

**The development of an instructional design model
as a strategic enabler for sustainable competitive
advantage**

by

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Declaration

By submitting this dissertation, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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Acknowledgements

The writing of a dissertation is a lonely and often very confusing and frustrating experience. (See Appendix 15 for my musings on this.) Yet it is made better by so many people for so many reasons.

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Abstract

Organisations increasingly operate in an environment of continuous change and turbulence which places new demands on the choice of business and supportive strategies relevant not only to the sustainable competitive advantage (SCA) of the particular organisation, but also countries and the global nature in which they operate. A business-level strategy is to a large extent vested in intangible resources, specifically human resources strategy and capital, including the capabilities embodied in a productive and skilled workforce. In Africa, and South Africa in particular, there is a shortage of a workforce of such a nature. This is amongst others the result of past inequalities but also of shortcomings in current training practices in both the private and public sectors. One way to improve workforce output is through appropriate training aimed at increasing job-specific knowledge and the concomitant skills and productive behaviour.

Changes and turbulence in the environment, therefore also create different challenges to training strategies and practices, with a shift from all-at-once to ongoing training with verifiable learning. In this regard instructional design (ID) models are deemed intrinsic to training strategy.

In this dissertation an ID model within a particular contextualised situation is offered that broadens, deepens and extends existing ID models by positioning it within business-level strategy and by utilising a multidisciplinary approach pertinent to the new demands on training. To serve as a test-bed for the ID model it is implemented in a case organisation. The aim of the research is to evaluate the impact, based upon action standards, of the ID model on job-specific knowledge and productive behaviour and to provide an explanation of the internal construct relationships of the ID model. The purpose of the research is exploratory and interpretive, culminating in the single-case study tactic, wherein both quantitative and qualitative methods are applied. The case organisation is considered to be representative of a certain type of organisation

with comparable characteristics. Where the existing literature supports the results (as in this instance), inductive generalisation facilitates the transferability and exportability of the ID model to other organisations.

Results reveal a positive reaction to the ID model and a measurable increase in job-specific knowledge and concomitant productive behaviour. It is considered to be preferable over more traditional training practices. The relationships between the internal constructs of the ID model and improved job-specific knowledge and productive behaviour are seen to be facilitated by the combination and interplay of the components of the ID model.

The contribution of this research is in providing and evaluating an ID model aimed at addressing the previous shortcomings in training and ID models and the application thereof in practice. Thus, the significance of the study lies in its extension of existing literature on ID models and specifically their contribution to sustainable competitive advantage, i.e. an academic theoretical contribution that extends the current body of knowledge. Particularly in its South African and African context, given the background of shortages in skills and productive behaviour and the need for fast-tracking the development of a competent workforce, the study is significant in that it provides guidelines for the practical development and implementation of a new ID model.

The study makes recommendations to enhance both the formulation of the theoretical ID model as well as its practical implementation. It furthermore recommends extended research to explore the possibility of exporting the ID model to a broader range of private sector organisations as well as its possible transferability to public sector organisations.

[Note: A more comprehensive abstract is provided in Appendix 16.]

Opsomming

Organisasies funksioneer toenemend in 'n omgewing van deurlopende verandering en turbulensie, en dit stel nuwe eise aan die keuse van sake- en ondersteunende strategieë. Hierdie strategieë is van toepassing op die volgehoue mededingende voordeel van spesifieke organisasies sowel as op die lande en die globale konteks waarbinne hierdie organisasies werksaam is. 'n Strategie op sakevlak is grootliks afhanklik van ontasbare hulpbronne, spesifiek mensehulpbronstrategie en kapitaal, insluitend die bevoegdheids wat van 'n produktiewe en opgeleide arbeidsmag afhanklik is. In Afrika, en in Suid-Afrika in die besonder, bestaan daar 'n tekort aan so 'n arbeidsmag. Dit is onder meer die gevolg van ongelykhede in die verlede en tekortkominge in huidige opleidingspraktyke in die private sowel as openbare sektor. Een manier waarop die uitsette van die arbeidsmag verbeter kan word, is deur toepaslike opleiding gerig op die verbetering van werkspesifieke kennis, meegaande vaardighede en produktiewe gedrag.

Veranderinge en turbulensie in die omgewing skep gevolglik ook verskillende uitdagings aan opleidingstrategieë en -praktyke met 'n verskuiwing van alles-op-een-slag na deurlopende opleiding en bewysbare leer. Ontwikkelingsontwerp-modelle (OO-modelle) word hier as wesentlik tot opleidingstrategie beskou.

In hierdie proefskrif word 'n OO-model aangebied binne 'n spesifieke gekontekstualiseerde situasie wat bestaande OO-modelle verbreed, verdiep en uitbrei deur dit binne sakevlakstrategie te posisioneer en deur 'n multidissiplinêre benadering ten opsigte van die nuwe vereistes vir opleiding te volg. Om as 'n toetsbasis te dien, word die OO-model in 'n gevallestudie-organisasie aangewend. Die doel van die navorsing is om die impak, gebaseer op aksie-standaarde, van die OO-model op werkspesifieke kennis, meegaande vaardighede en produktiewe gedrag te evalueer, asook om 'n verklaring te bied van die interne konstruk-verwantskappe van die OO-model. Die doel van die navorsing is verkennend en

verklarend, en dit kulmineer in die enkel-gevallestudie taktiek waarin kwantitatiewe sowel as kwalitatiewe metodes toegepas word. Die gevalle-organisasie word as verteenwoordigend van sekere soorte organisasies met vergelykbare kenmerke beskou. Waar die bestaande literatuur die resultate steun (soos in hierdie geval), fasiliteer inductiewe veralgemening die oordraagbaarheid en uitvoerbaarheid van die OO-model na ander organisasies.

Bevindinge toon 'n positiewe reaksie teenoor die OO-model en 'n meetbare toename in werkspesifieke kennis, meegaande vaardighede en produktiewe gedrag. Die OO-model word verkies bo meer tradisionele opleidingspraktyke. Die verwantskap tussen die interne konstrunkte van die OO-model en verbeterde werkspesifieke kennis en produktiewe gedrag word gefasiliteer deur die kombinasie van en wisselwerking tussen die komponente van die OO-model.

Die bydrae van hierdie navorsing lê in die verskaffing en evaluering van 'n OO-model wat aandag skenk aan vorige tekortkominge in opleiding, OO-modelle en spesifiek die toepassing daarvan in die praktyk. Die belangrikheid van die studie lê dus in die uitbreiding van bestaande literatuur oor OO-modelle en hul bydrae tot volgehoue mededingende voordele. Kortom: Die studie bied 'n akademiese-teoretiese bydrae wat bestaande kennis uitbrei. In die lig van die vaardigheidstekorte, die gebrek aan produktiewe gedrag en die behoefte om die ontwikkeling van 'n vaardige werksmag te bespoedig – veral in die Suid-Afrikaanse en Afrika-konteks – is die studie betekenisvol omdat dit riglyne vir die praktiese ontwikkeling en implementering van 'n nuwe OO-model verskaf.

Die studie maak aanbevelings om die formulering sowel as die praktiese implementering van die OO-model uit te bou. Dit beveel ook uitgebreide navorsing aan om die oordraagbaarheid van die OO-model na 'n groter verskeidenheid organisasies in die private asook openbare sektor te ondersoek.

[Nota: 'n Volledige opsomming in Engels word in Bylae 16 verskaf.]

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List of terms

- Capabilities** : That which an organisation does, the capacity of bundles of resources to perform tasks and achieve goals.
- Competencies** : That which an organisation is good at doing, as a product of experience and accumulated learning about proficiency in performing an internal activity.
- Core competencies** : Strategically important activities that an organisation performs better than other activities, most often knowledge-based and residing in people.
- Data analysis** : Techniques used in data analysis and coding.
- Distinctive competencies** : A competitively valuable activity that an organisation performs better than its competitors, thus representing superior resource strength.
- Dynamic capabilities** : A learned and stable pattern of collective activity through which the organisation systematically generates and modifies its operating routines in pursuit of improved effectiveness.
- Efficiency** : Internal improvement of capabilities.
- Effectiveness** : Improved adaptation to external environment.

Human capital	: The knowledge, skills and experience of the organisation's people.
Learning	: The concerted activity and effort that increases the capacity and willingness of organisations and individuals to develop, obtain and apply new knowledge and skills to improve job-specific knowledge and productive behaviour.
Productive behaviour	: Made up of core and situation specific behaviour.
Relevant knowledge	: Job-specific knowledge.
Relevant skills	: Skills that improve and enhance productive behaviours.
Research methodology	: The procedural framework within which the research is conducted.
Research methods	: The data collection methods.
Research programme	: The operational plan within which the research is conducted.
Research strategy	: The basic belief system of the researcher comprising an accepted set of theories, methods and ways of defining data.
Research tactic	: The evidence collection and analysis approach; the overall expedient to achieve the research aim.

Resources : Those tangible and intangible assets an organisation has to work with.

Source : A cause or a generative force, something that contributes to something else, the origin of.

List of abbreviations

ADDIE	: Analyse, design, develop, implement, evaluate
DCs	: Dynamic capabilities
EUA	: Embedded unit of analysis
FG	: Facilitator's guide
FMCG	: Fast moving consumer goods
HR	: Human resources
HRM	: Human resource management
ID model	: Instructional design model
ID	: Instructional design
IT	: Information technology
LAMS	: Learning Assessment Management System
MSD	: Marketing Skills Development Department
NQF	: National Qualifications Framework
PBV	: Positioning-based view

QA	: Quality assurance
QR	: Qualitative research
R+Q	: Rigour and quality
RBV	: Resource-based view
ROI	: Return on investment
SCA	: Sustainable competitive advantage
SDA	: The Skills Development Act
SDLA	: The Skills Development Levies Act
SETA	: Sector Education and Training Authority
SHRM	: Strategic human resource management
TTT	: Train-the-trainers
VRIN	: Value, rarity, inimitability, non-substitutable

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CHAPTER 1

INTRODUCTION AND OVERVIEW OF DISSERTATION

1.1 BACKGROUND

Over the last two to three decades, organisations increasingly operate in a time of rapid, all pervasive, continuous change. Technological advances and innovation, the information explosion, a knowledge-based economy, a changing workforce, altering organisational architectures and a global economy drive these changes, amongst others. This changed and constantly evolving environment places new demands on organisations and the business-level strategies they develop and employ to remain in business and perform and prosper.

