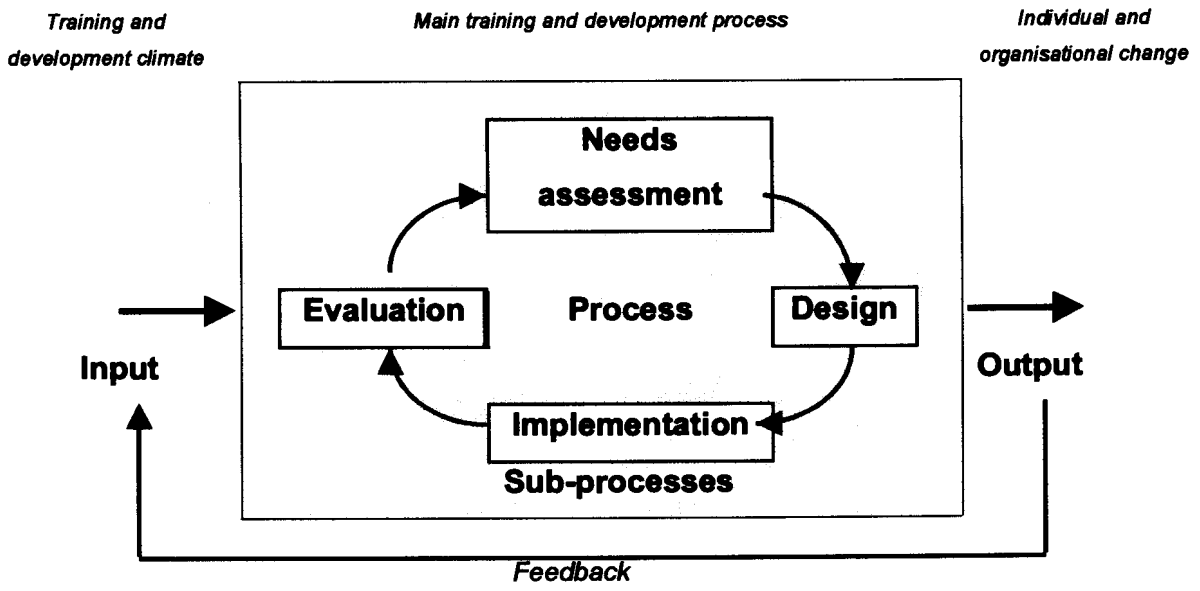

Figure 2.19 – Training and development process

- **Design**

The design phase involves the creation of a training and development plan with clear objectives. It is an attempt to determine systematically how to achieve a positive transfer of skills, knowledge and attitudes in the training situation. It is a description of the performance learners will to be required to master before they will be considered competent (Mager, 1975). Steps involved in this phase include reviewing the outcomes of training and development objectives, consulting with the parties involved, writing the final learning objectives, arranging training activities and interventions and evaluating the training and development objectives (Goldstein, 1974; Camp, Blanchard & Huszczo, 1986; Nadler, 1984).

The literature supports various learning theories and models to enhance the design of training and development programmes in terms of Lewin's (1951) field analysis model of maintaining forces, unfreezing, moving and re-freezing as a learning approach or Piagett's (1950) evolutionary stages of learning theory used to identify learners' cognitive development needs. The design phase also involves the selection of instructional methods and techniques. The implementation of the training and development programmes and

activities becomes the next step in the process. The objective of this phase is to conduct the training programmes that have been designed (Bushnell, 1990).

- **Evaluation**

Training evaluation and feedback is the final phase in the proposed process. This phase investigates whether the training and development process achieved its objectives and whether the programme was implemented according to the specified predetermined plans. This phase includes the determination of whether the behavioural and performance changes have occurred. This is not the final evaluation of the training and development system (Nadler, 1983; Golstein, 1974).

There is a difference between programme evaluation and system evaluation. Programme evaluation determines behavioural and knowledge changes, whereas systems evaluation determines the return on investment quantitatively and qualitatively. No adequate evaluation can be undertaken without an effective feedback system that makes the necessary information available. Feedback is an ongoing systematic process aimed at the transmission of data and information among the entire training process and system. Training and development is most successful when employees have actually helped to plan, design and implement programmes (Casner-Lotto, 1988). A participative approach involves all the relevant parties from top management down to the learner.