Thompson, Strickland and Gamble (2005:3) state “a company’s strategy thus indicates the choices its managers have made about how to attract and please customers, how to respond to changing market conditions, how to compete successfully, how to grow the business, how to manage each functional piece of the business and develop needed capabilities, and how to achieve performance targets”.

Fundamental to strategic thinking and management and encompassed in the above definition is how organisations can, through ongoing superior organisational performance, achieve and sustain competitive advantage (SCA). Achieving and sustaining competitive advantage is not only pertinent to organisations, but also to countries and the global nature in which they compete.

The empirical link between strategy and national advantage was first proposed by Porter (1990:71-73) when he identified the relationship between “firm strategy, structure and rivalry and national advantage”. This principle is elaborated on by the World Economic Forum (2006, Chapter 1.1) whereby the important relationship between organisational operations and strategy, and the improvement of productivity and subsequently the relative competitiveness of the country is highlighted. The most recent report by the World Economic Forum (2007:5) highlights “higher education and training” as one of the 12 pillars of national competitiveness.

Against this framework it is disturbing that the World Economic Forum in “Assessing Africa’s Competitiveness in a Global Context” (2007-8:13) states “... companies are not providing on-the-job training ... a stronger culture of training will be important for Africa as it continues on its path of development”. As far as South Africa is concerned, the Report states “this year’s ranking for higher education and training shows a drop to place from last year” (2007-8:20).

SCA in organisations are seen to spill over into national and international competitive advantage for nations (Porter, 1998), which is embodied in positive economic growth rates, low unemployment levels and social well-being of citizenry. In Africa (Tikly *et al.*, 2003) and South Africa (Mayer & Altman, 2005) in particular, the shortage of skilled workers has been identified as a major impediment to the application of optimal business-level strategies and consequently to economic growth. Skilled workers allow organisations to develop and implement value-adding strategies aimed at improving productive behaviour and as such, superior performance of organisations. Superior performance of organisations, amongst others through the availability of skilled workers applying their knowledge and skills, is of benefit to general economic performance and growth of countries.

In addition, change in both internal to organisations and to the external environment will render some skills obsolete and require the development of new skills. Organisations (and countries) should thus define capabilities and core competencies for present and future performance on an ongoing basis. “Focusing on training and development and the creation of skills and competencies that are fit for purpose is therefore an essential prerequisite of effective change management” (Baker, 2007:128). Training is thus one of the activities that empower individuals, organisations and countries to deal with change and possess the skills and knowledge required to compete successfully in local and international arenas. The role of training in developing countries, also in its role in change management is not to be underestimated.

“In order to halve unemployment (in South Africa) by 2014 our economic growth rate needs to be 6 percent by 2010. The shortage of skills in the country ... is one of the constraints in achieving this target” (Madlana, 2007:4).

Both through the inequalities of skills development, education and training in South Africa in the past, and pressures to become increasingly competitive internationally, South Africa

is faced with the challenge of creating not only its workforce of tomorrow, but also of today. To address the training of the current workforce and preparing a future workforce, a combination of legislative acts has been implemented. The Skills Development Levies Act or SDLA (1999), the Skills Development Act or SDA (1998) and the National Qualifications Framework or NQF (1995) all provide the basis for and enforcement of creating a new, skilled, competitive South African workforce. The SDA was promulgated to increase investment in education and training, right historical wrongs regarding access and opportunities to learn, and encourage organisations to provide their workplaces as learning environments. To assist in the funding, the SDLA requires every employer to pay a skills levy in the amount of 0.5 percent of payroll in the first year and one percent every year thereafter. The NQF provides recognition for work experience and the means to help people learn continuously and develop portable skills.

Governmental pressure for global competitiveness, economic growth facilitated by a skilled workforce in South Africa and the quest for sustained superior organisational performance, require organisations to upgrade and enhance their competitive edge on an ongoing basis. Traditionally this could be achieved through, for example, industry-level barriers to entry, or patent protections. However, in the current rapidly changing environment, superior performance now requires, amongst others, flexibility and innovation, which is primarily vested in the internal, intangible resources and capabilities of organisations (Becker, Huselid & Ulrich, 2001:7), including the organisation's ability to develop productive, skilled and competent employees through training and skills development.

Current training practices often fail to meet the dual demand of enabling economic competitiveness and providing organisations with the capabilities needed to achieve performance targets. "Capabilities, as the collective skills, knowledge, experience and expertise of an organisation, arise from the coordinated activities of groups of people who pool their individual skills in using assets" (Sanchez, 2004:519). However, where individual skills are lacking or inadequate, organisations look to increase and improve knowledge, skills and expertise through, for example, training.

Many current organisational training practices still largely focus on the transfer and provision of job-specific knowledge and related skills in a classroom-based, "all-at-once" format (Media Toolbox, 2004). In this model, learners would typically receive a pre-prepared course whereby course material is presented by a trainer, and the learner would

then be expected to apply this abstract knowledge in their workplace later. When assessed, organisations often find shortcomings related to job-specific knowledge improvement, understanding of key concepts and the application thereof in practice (Oliver & Fleming, 1997; Sumner, Domingue *et al.*, 1998), which negatively impact on the organisation's ability for superior organisational performance and SCA. Traditional training practices for organisational training need revising to align with the strategic intent of organisations, so that relevant knowledge is increased and skills enhanced. In this dissertation relevant knowledge is defined as job-specific knowledge, and skills as those skills that improve and enhance productive behaviour. Productive behaviour consists of core behaviour (integral for successful competitive performance) and situation-specific behaviour (essential at a particular point in the value-chain of the organisation).

Evidence suggests that there is a paucity of integrative, "new age" training which has as its basis the improvement of job-specific knowledge and productive behaviour through a combination of training and learning principles (Sleight, 1993; Brown in Brown & Seidner, 1998; Sumner & Domingue *et al.*, 1998; The European Commission Community Research Briefing Paper 22, 2000) embodied in instructional design models in accord with strategic imperatives.

This dissertation puts forward an instructional design (ID) model that aims to address the issues of improving job-specific knowledge and productive behaviour as embodied in relevant skills. A two-fold approach will be followed, i.e. the development and implementation of the ID model; and an empirical investigation to verify the impact of the ID model. Thus the ID model will be applied in an organisation to evaluate the assertion that the ID model positively influences job-related knowledge and productive behaviour. Should this be so, it may be argued that the ID model serves as an enabler for superior organisational performance, as is outlined in the context and theoretical frame of reference for this dissertation in par. 1.2 hereunder.

1.2 CONTEXT AND THEORETICAL FRAME OF REFERENCE

This section outlines the context (par. 1.2.1) and theoretical frame of reference (par. 1.2.2) for the dissertation.

1.2.1 Context

Ongoing changes in both the external and internal environments in which organisations operate and compete, demand pertinent and relevant job-specific knowledge and productive behaviour from the workforce to contribute to superior organisational performance. Ongoing superior performance leads to SCA, which constitutes a significant focus in the formulation and application of the business-level strategy of organisations and the resultant impact of SCA on the economic prosperity of the country.

The goals of business-level strategy include to build competitive advantage, strengthen market position and develop actions to build competitive capabilities for the organisation across its value chain. It is concerned with matching the internal capabilities of the organisation with its external environment. Ten schools of thought are evident in the literature on strategy (for a comprehensive overview see Mintzberg, Ahlstrand & Lampel, 2005) and all strategy writings are based, to a more or lesser extent on one or a combination of these ten schools. In this dissertation, two of the major prescriptive schools of thought, namely the positioning-based view (PBV) and resource-based view (RBV) form the basis for the theoretical context and frame of reference, in that both these schools explore the link between the internal and external environments and how to create SCA through resources and their development. The relationship between SCA, strategic schools of thought (in particular the RBV and PBV) and training (as an activity to improve resources) will be discussed in more depth in Chapter 2.

Organisations react to the challenges of the changing internal and external environments in different ways. Over the last two decades, the people in an organisation are seen to be at the front end of addressing the challenges through the knowledge, skills and expertise they possess and apply towards organisations attaining SCA. With people becoming one of an organisation's key assets, there is now, seemingly more so than previously, a real and concerted effort to manage, direct and develop that asset. Human resources (HR), as the support activity in the value chain that are concerned with the activities, costs and management of people are associated with the recruitment, hiring, training, development and all other people-related practices and activities within the organisation. Training now encompasses learning; the development and management of workforce performance now encompass more structured ways for producing capabilities that produce performance (Wilson, 1997). Apart from improving the knowledge and skills (embodied in productive behaviour) of the workforce to do their jobs, training also needs to provide capabilities and competencies to enhance the competitive standing of the organisation on an ongoing

basis. Capabilities and competencies provide a framework for job-related knowledge and productive behaviour associated with the performance of the organisation. Delivery of training and learning, through the methods employed and ID models implemented, needs to align with organisational requirements in terms of capabilities and competencies. Most organisations that do effective work in training, also have a clearly defined and distinct philosophy of learning, and how training is disseminated: they have a system of principles to guide practicalities (Davis & Davis, 1998:74). A variety of training and ID strategies and ID models inhabit the literature (see for example Dick & Carey, 1990; Sleight, 1993; Jarvis, 1995; Lipschitz, Popper & Oz, 1996; Reigeluth, 1996; Dewey, 1997; Davis & Davis, 1998; Dearden, Reed & van Reenen, 2000; Drisoll, 2000) and will be discussed in more detail in Chapter 3.

It is, as discussed above, within the context of SCA, organisational performance and the capabilities and competencies required, the concomitant knowledge and productive behaviour of the workforce and the role of training in the value chain, that the literature offers the theoretical frame of reference for this dissertation, as outlined in par. 1.2.2.

1.2.2 Theoretical frame of reference

Figure 1.1 provides the theoretical frame of reference for this dissertation. It draws on the literature to represent the line of logic that links the various constructs of the dissertation together and depicts the flow that links training and SCA. No claim is made that these links are direct causal links, or that there is a one-to-one relationship between an intangible asset (like the knowledge of workers) and, for example, return-on-investment (ROI). It cannot be shown that training will increase sales. Instead, the logic is that training will improve quality of service as one variable, quality of service boosts customer confidence and customer confidence may increase sales (Norton in Daum, 2002). Training is therefore only one ingredient, but a strategically important ingredient nevertheless. The importance is that training needs to improve outcomes for or an impact on the organisation, however outcomes and impact are defined. In this dissertation, outcomes are defined as job-specific knowledge and productive behaviour (core and situation-specific) since, in the context and theoretical frame of reference they relate to organisational capabilities and competencies.

Figure 1.1 shows the following line of logic flow for the theoretical frame of reference:

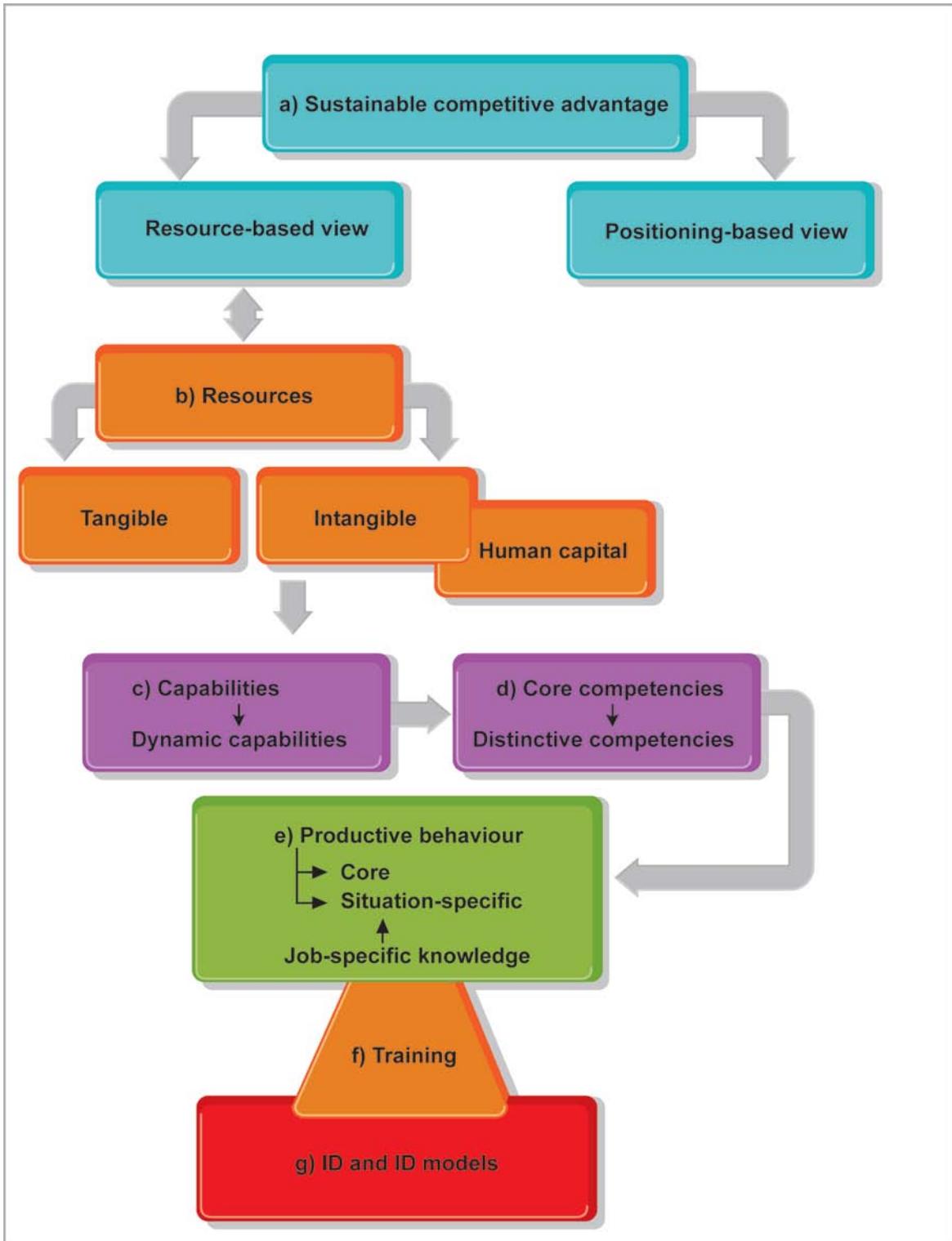


Figure 1.1: Theoretical frame of reference

Source: Author's own

- a) Sustainable competitive advantage can be attained in a number of ways. Thompson *et al.*, (2005) provide an overview of four of the most frequently used strategic approaches to achieving SCA. These are largely based on the positioning approach of the Porter (1985) model and include “being a low-cost provider; focusing on a narrow market niche; developing differentiating features such as better service; and developing expertise and resource strengths that give the company competitive capabilities that rivals can’t easily imitate or trump with capabilities of their own” (Thompson *et al.*, 2005:7).

Extending the positioning-based view on the development of expertise and resource strengths, the resource-based view seeks to explore the value that is brought to an organisation through its tangible and intangible resources.

For the purpose of this dissertation, the resource-based view (RBV) as universalised by Hamel and Prahalad (1994) with its focus on resources, and the positioning-based view (PBV) of Porter (1984) with one of its elements being the development of expertise and resource strength, provide the theoretical home. This is discussed more comprehensively in par. 2.2.1 and par. 2.2.2.

- b) Resources may be tangible resources, for example physical resources; or intangible resources, for example the human capital resident in the knowledge, skills and experience of employees. SCA may be achieved either through the development of the knowledge and skills, or through a variety of other activities. Within the RBV, the output of resources output is the capabilities and core competencies of organisations, which in turn are linked to SCA (Oosthuizen, 2002:5).
- c) Capabilities are the processes created through the collective skills, abilities and expertise of an organisation and they come about through organisational investments in, for example, compensation, training and other human resource areas (Ulrich & Smallwood, 2004).

In the face of the rapid, continuously changing environment, dynamic capabilities are the tools used by organisations to continuously reconfigure and coordinate resources to cope with the changing environment through learning – in this instance learning brought about through training (Eisenhardt & Martin, 2000; Zollo & Winter, 2002) and create and sustain competitive advantage. In this dissertation, the ID

model is put forward as one such tool. The collective skills (capabilities) provide organisations with the basis for core competencies.

- d) Core competencies are internal activities central to an organisation's strategy and competitiveness that the organisation performs better than other internal activities. Most often core competencies are knowledge-based and vested in its employees. Core competencies become distinctive competencies when they represent competitively superior resource strength. Thus, distinctive competencies are competitively valuable activities that an organisation performs better than its rivals (Thompson *et al.*, 2005:91). This may be, for example, through the productive behaviour of the workforce of the organisation.
- e) Productive behaviour is linked to those activities of the workforce that improve and enhance an organisation's competitive performance. At its elemental level, productive behaviour may be seen to consist of core behaviour (relevant for the successful competitive performance of the organisation, for example, proficiency in distribution) and situation-specific behaviour (relevant at particular points in the value chain of the organisation, for example, customer contact). Both core and situation-specific behaviour (which are intrinsically developed through relevant, job-specific knowledge) relate to and define the productive behaviour in an organisation.
- f) One of the ways in which the productive behaviour, and by association, the capabilities and core competencies of an organisation is developed is through training (Ulrich & Smallwood, 2004), which can be delivered through a variety of ID models (see for example Gagné, 1985; Jonassen, 1991; Wilson, Jonassen & Cole, 1993; Smith & Ragan, 1999; Carliner, 2000; Dick, Carey & Carey, 2000; Brennan, 2003; Deubel, 2003).
- g) ID and ID models are systems or processes of organising learning to increase the achievement of pre-defined learning objectives and outcomes. ID models represent a way of thinking about and structuring training delivery in an organisation. Training and ID are discussed in more detail in Chapter 3. Training and the ID models through which it delivers focus implicitly on increasing job-specific knowledge and the productive behaviour of the people in the organisation. Training and ID models are encompassed in an organisation's human resources (HR) function, which is aligned with the organisation's strategy through strategic HR deliverables. These

deliverables include performance drivers, i.e. core people-related capabilities such as employee productivity; and enablers, i.e. elements that reinforce performance drivers such as a change in organisational training delivery (Becker *et al.*, 2001). In this dissertation, the ID model will be seen as an enabler provided it contributes to SCA through developing and improving job-specific knowledge and productive behaviour as proxies for SCA.

A large and growing body of evidence (see, for example, Dearden *et al.*, 2000; Becker *et al.*, 2001; Stiles & Kulvisaechana, 2004; Tamkin, 2005; Worland & Manning, 2005) demonstrates a positive linkage between the development of intangible resources vested in human capital and organisational performance. Training employees to improve job-specific knowledge and productive behaviour develops organisational capabilities and core competencies which, amongst others, lead to SCA (see par. 2.2, par. 2.5 and par. 2.6).