- **Output**

Training and development systems outputs capture what organisations gain from the intervention activities. This level of evaluation considers the entire system. It is not an evaluation of a training programme, but an attempt to measure the organisation's return on its investment in the training. There is unanimous agreement in the literature that this is a difficult task to perform (Bushnell, 1990; Erickson, 1990; Goldstein, 1974; Kirkpatrich, 1983; Hequet, 1996; Phillips, 1996; Tracey, 1981).

Measuring the extent to which employees are able to apply knowledge and skills that have been learned is also highly important in any evaluation and feedback in the work situation. The motivation for this type of evaluation will be to determine the extent to which the programme has been designed effectively and the participant acquired the requisite knowledge and skills, and whether he or she is now able to apply this knowledge in the workplace.

2.6.2.2 The input stage

At the input stage, the elements that could be evaluated in terms of their potential contribution to the overall effectiveness of a training programme fall into such categories as trainee qualification and practitioner experience. The input stage includes elements such as the availability of already tested instructional materials, the types of equipment and training facilities and the training budget (Bushnell, 1990).

2.6.2.3 The process stage

At the process stage the practitioner needs to specify instructional objectives, develop design criteria, select instructional strategies and assemble training materials. At this stage the training and development takes place and adds value to the learner (Bushnell, 1990).

2.6.2.4 The output stage

The output stage includes the learner's reaction to the learning intervention and the gaining of skills, knowledge and competencies, leading to improved performance in the workplace. However, it is helpful to distinguish between outputs and outcomes. Outputs are the short-term benefits or effects of training, whereas outcomes refer to the longer-term results associated with improvement in the organisation's business objectives (Figure 2.20) (Bushnell, 1990).

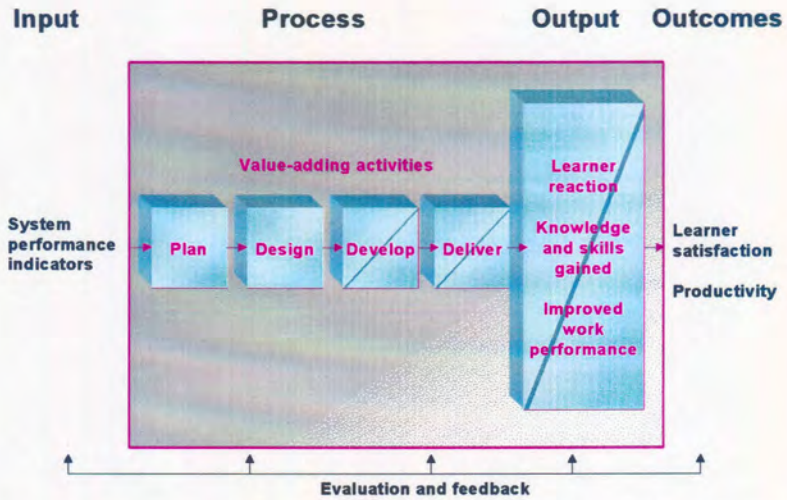

Figure 2.20 – An input-process-output approach (Adapted from Bushnell, 1990)

2.6.2.5 Advantages of using a macro training and development process

The model illustrated in Figure 2.19 and in Figure 2.20, comprises three main sets of variables: input, process and outputs. There are six major inputs that impact on the quality of the organisational training and development function: human resources development objectives, long-term human resources development policies, the perception of leadership, organisational climate, availability of resources, and learning systems.

Human resources development objectives

HR objectives will lead to the HRD objectives at organisational level, as strategic objectives and at a training events level. The organisational strategic objectives are derived from the strategic or business plan, as are the objectives at training event level (Bexley & Latham, 1981; Camp, Blanchard & Huszczo, 1986).