Given the positive linkage between the development of human capital and organisational performance and evidence that current training in organisations does not always meet the demands of building and increasing capabilities and competencies (see par. 1.1), suggest the need for training in organisations that is designed to demonstrate positive outcomes.

For the purpose of this dissertation, and drawing on the literature, the development of an ID model which positively impacts on job-specific knowledge and is seen to positively influence specified productive behaviour important for organisational capabilities and core competencies may be viewed as an enabler for SCA, as depicted in the line of logic flow of the theoretical frame of reference in Figure 1.1.

The flow of events and focus for this study are discussed in par. 1.3.

1.3 FLOW OF EVENTS AND RESEARCH FOCUS

The flow of events and research focus are reflected in Figure 1.2. The first event is a literature study (par. 1.3.1) followed by the development of an ID model (par. 1.3.2). The ID model is implemented in a case organisation (par. 1.3.3) to enable an empirical investigation (par. 1.3.4) for evaluation of the ID model.

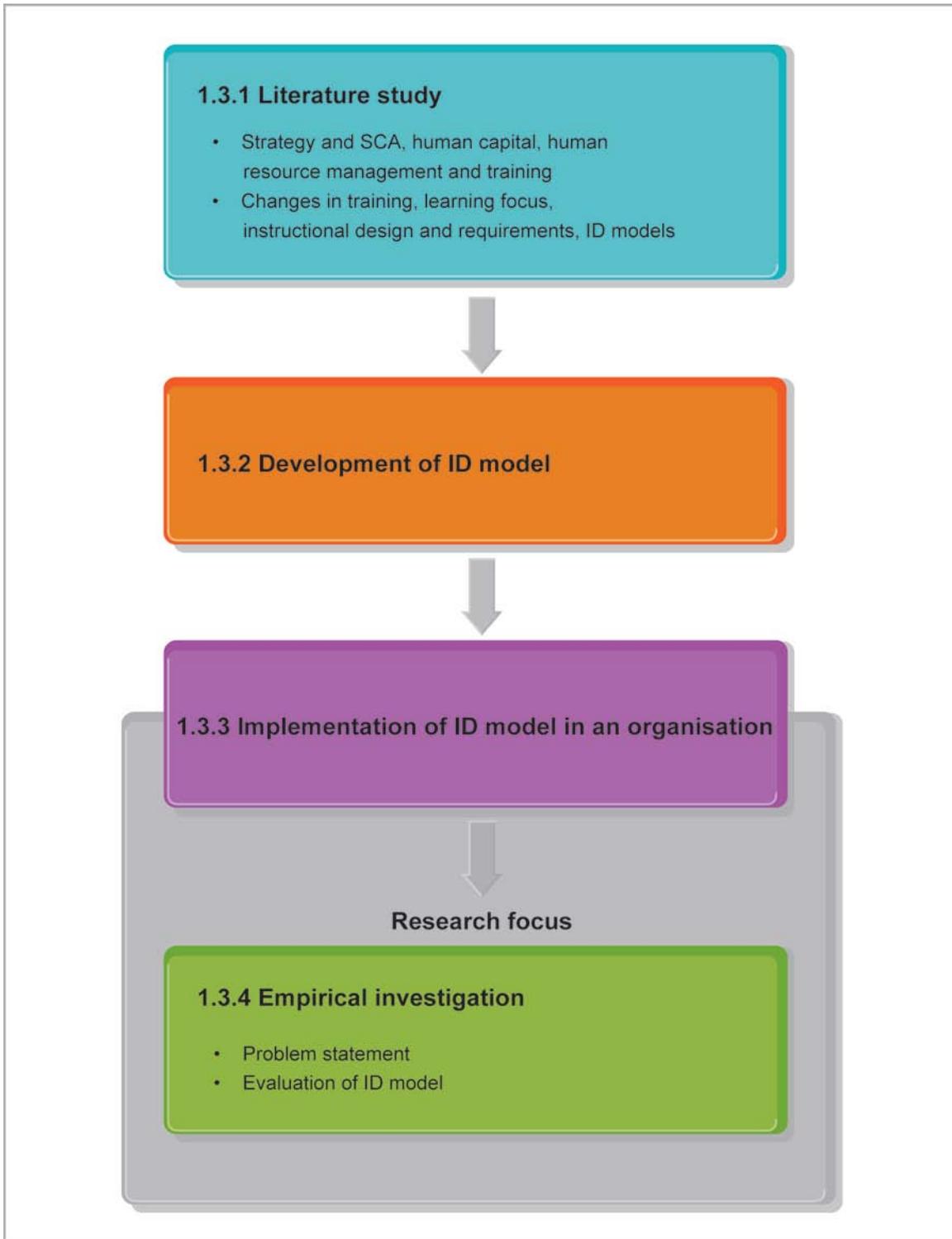


Figure 1.2: Flow of events and research focus

Source: Author's own

1.3.1 Literature study

The aim of the literature study is firstly, to provide an overview of the literature on strategy and SCA and, by elaborating on the RBV and PBV, consider human capital, human

resource management and training within this context. Chapter 2 contains this section of the literature study and elaborates on the context and theoretical frame of reference (Figure 1.1 a-e). Secondly, the literature study considers the literature on changes in training to, amongst others, a learning focus. It elaborates on the literature on instructional design and requirements and ID models within this framework. Chapter 3 contains this section of the literature study and elaborates on the context and theoretical frame of reference (Figure 1.1 f-g).

Overall, the literature study provides the conceptualisation of the research problem by delineating the body of knowledge within which the research problem is embedded (Mouton, 1996:66). The literature study provides the context, inputs and requirements for the development of an ID model, i.e. specifically the ID model put forward in this dissertation.

1.3.2 Development of ID model

The ID model is developed by applying the requirements specified and insights obtained from the literature study. Chapter 4 describes the development of the ID model and defines its success criteria, which underpin the action standards for the research.

1.3.3 Implementation of the ID model in the case organisation

The implementation of the ID model provides the test-bed for its evaluation. A case organisation is used for the operationalisation and implementation of the ID model and the focus of the research is contained in the empirical investigation. Chapter 5 describes the research methodology employed in the empirical investigation.

1.3.4 Empirical investigation

There is no empirical evidence for the ID model as put forward in this dissertation, thus its impact on job-specific knowledge and specified productive behaviour is unknown. This lies at the heart of the research problem: what impact does the ID model have on job-specific knowledge and productive behaviour? And, what, if any, references can be made and conclusions can be drawn about the connection between the ID model and SCA? Chapter 6 presents the outcomes of the empirical investigation through discussion of the research results, analysis and interpretation.

The need for the empirical investigation is to evaluate the ID model after the operationalisation and implementation thereof in the case organisation, to assess whether

it may be seen as an enabler for SCA and therefore offer an alternative ID model for training. The summary, critical reflection, conclusions and recommendations of the empirical investigation are contained in Chapter 7. For the purpose of this dissertation, the evaluation model of Kirkpatrick (1994) will be used, as this remains a standard evaluation tool in business and industry (Bassi, Benson & Cheney, 1996; Kirkpatrick, 1996; Boyle & Crosby, 1997), despite numerous attempts to develop alternatives (Holton, 1996; Boyle & Crosby, 1997).

The Kirkpatrick evaluation model is a systematic approach including four levels of evaluation measures:

- Level I evaluates the reactions of learners to the ID model (reaction).
- Level II evaluates the degree to which the learners have learnt the material (learning and job-specific knowledge improvement).
- Level III evaluates the perceived ability of learners to transfer the learned knowledge by applying it in the workplace (application). This application of the knowledge in the workplace relates to productive behaviour in core and situation-specific circumstances.

Level I – III results are referred to as soft results (Clark, 2004a) and are the focus for this dissertation because as is evident from the literature, a direct causal link between training and return on investment (ROI) is difficult to establish (Norton in Daum, 2002); elusive (Tamkin, 2005) and the multiple functions of training make a direct equation undependable (Keep, Mayhew & Corney, 2002).

- Level IV results measure specific “hard” business outcomes that occur as a result of employees doing their jobs differently, for example decreased absenteeism, increased orders, ROI. This evaluation falls outside the scope of this dissertation, since the ID model and its impact on job-specific knowledge and productive behaviour, not other hard measures, is the aim of the research.

The research aim and purpose are discussed in par. 1.4.

1.4 RESEARCH AIM AND PURPOSE

The research aim refers to the intent of the research, whilst the research purpose describes the why and wherefore. In essence, the aim delineates the research objectives and the purpose describes the research approach and reasons for the approach.

The main aim of the research is to evaluate the ID model in terms of its perceived impact on job-specific knowledge and productive behaviour; and to provide an explanation of the internal construct relationship between the influence of the ID model, job-specific knowledge and productive behaviour and in doing so make a contribution to the body of knowledge relating to the impact of training as an enabler for SCA. Productive behaviour, in this dissertation, is defined as job-specific knowledge to facilitate better on-the-job performance by applying learned principles and knowledge that are of benefit in core and situation-specific situations in the organisation's value chain and service positioning.

Underpinning the main aim are the following specific research objectives:

- To investigate reactions to the ID model.
- To determine levels of learning and job-specific knowledge improvement brought about by the ID model.
- To analyse the impact of the ID model on job-specific knowledge application.
- To evaluate the performance of the ID model.
- To understand how and why (if) the ID model is seen to work.

These research objectives are linked to the action standards of the research, specified as following:

- To obtain a positive reaction to the ID model.
- To obtain a measurable increase in job-specific knowledge and improvement in the application thereof.

- To obtain positive ratings for the components of the ID model.