- **Long-term human resources development policies**

Long-term human resources development policies are practically neglected in the modules found in the literature. These policies form the umbrella under which training and development activities are executed. Human resources development must become a long-term investment aligned with the organisational objectives and strategic plans (Echstrand, 1964; Hinricks, 1976; Lathan, 1988).

- **Perception of leadership**

The perception of leadership plays an important role in human resources development in an organisation. Training and development must not be perceived as an isolated event (Sadler, 1996). It should be comprehensively articulated, using various training and development techniques, in terms of on-the-job training and work rotation. It is no longer feasible to address the complex needs and requirements of training and development in the contemporary organisation in a less than comprehensive manner (Camp, Blanchard & Huszczo, 1986). Organisations are operating in diversified external and internal environments where technology is rapidly reshaping the organisation. Communications are advancing and human societies are becoming informational rather than industrial (Naisbitt, 1982).

- **Organisational climate and the attitude of management**

Organisational climate and the attitude of management relates to the implementation of new ideas to enhance the working environment and improve performance. Training and development are fundamentally change mechanisms (Nadler, 1984).

- **Availability of resources**

The most important input to the process is the availability of resources in terms of manpower and finances (Goldstein, 1974; Bexley & Latham, 1981; Latham, 1988).

- **Learning systems**

The learning systems approach accommodates the multiple purposes required by individuals and by organisations. This approach also address the complexity of learning that characterises the modern world of work and integrates elements of learning systems and human resources practices (Meyer & Semark, 1996).

The training and development process is the catalyst for change within the organisation. The training and development inputs are transformed into actions and results. This is where the learning occurs and required performance changes are introduced to employees. It is a systematic process aimed at producing a progressive learning environment, encouraging the participants to reach the desired standard of performance and to evaluate the learning experience.

2.6.2.6 Emphasis and criteria for training and development models

The major emphasis of *training and development models* and *learning systems* should be the transferability of generic skills in areas not normally supported by readily available systems and interventions. The training and development process focuses on the following areas (Camp, Blanchard & Huszczo, 1986; Boud, 1985):

- Determining the actual need for the training and development.
- Training and development as an ongoing process

- Evaluation of the training outcome as an essential function of any training activity
- Developing a process training and development model and casting it in a systems perspective
- Validating the proposed model and outlining future research implications and direction
- The requirement of more flexible processes and modes of delivery in which disruption of normal working activities is minimised
- Ensuring that the content of learning systems and processes is directly relevant and related to the activities and requirements of the workplace

2.6.2.7 Characteristics of a training and development process

When the training and development process is focused on re-engineering, individuals are enabled to control their own activities. The same applies when the decision-making and design processes are linked. Process redesign can eliminate departmental obstacles because data, skills and knowledge can be shared throughout the organisation, can be applied across physical borders and over geographical distances and can even overcome interpersonal fears. Hammer & Champy (1993) describe some of the elements that are adapted by organisations using a re-engineering training and development approach:

Combined jobs	• Several jobs are combined in one. A team takes account for a whole process.
Participants make decisions	• There is empowerment – workers assume responsibility and decision-making becomes part of the work.
Multiple versions	• Processes have multiple versions and can be clean and simple and handle the

activities applicable to specific training and development environment needs.

Hybrid centralised / decentralised

- Hybrid centralised / decentralised operations are widespread, enabling an organisation to provide high flexibility in virtually autonomous systems.

2.6.2.8 The place of a training and development model in a process organisation

The development and place of a training and development model within a process organisation is important. The development of this theory is based on a general systems theory view of organisations with additional insight from complexity theory. An organisation exists as a purposeful collection of processes within an environment (Jacobs, 1989). A process model of an organisation, designed by Jacobs (1989), is reflected in Figure 2.21. Nadler & Tushman (1989) suggest that the environmental context, available resources and the history of the organisation serve as inputs to the organisational processes.

Other authors view the external environment as providing the context within which an organisation performs (Pearce & Robinson, 1994; Swanson, 1994). Leadership and strategy serve as drivers to the process and are affected by the culture. The structure of the organisation brings about the transformation of inputs into outputs and is also affected by the organisational culture (Figure 2.21). The results of the processes continually feed information back into the organisational structure and drivers, as well as into the environment.