These action standards are relative and not quantitative absolutes and are set to be evaluated from an exploratory, interpretive perspective.

Since the ID model as presented in this dissertation has not been implemented in an organisation previously, the purpose of the research is by necessity exploratory, in that it gathers explanations and gains insight into a phenomenon about which little is known (the ID model) through open-ended, largely unstructured methods (Denzin & Lincoln, 1994; Hesse-Biber & Leavy, 2004). The exploratory purpose of the research precipitates an interpretive and descriptive study to explore research questions that are predominantly probing in nature. The research will address the research questions as listed in par. 1.5.

1.5 RESEARCH QUESTIONS

The overarching research questions revolve around how best to employ training as an enabler to improve the SCA of an organisation. There are many and diverse views on this (for example Andrews & Goodson, 1980; Pedler *et al.*, 1991; Gagné *et al.*, 1992; Pfeffer, 1994; Gros *et al.*, 1997; Merriam & Brockett, 1997; Becker & Huselid, 1998; Jonassen, 1999; Reigeluth, 1999) and a gap exists in evidence relating to the impact of a specific training intervention (the ID model in this dissertation) on SCA, through the proxies of job-specific knowledge and productive behaviour.

To achieve the objectives and aim of the research, i.e. to evaluate the ID model and explain the relationship between the ID model and job-specific knowledge and productive behaviour, input from both the learners, i.e. the employees who go through the training via the ID model, and managers, i.e. the facilitators and assessors of the ID model, is included in the research (see par. 1.6.2). The following research questions (also see par. 1.3.4) serve as the focus for the study:

1.5.1 Reaction questions

Reaction questions (level I evaluation) include how learners and managers feel about the ID model, its various components and the way it works; likes and dislikes about the ID model and reasons why; and how the ID model can be improved.

1.5.2 Learning and job-specific knowledge improvement questions

Learning and job-specific knowledge improvement questions (level II evaluation) include what knowledge is acquired, what skills are developed or enhanced, what is learnt and the extent to which the ID model is seen to improve job-specific knowledge and skills and reasons why. In addition, a specific quantitative measure on knowledge improvement that measures job-specific knowledge levels before implementation of the ID model, and again after implementation of the ID model, will be included in this evaluation level.

1.5.3 Application questions

Application questions (level III evaluation) are approached from two perspectives. Firstly, they include perceptions about changed behaviour, observed changed behaviour and on-the-job performance as a result of the implementation of the ID model. Secondly, they involve the evaluation of the performance of the ID model *per se* in respect of how all components are rated by both the learner and manager users of the ID model to understand how (if) the ID model is seen to work.

The results from these research questions will provide the input for the evaluation of the ID model and its impact on job-specific knowledge and productive behaviour.

The exploratory and interpretive purpose of the research and the nature of the research questions, denote a particular approach regarding the research philosophy, the tactic to be used and the methods employed. These are discussed in par. 1.6.

1.6 RESEARCH PHILOSOPHY, TACTIC AND METHODS

For the aim and purpose of this research (see par. 1.4), the research philosophy is interpretivist, the research tactic the case study, and the research methods a combination of qualitative (focus groups, in-depth interviews, observation) and quantitative (ratings of components of ID model, job-specific knowledge improvement measures) methods.

1.6.1 Philosophical orientation of the research

The philosophical orientation of the research refers to the ontological (views of the nature of social reality) and epistemology (theory of knowledge) underpinnings of the research. In this research the ontology is constructivism, emanating from the belief that people interpret reality and attach meaning to it, and therefore multiple realities are constructed

by individuals in specific situations and contexts. Epistemology, as the possible ways of gaining knowledge is, at its simplest level, defined through the positions of interpretivism and positivism.

Interpretivism is seen to be the most appropriate epistemology for this research, since this research deals with behaviour, experiences and understanding as defined by participants in social action (Hussey & Hussey, 1997). Interpretivism seeks to produce descriptive analyses that explain how individuals interact with and experience their worlds. Data analysis is inductive, ongoing and aimed at providing a holistic understanding of phenomena under study. Specifically, the research questions relating to feelings, experiences, attitudes and perceptions (see par. 1.5) position this research in the interpretivist epistemology, since it aims, on the whole, to understand “why” and “how”, not “how many” questions.

Positivism is deemed as being an inappropriate epistemology for this research, as the implementation of the ID model is context-bound, relevant variables relating to job-specific knowledge and productive behaviour are multi-faceted and cannot be isolated and tested before an exploratory study identifies and describes them. Also, the research does not seek to establish general laws, which is a central aim of positivism (Money, 2005).

Although some quantitative methods are incorporated in the evaluation of the ID model, the research philosophy remains in constructivism and interpretivism in that the purpose of the research is exploratory and interpretive (see par. 1.4).

The exploratory and interpretive purpose of the research and the implementation of the ID model in a specific case organisation contribute to the choice of research tactic for the study, as outlined in par. 1.6.2.

1.6.2 Research tactic

The research tactic, i.e. the overall expedient used to achieve the research aim is the case study. Yin (2003:5) points out that “how” and “why” research questions are likely to favour case studies, especially when the focus is on contemporary events (i.e. the implementation of the ID model) and relevant behaviour (e.g. reactions to, perceived benefits of, rating of the components of the ID model) cannot be manipulated.

In this study, a single-case design with multiple embedded units of analysis (EUA) is employed. Single-case design is appropriate when the case is critical or unique; the phenomenon under study is previously unavailable; it is an exploratory study; and the case selected can be shown to be representative (Yin, 2003:45-50). The case selected for this research qualifies on all these criteria (see par. 5.2.3.4 and par. 5.2.3.6a). The case is critical or unique in that the ID model is applied in one case organisation where the development and implementation of the ID model are linked to strategic imperatives. Due to the strategic nature of the learning contents contained in the ID model (see par. 4.5.1.3 and par. 4.5.2.2), and the time constraints inherent in the research timing framework (see Figure 5.3), it is impractical to populate the ID model with strategic contents in another organisation. The phenomenon under study, i.e. the ID model as presented, is previously unavailable and the study is therefore exploratory and interpretive in nature. The case selected can be shown to be representative, as it is an international fast moving consumer goods (FMCG) organisation; operating in the manufacturing and marketing arena; with an organisation structure to support a value chain generally accepted as being representative; and deemed to be a best practice organisation internationally (see par. 5.2.3.6a).

Within the single case, multiple embedded units of analysis (EUA) are included. The EUAs are included not only to “add significant opportunities for extensive analysis” (Yin, 2003:46), but also to triangulate the findings and to rigorously explore all perspectives on the phenomenon under study. There are three EUAs in the case. EUA 1 consists of learners, undergoing the training through the ID model. EUA 2 consists of managers, who facilitate the implementation of the ID model and who, within the ID model, manage, assess and evaluate the outcomes and degrees of performance improvement provided by the ID model. EUA 3 consists of personnel responsible for marketing skills development within the organisation.

Due to its exploratory and interpretive nature no claim is made about statistical generalisations or predictive capabilities of this research. However, case studies, when backed up by the literature are transferable to theoretical propositions. Inductive support, obtained through deductive reasoning based on the theoretical propositions in the literature (Mouton, 1996:80), enables the transferability of case study research.

To achieve the aim and purpose of the research, a combination of qualitative and quantitative methods is applied as outlined in par. 1.6.3.

1.6.3 Research methods

For the evaluation of the ID model, a combination of qualitative and quantitative methods is applied within the ambit of the research. The qualitative methods include focus groups and in-depth interviews and seek to explore reaction, learning and job-specific knowledge improvement and application questions (see par. 1.5). The quantitative methods seek to measure job-specific knowledge improvement levels and obtain an analysis of how the various components of the ID model are rated (see par. 1.5.2 and par. 1.5.3).

The qualitative research entails five focus groups in EUA 1 and five focus groups in EUA 2. For EUA 3, a total of 20 meetings is conducted, using qualitative in-depth interview discussion methods. Augmenting the qualitative methods, additional evidence is collected from organisation documentation (for example, ID model business case document, internal review documents and project plan documents); conversations with expert personnel (for example in development of ID model contents, discussions with IT personnel); direct observations (for example in learners' use of and reaction to the ID model in test sessions, or in-field).

The quantitative methods entail a self-completion questionnaire to rate the components of the ID model. A response rate of 44 percent of EUA 1 participants, and 59 percent of EUA 2 participants was achieved. The questionnaire is not administered to EUA 3, since it relates to a rating of the components of the ID model, which is not applied to EAU 3.

Job-specific knowledge improvement is measured quantitatively, by obtaining scores from the Learning Assessment Management System (LAMS), resident on the intranet of the case organisation. LAMS measures job-specific knowledge levels before the ID model is implemented and again once learners have completed learning contents. This measure reflects the difference in levels of knowledge through percentage scores obtained on job-specific contents recall. The LAMS is an integral part of the ID model and was developed in conjunction with the IT department of the case organisation (see par. 4.5.2.5).

Inherent in the research philosophy, tactic and methods are some limitations and delimitations that have a bearing on this research. This is discussed next in par. 1.7.

1.7 RESEARCH LIMITATIONS AND DELIMITATIONS

Limitations are factors that may affect the study, but not within the researcher's control, while delimitations are within the researcher's control (Roberts, 2004:129) and relate to the scope of the study.

The limitations are inherent in the research philosophy and tactics and are outlined in par. 1.7.1.

1.7.1 Research limitations

The interpretivist epistemology underpins the research and is applied to investigate reactions to and feelings about the ID model and how it does or does not impact on job-specific knowledge and productive behaviour. These reactions and feelings are qualitative in nature, and cannot be quantified or extrapolated outside this case to make predictions about learner audiences and populations other than the one in which the ID model is implemented.