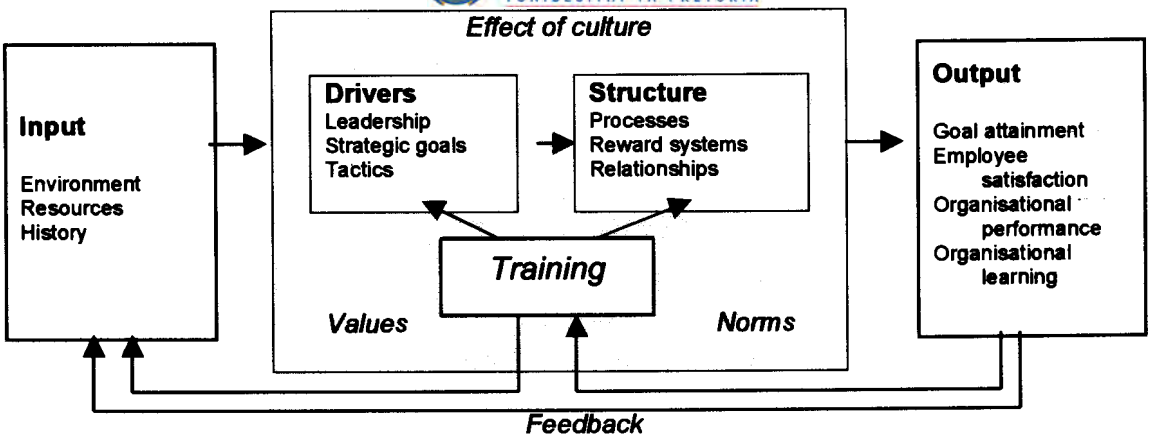

Figure 2.21 – Organisational process model (Adapted from Jacobs, 1989)

As shown in Figure 2.21, training and development can affect the drivers and the structure through the development of organisational leadership, strategy processes and improvements in processes and reward systems. Conditions within the environment make some positions more or less advantageous when matched with the organisation's competencies. Bennett, Fadil & Greenwood (1994) and Schein (1990) note that the external environment also has an indirect influence on the organisational culture through the values and beliefs of its individual members. This influence is reflected in the input element "resources" in the process model.

2.6.2.9 Expected learner outcomes from the learning interventions

This section will discuss a conceptual framework for the evaluation of expected learner outcomes. Nussbaum & Scott (1979) have developed such a framework for evaluating the experiences gained by the practitioner-learner during the learning phase and they argue that "learning is a change brought about by teacher-student interactions" (Nussbaum & Scott, 1979: 569). This change is evident in the following three domains, which can be viewed individually or in combination:

Affective domain

- The affective domain focuses on learner attitudes towards the practitioner, the learning intervention or both. This domain typically emphasises the learner's evaluation of the learning interventions.

Cognitive domain

- The cognitive domain is concerned with the assimilation of the course content learned. Evaluation results are frequently used to assess this kind of learning.

Behavioural domain

- The behavioural domain reveals the extent to which learners apply what they have learned in practice and on the job.

The affective domain is important because it forms the basis for practitioner evaluation programmes in the workplace as well as managing the training programmes in the organisation. In the affective domain the learners evaluate the learning interventions and in the cognitive domain the practitioners measure the success and achievements of the learners (Cohen, 1981).

2.7 SUMMARY

The experiential process model concept is not new. It is utilised in the training and development environment on a daily basis. However, whether or not it is used in a micro or macro training and development environment, a profound theoretical knowledge, educational philosophy and understanding of training and development principles are required to accommodate and integrate the external forces into the learning environment.

It is evident from this literature review that a process cannot work if national and organisational alignment is not adhered to, the learner's development is not well structured, and the practitioner is not trained to be an agent of change and implementor of new initiatives supported by the process and systems available. External influences on the training and development process should be accommodated by the learning interventions and should therefore be clearly visible in the generic, activity and performance learning by the employee.

The next chapter reports on the development and design of such an experiential learning process.