The limitation inherent in the case study tactic is that the ID model is only applied in one organisation, and therefore comparisons of the performance of the ID model in other organisations cannot be made. This limitation is precipitated by time and budget constraints (see par. 1.7.2). More importantly, specific learning contents of the ID model are confidential and proprietary to the case organisation which prohibited the wider implementation in other organisations of the ID model in its entirety, learning contents included.

The exploratory and interpretive nature of the research implies that no statistical claims towards generalisation or predictive capabilities are made. However, in considering the theoretical literature (see par. 3.2) and research findings (see Chapter 6) certain trends emerge that appear to imply a confirmation of the contribution of training embodied in the ID model as a strategic enabler for SCA, which may be transferable to other organisations.

In using qualitative methods, the researcher is the human instrument for data collection. Subsequently, any biases and/or particular interests of the researcher may impact on the research. Particularly in qualitative research based in an interpretivist epistemology, the biases and assumptions of the researcher need consideration and reporting on (Denzin &

Lincoln, 1994; Hussey & Hussey, 1997; Yin, 2003; Hesse-Biber & Leavy, 2004). In par. 5.3.4 on researcher assumptions and critical self reflection it will be shown how this aspect is addressed in this research.

For a measurement of the specific, quantified impact of the ID model on the organisation, Level IV questions (see par. 1.3.2) will need to be applied, as these address “hard” management issues such as ROI, decrease in absenteeism, increase in sales calls and orders, amongst others. Due to budgetary and time constraints, and the aim and purpose of the study it falls outside the scope of the present research.

The delimitations of the research are outlined in par. 1.7.2.

1.7.2 Research delimitations

The following delimitations apply to the study:

- The empirical investigation (both quantitative and qualitative) was conducted between September 2005 and October 2006. It was dictated by the completion of the development of the ID model, organisational requirements and personnel availability in the case organisation. Based on the results of the empirical investigation, refinements and contents upgrades were made to the ID model during 2007.
- Those surveyed in this research consist of learners from Western and Northern Gauteng, KwaZulu Natal (KZN), Cape Peninsula and Northern Cape; managers from Western, Northern and Eastern Gauteng, KZN and Cape Peninsula; and skills development personnel in Head Office in the Western Cape.
- The criteria selected for the evaluation of the ID model are reactions to the ID model, learning and job-specific knowledge improvement and the application of the learning imparted through the ID model to change behaviour and on-the-job performance. In addition, an evaluation of the specific components of the ID model are ID model contents, look and feel, assessments and in-field tasks, the learning experience, usability, the process, likes and dislikes, perceived benefits and suggested improvements.
- The budget and timing requirements allocated to the development and implementation of the ID model by the case organisation further governed the scope of the study.

Despite both the limitations and delimitations, it is nevertheless believed that the research is of significance, as outlined in par. 1.8.

1.8 SIGNIFICANCE OF THE STUDY

Increasingly, the value of a competent, well-skilled workforce is seen to be of high strategic value (Brown & Seidner, 1998) and new demands are placed on the contribution of training in the development of productive and relevant employee knowledge and behaviour. Continuously more pressure is placed on training and the methods it employs to build and facilitate behaviour in the workforce that align with business strategies and value chain improvement. Organisations are increasingly turning to learning and employee development (i.e. development of intangible assets in human resources) as a means to achieve strategic aims (Beckett, 2000; Maurer, 2001). Revised forms of training are required to meet the demands of business in the century (Sleight, 1993). Particularly in South Africa, the need for skills development is defined as being critical for economic growth and improving South Africa's international competitiveness. To do this, training and the methods it employs need to demonstrate its contribution to the development of productive behaviour aimed at improving on-the-job performance.

The contribution of this research is in providing and evaluating an ID model aimed at addressing the previous shortcomings in training and ID models and the application thereof in practice. Also, the evaluation allows for fine-tuning the ID model to provide guidelines for the implementation in other similar organisations. Alternatively, the evaluation will provide pointers to components in this ID model that do not contribute to learning, job-specific knowledge increases and productive behaviour improvement. Whichever the findings, the research brings about the capacity for action by HR and training personnel to adapt and/or change current training practices and a description of the specific components to be employed in future ID models of this nature.

The significance of the study is seen to be in its consistency with and extension of existing literature on ID models and their contribution to SCA, i.e. an academic theoretical contribution that extends the current body of knowledge through incorporating a multidisciplinary approach in the development of the ID model. The ID model put forward in this dissertation extends, broadens and deepens the literature by defining a wide scope

of components to be incorporated in the development of ID models as enablers for SCA. Specifically, in its South African and African context, given the background in shortages of skills and productive behaviour and the need for fast-tracking the development of a competent workforce, the study is significant in that it provides guidelines for the practical development and implementation of an extended ID model, within a particular contextualised situation and, within the RBV as theoretical home, provides a link between business-level strategy, training and SCA.

The structure of the dissertation is outlined next, in par. 1.9.

1.9 STRUCTURE OF THE DISSERTATION

Chapter 1: Introduction and overview of dissertation

This chapter provided the background against which the need for new ways of training and skills development is defined. Skills development is seen to be critical not only for organisations, but also for Africa and South Africa to increase economic competitiveness and prosperity. The overall theoretical context and frame of reference was outlined to indicate the flow and line of logic linking the various constructs of the dissertation. From this frame of reference, the research focus, aim and purpose were defined and the research questions listed. The research philosophy, tactic and methods, including the limitations and delimitations were highlighted and the significance of the study was outlined.

Chapter 2: Literature review on sustainable competitive advantage, business-level strategy, resources and training

This chapter will consider the literature on SCA and business-level strategy. Two of the main streams of thought in business-level strategy, namely the positioning-based view (PBV) and resource-based (RBV) view are considered. Both the PBV and RBV are vested in the value chain of the organisation and the role and contribution of training within the value chain are examined. Resources, as an enabler in the value chain provide input to capabilities and competencies and their role in SCA through human capital and training is explored.

Chapter 3: Literature review on training and instructional design

This chapter will provide the literature review on training and instructional design, in order to delineate the current conditions and changes in organisational training and the strategic demands placed thereon. Training aims to enhance workforce performance and it is grounded in the functional area of human resources. The changing environment dictates a shift in training, whereby there is now an emphasis on learning. This chapter will review the changes and describe how instructional design and instructional design models accommodate learning. Within this framework, the requirements of instructional design, both from a theoretical and practical perspective (the latter through the development of ID models) will be reviewed.

Chapter 4: The development of an instructional design model

This chapter will provide a description of the ID model. In this chapter, the selection of the case organisation and its similarity to other organisations is described and defended through its international stature, nature of business and representativeness. The HR structures and strategies are outlined and current training described and assessed. Against this background the ID model is developed and described in terms of each of the phases inherent in the development of ID models. The analysis phase describes the ID and learning theory chosen for the ID model, the characteristics of the learner audience at whom the ID model is directed, the delivery media used to disseminate the learning contents and an outline of the structure and detail of the learning contents. The development phase describes the learning contents development and treatment, with particular emphasis on the visual learning approach. The ID framework, the technical infrastructure, overall management system, LAMS and practical process are included. The implementation phase describes the pilot and testing phase, launch and roll out, the field feedback and problems encountered. Quality assurance during all the phases are described and the evaluation phase of the ID model will look at the evaluation of the ID model itself, and an evaluation of the ID model on its defined success criteria and criteria for learner success.

Chapter 5: Research methodology

This chapter will consider the research methodology for the empirical investigation in this dissertation by presenting the procedural framework containing the research approach and how it is operationalised in the research programme. The main strategies of positivism and interpretivism are discussed and this research is positioned within the interpretivist strategy, which aims to describe and understand social phenomena and the

way meaning is attached to these phenomena. The research aim of the evaluation of the ID model and exploratory and interpretive purpose of the research are delineated and the research tactic of the case study will be described and defended. Various case study designs are outlined and the single-case design for this study will be explained on grounds of the critical and unique nature of the case and the ID model being previously inaccessible. The applicability of the case study tactic for this study relates to the intricate social setting and the contextual meaning that needs to be obtained from within a bounded system, namely the case organisation, and this is elaborated on. Disadvantages of case study research tactics are considered and the biases that may be contained therein will be described and addressed. The integrity of case study research is defined by discussing the dependability and trustworthiness of the research, including the procedures of descriptive validity, interpretive validity and theoretical validity. The sequential phases of the research methods will be defined and the use of both the quantitative and qualitative methods is described. The sampling frame and sampling procedure for the study is delineated. This chapter includes a description of data analysis techniques used and the data coding techniques followed. The integrity measures of triangulation, member checking, negative case analysis and researcher assumptions and critical self-reflection are described and additional rigour and quality measures included in the research will be outlined. Documenting and reporting protocols, the research ethics implemented in the study and the limitations of the research will also be described in this chapter.

Chapter 6: Research results, analysis and interpretation

This chapter will contain the research results obtained from the evaluation of the ID model through the results yielded through the quantitative and qualitative methods. It will describe the evaluation of the ID model on all its components by obtaining rating scores and considering the feelings and reactions of research participants to the ID model; likes and dislikes about the ID model; perceived benefits of the ID model and suggested improvements to the ID model. The measures of job-specific knowledge improvement will be extracted from the LAMS. This chapter will provide an analysis and interpretation of the research results, including explanations of the usability of the ID model and the influence of the ID model on job-specific knowledge and productive behaviour.

Chapter 7: Summary, critical reflection, conclusions and recommendations

This chapter will provide a summary of and the conclusions relating to the performance of the ID model, its evaluation and impact on job-specific knowledge, productive behaviour and ultimately sustainable competitive advantage. A critical reflection on the research, its

success, impact on theory and practice and contribution to knowledge will be provided. Recommendations for further research are to be provided, as well as guidelines for organisations in the implementation of this ID model.

CHAPTER 2

LITERATURE REVIEW ON SUSTAINABLE COMPETITIVE ADVANTAGE, BUSINESS-LEVEL STRATEGY, RESOURCES AND TRAINING

2.1 INTRODUCTION

This chapter reviews the literature to expand on the theoretical frame of reference and line of logic for this dissertation, as outlined in Figure 1.1:a-e. It considers sustainable competitive advantage (SCA) as debated in the literature on business-level strategy (par. 2.2), with a specific focus on the resource-based view (RBV) and positioning-based view (PBV). Resources and human capital as an intangible resource are discussed (par. 2.3) and capabilities and core competencies delineated (par. 2.4). The link between SCA and organisational performance through human capital is deliberated (par. 2.5) and strategic human resource management (SHRM) systems, training as a practice therein, and the impact of training on productive behaviour and job-specific knowledge are discussed (par. 2.6). A summary of this chapter is offered in par. 2.7.

2.2 SUSTAINABLE COMPETITIVE ADVANTAGE (SCA) AND BUSINESS-LEVEL STRATEGY

Competitive advantage sustained over a period of time lies at the heart of organisational performance. This implies performing every step in the value chain of the organisation in such a way that a dominant position is achieved in the industry through superior resources and the way these are applied and used in the organisation. Many authors have contributed either directly or indirectly to the literature pertaining to SCA. See for example Porter (1985) introducing the value chain in assessing sources for SCA; Ghemawat (1986) on sustainable advantages and superior access to resources or customers; Day and Wensley (1988) on the possession of superior skills as sources of SCA; Dierickx and Cool (1989) on the substitution or imitation of assets as threats to SCA; Prahalad and Hamel (1990) on core competencies and the consolidation of resources and skills into

competencies; Barney (1991) on firm resources and their potential to bring about SCA; Peteraf (1993) on the conditions that bring about SCA; D'Aveni (1994) on the rules of behaviour and response to the market in a rapidly changing environment.

The fundamental question in strategic management and one of the fundamental goals of business-level strategy is how organisations can achieve and sustain competitive advantage (Oosthuizen, 2002:1), i.e. approaches to follow for value-creating strategies. A number of schools of thought on what these approaches may be emerge in the literature, summarised succinctly in Mintzberg *et al.*, (2005) and not elaborated on here.

The focus for this dissertation is on the strategic approaches pertaining to business-level strategy from a micro-economic (not people/social) perspective. Where corporate-level strategy addresses the entire scope of the organisation going into the future, business-level strategy focuses on performance to procure and sustain competitive advantage (Encyclopedia of Management).

In the micro-economic strategy literature, two broad sets of inputs for value-creating business-level strategies dominate, largely based on two views, namely orientation to the external and internal environments. Where the external environment is regarded as the primary determinant of strategy, the work of Porter (1985) and his formalisation of the positioning-based view (PBV) is seminal. He maintained that competitive advantage is the ability to manage the organisation's value chain activities in such a way as to achieve one of two generic strategies, namely cost-based advantage or differentiation (Porter, 1985; Oosthuizen, 2002). Where the internal environment is regarded as the primary determinant for strategy, the resource-based view (RBV) with its focus on the internal set of resources and capabilities of the organisation predominates (Prahalad & Hamel, 1990; Boxall, 1996).

The issue of what contributes to competitive advantage, has seen within the strategy literature, a shift in emphasis away from external positioning and the relative balance of competitive forces, towards an acknowledgement that internal resources be viewed as crucial for sustained effectiveness (Wright, Dunford & Snell, 2001). Furthermore, a study by the Society of Human Resource Management (Alsher, 2004) has revealed a significant shift in the sources of organisation value. Today, intangible assets represent up to 85 percent of an organisation's value, compared to just 38 percent 20 years ago. This means that intangibles, particularly human capital (i.e. the knowledge, skills and experience of

employees), represent a major potential value driver for business. Yet many organisations today fail to grow that value by making the necessary investment in training employees. It is suggested that in the “new knowledge economy” provision is to be made for considerable levels of human capital development and for a significant investment in education, training, research and development – the major knowledge generating activities (Melody, 2002).

Organisational investment in training, through amongst others, the implementation of ID models that build and enhance job-specific knowledge and productive behaviour and job-specific knowledge, is strategically important for strengthening and expanding capabilities and competencies to give the organisation an edge in the industry. The development of skills-based competencies to give an organisation an edge in the industry converges in the RBV and PBV positions regarding business strategy and SCA, as discussed in par. 2.2.1 and par. 2.2.2.

2.2.1 The resource-based view (RBV)

The full scope and detail of the RBV is well documented and well researched (see, for example, Wernerfelt, 1984; Hitt *et al.*, 2001; Connor, 2002; Rugman & Verbeke, 2002; Hoopes, Madsen & Walker, 2003; Halawi *et al.*, 2005). The focus for this discussion on the RBV will be on two core aspects of the RBV, namely, resources with a focus on human capital (see par. 2.3) and capabilities and core competencies (see par. 2.4).

The RBV regards organisations as potential originators of value-adding capabilities and the underlying organisation competencies involve viewing the assets and resources from a knowledge-based perspective (Prahalad & Hamel, 1990; Conner & Prahalad, 1996). It focuses on costly-to-copy attributes of the organisation as the means to achieve superior performance in the industry that lead to sustainable competitive advantage (Prahalad & Hamel, 1990; Barney, 1991). In essence, the RBV holds that organisations can find strategic value-creation through the acquisition, development and deployment over time of scarce and unrivalled resources and skills which are either special and defining in themselves or in the way they are combined with other assets. The RBV therefore charges strategic management practices to identify, develop and deploy key resources to differentiate the organisation and maximise returns through output performance.

The RBV contends that SCA for an organisation lies in its possession of certain key resources that are converted into something of value for its customers. This involves

resource identification, development, protection and deployment (Amit & Shoemaker, 1993) and managerial skill in these activities is in itself a source of SCA (Castanias & Helfat, 1991).

The instructional design (ID) model put forward in this dissertation, relates to the development of job-specific knowledge and productive (value-adding) behaviour as proxies in enabling the organisation to achieve SCA. The ID model as a managerial activity aimed at the improvement of resources may be viewed as a source for SCA, provided it enables the development of job-specific knowledge and productive behaviour.

The RBV does not go without criticism in the literature. Priem and Butler (2001) mention that the RBV assumes stability in product markets; it contains imprecise definitions that hinder prescription; and, to their minds, the RBV eschews determining the value of resources. Ghemawat (1991:6-7) emphasises “the embarrassing abundance of candidate success factors and the consequent difficulty in figuring out which ones to focus on”, and his view is that the RBV does not explain precisely the ways in which resources and competencies are transformed into competitive advantage. D’Aveni (1994) posits that the RBV does not allow for the constant creation of new short-term competitive advantages in a hyper-competitive environment, i.e. the RBV does not account for the complexity of the environment.

While these criticisms are acknowledged, not all of them fall within the ambit of this dissertation, as explained next. In order to overcome the criticism of imprecise definitions a list of terms as used in this dissertation is supplied (see p.14). The criticisms relating to a lack of determining the value of resources and an abundance of candidate success factors fall outside the scope of this dissertation, since the RBV is used in the theoretical frame of reference and the dissertation does not aim to expand the theory on RBV. D’Aveni’s criticism of the RBV not allowing constant ongoing creation of short-term advantages is also deemed to fall outside the scope of this dissertation, as the training of employees occurs over a period of time and is based on developing organisation-specific productive behaviour and job-specific knowledge. However, insofar as the ID model may modify job-specific knowledge and productive behaviour to enable the employees of the organisation to better cope with the turbulent environment, it may be said that the dissertation makes allowances for D’Aveni’s criticism, although in an indirect and inferred manner.

In the RBV, thus, SCA can be attained by employing and/or developing employees to have better job-specific knowledge (and skills connected thereto) to exhibit more productive behaviour than competitors. Also, an organisation can attain SCA by differentiating its human resources practices from competitors. Differentiating oneself from the competition is a core tenet in the PBV, which is discussed next in par. 2.2.2.

2.2.2 The positioning-based view (PBV)

In the positioning-based view SCA is ascribed to management's ability to continuously position the organisation's assets against some external context. Strategy becomes a matter of choosing an appropriate position according to a generic strategy of either cost advantage or differentiation (Porter, 1985). The choice of strategic approach is facilitated by beneficial deployment of the organisation's value chain, i.e. all the activities within an organisation to offer a level of value that exceeds the cost of the activities. The primary activities in the value chain, for example operations, marketing and sales, inbound and outbound logistics are supported by secondary activities, amongst others human resource management activities. The latter includes activities relating to, for example, employee recruiting, hiring, training, development and compensation. The focus for this dissertation is in this support activity, specifically the training aspect. Within the value chain, an organisation can pursue SCA through cost advantage by better understanding costs and extracting these out of the value-adding activities; and/or by differentiation through the creation of distinctive features, service and quality by focusing on those activities associated with capabilities and core competencies in order to perform better than competitors. Capabilities and core competencies create distinctive features, service and/or quality in the organisation and training is able to positively improve all three these aspects of differentiation.

Achieving and sustaining a competitive advantage by becoming a (low) cost leader or differentiator puts a large premium on having a competent workforce. Therefore, competitive advantage lies not just in becoming a low cost leader or differentiating a product or service, but in being able to tap the organisation's special skills, capabilities and competencies vested in its human capital to respond rapidly to customers' needs and the current and expected moves of competitors.

The link between the PBV and RBV for the purposes of this dissertation lies in the SCA offered when an organisation achieves low cost differentiation through the special skills, capabilities, competencies and productive behaviour vested in and exhibited by

employees. The ID model put forward in this dissertation has not been used by an organisation previously; therefore it may be seen to provide differentiation in training. Should the ID model positively affect job-specific knowledge and productive behaviour, and is seen to do so measurably, it enables the organisation to provide superior service, again, one of the aspects of differentiation.

Other writers on and contributors to the PBV, for example Miles and Snow (1978), Covin (1991), Mintzberg *et al.*, (2005), focus on strategic choices and approaches within a positioning framework. Since the focus of this dissertation is on specifically the development of human capital through training, the work of these and other writers is not expanded on.

The PBV is relevant for the purposes of this dissertation in that it describes the value of low cost differentiation through improved features, service and/or quality as a strategic option, while the RBV provides the theoretical home for the ID model and its role as a strategic enabler in the organisation through its premise of increasing job-specific knowledge and productive behaviour exhibited through the human capital in its intangible resources.

In summary, when reviewing the various perspectives on business-level strategy and SCA, a proliferation of schools of thought and positions are evident. See for example Miles and Snow (1978), Dierickz and Cool (1989), Kay (1993), Peteraf (1993) and D'Aveni (1994) on hypercompetition; Brandenburger and Nalebuff (1995) on game theory; Brown and Eisenhardt (1998) on evolutionary change; Hax and Wilde (2001) on the Delta Project; Downes (2002) on the strategy machine and Mintzberg *et al.*, (2005) on the design school, cognitive school, environmental school and configuration school.

It is not the intention of this dissertation to provide either a comprehensive overview, or critique of these positions. Suffice to say that SCA as displayed by all the positions or schools of thought, reflects the underlying goal of achieving an edge in the industry. From the perspective of this dissertation, the resources, capabilities and competencies of the organisation form the key considerations in developing a superior business-level strategy, as converged in the RBV and PBV schools of thought. These are the broad-based theoretical points of departure for the dissertation, although overlap with some of the other schools of thought exists. See for example the cultural school (Mintzberg *et al.*, 2005:264-283) for discussion on culture and resources; the learning school (Mintzberg *et al.*,

2005:176-231) for discussion on knowledge creation and SCA; knowledge management and SCA (Halawi *et al.*, 2005).

Both the RBV through its focus on resources and the PBV through its focus on external positioning have at their core organisational performance as the source for SCA. Both the RBV and PBV hold that organisational goals are achieved through the value chain and the emphasis of the value chain activities and their contribution to SCA are seen to be external factors or internal factors.

In a growing number of organisations human capital is now viewed as a source of competitive advantage (Becker *et al.*, 2001) and a large and growing body of evidence demonstrates a positive linkage between the development of human capital and organisational performance (Dearden *et al.*, 2000; Stiles & Kulvisaechana, 2004; Tamkin, 2005). There is greater recognition that core and distinctive competencies are obtained through highly developed workforce skills and knowledge, distinctive organisation cultures, management processes and systems. Increasingly it is being recognised that productivity obtained with a high quality workforce enables organisations to compete on the basis of market responsiveness, product and service quality, differentiated products and technological innovation (Chaturvedi, 2005), all of which are seen to contribute to SCA.

The SCA that can be obtained through a high quality workforce is relevant for this dissertation, since the aim of the ID model put forward is to aid the organisation in not only providing differentiated service quality through improved job-specific knowledge and productive behaviour, but also to differentiate in training practices by using an ID model which incorporates technological innovation (see par. 4.4.2.7). The ID model, in broad, is thus aimed at the development of one of the intangible resources in the organisation, namely the employees.

The development of resources, specifically human capital, and the concomitant development of the capabilities and competencies of the organisation as sources for value-adding strategy and SCA are central constructs in the theoretical frame of this dissertation. Resources (par. 2.3) and capabilities and core competencies (par. 2.4), are discussed next.

2.3 RESOURCES

Resources can be both tangible and intangible, and represent those assets that the organisation has to work with. Tangible resources include, for example, physical resources (e.g. plants and equipment), financial resources, and technological resources. Intangible resources include, for example, reputation, organisation-specific practices and procedures, goodwill, brands, intellectual capital and human capital.

Human capital is “generally understood to consist of the individual capabilities, knowledge, skills and experience of the organisation’s employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge skills and experience through individual learning” (Dess & Picken, 2000:8).

The goal of the ID model put forward in this dissertation is to positively impact on job-specific behaviour and productive behaviour of employees. It seeks to be an enabler to increase knowledge skills and experience relevant to the task at hand, which has as its focus to provide the organisation with an edge, and thus SCA in the industry.

In and of themselves, resources do not confer a sustainable competitive advantage – they only become so when applied to an industry or brought to a market. Consequently, the managerial role is specifically one of converting resources into something of value to customers. This involves identifying, developing, protecting and deploying the organisation’s resource base (Amit & Shoemaker, 1993). This has been expanded on by, amongst others, Grant (1996) under the ‘knowledge-based view of the organisation’, which emphasises the requirement of organisations to develop and increase the knowledge and learning capabilities of the workforce through knowledge acquisition and knowledge sharing and transfer to achieve competitive advantage. Knowledge-based resources refer to skills, abilities and learning capacity, and may be developed through experience and training. It is not enough to just acquire employees with the requisite skills and abilities, it is also necessary to develop structures, systems (such as the ID model) and strategies that allow the organisation to gain competitive advantage (DeNisi, Hitt & Jackson, no date). The development of job-specific knowledge and skills vested in intangible resources, specifically human capital, and visible through productive behaviour may thus be viewed as enablers for sustainable competitive advantage. However, a major tenet of the RBV is that not all resources are equally important or possess the potential to be a source of sustainable competitive advantage. Therefore there has been much deliberation

on the characteristics of value-creating resources. See for example Barney, 1991; Grant, 1991; Amit and Shoemaker, 1993; Collis and Montgomery, 1998; O'Riordan, 2006.

The RBV, based in this instance on the seminal work by Barney (1991), posits that the characteristics of value-creating resources centre on their value, rarity, inimitability and being non-substitutable (VRIN) conditions.

For the purpose of this dissertation, the focus is on value (par. 2.3.1), rarity, (par. 2.3.2) and inimitability (par. 2.3.3), as motivated below.

2.3.1 Value

Value to customers is an essential element of competitive advantage. For a resource to be a potential source of competitive advantage, it must be valuable or enable the creation of value. It must contribute to the organisation conceiving or implementing strategies that improve its efficiency and effectiveness in meeting the needs of customers (Barney, 1991) and thus it must contribute to value creation. In this dissertation, value creation relates to improved job-specific knowledge and productive behaviour brought about through the implementation of the ID model, which allows the organisation to improve how customer needs are met, through better service delivery from a trained workforce. Peteraf (1993) explains that to be valuable a resource must not only create rents, but also offer future returns prospects to the organisation.

In most RBV conditions, resources are by implication, valuable, therefore more is needed for them to qualify in the VRIN framework. In the specific instance of this dissertation, the intended better service delivery brought about through improved job-specific knowledge and productive behaviour may provide another of the characteristics of value-creating resources, namely rarity.

2.3.2 Rarity

When resources employed in an organisation are rare among the organisation's current and potential competition, it leads to SCA (Barney, 1991). Rare resources vested in the skills and knowledge of the workforce, may contribute to SCA, if they allow the organisation to implement value. Thus, the relative scarcity of a resource means that organisations that possess rare resources can generate either superior margins or superior service levels compared to competitors, since these resources are not commonly found in competing organisations.

“If the types and levels of skill are not equally distributed, such that some firms can acquire the talent they need and others cannot, then that form of human capital can be a source of sustained competitive advantage” (Snell, Youndt & Wright, 1996:65).

Acquiring, in the sense of this dissertation, refers to the training of, rather than the hiring of talent. In addition, it should be considered that the ID model in itself may be considered to be rare since it has not previously been applied as presented in an organisation. The rarity of the ID model is only relevant insofar as it may increase levels of skills through improved job-specific knowledge and productive behaviour, which will be investigated and reported on in the empirical research (see Chapter 6). Due to the deemed rarity of the ID model, and provided it brings about the desired improved job-specific knowledge and productive behaviour, it may provide the organisation with intangible (human) resources that are difficult to imitate. Inimitability is discussed in par. 2.3.3.

2.3.3 Inimitability

The more difficult it is for competitors to replicate a specific resource in an organisation, the more enduring that resource will be in providing the owner organisation to accrue rent from it. In terms of inimitability, there are at least two reasons why human resources (in which human capital is vested) may be difficult to imitate: causal ambiguity and path dependency (Barney, 1991). Firstly, there is causal ambiguity because it is difficult to exactly delineate how human resources and practices (such as ID models for training which is the topic for this dissertation) generate value, and secondly, since HR practices (such as the ID model) are developed and refined over time, they are path dependent and cannot simply be bought in the market by competitors (Becker & Gerhart, 1996). A competitive advantage may thus be created while competitors apply this, or develop their own value-creating ID models to positively improve job-specific knowledge and productive behaviour to better human capital resources. Causal ambiguity and path dependency protect the organisation's resources from imitation and therefore preserve the stream of rents they generate.

Porter (1996) asserts that SCA is related to both strategy and operational effectiveness, where operational effectiveness refers to those organisational practices that allow organisations to improve their cost or differentiation offering. Therefore, performing different activities or by performing them differently from competitors, organisations may establish a difference from their competitors and maintain it over time. In this dissertation,

training as a practice within the human resource management activity is aimed at providing the organisation with a difference through improved job-specific knowledge and productive behaviour.

2.3.4 Summary

In summary, this dissertation focuses on intangible resources, specifically the human capital resident in the skills, job-specific knowledge and productive behaviour of employees. For these resources to create value, the resources themselves must be valuable, rare and difficult to imitate. Where this is so, resources provide the input and source material for the capabilities and core competencies of an organisation. These capabilities and core competencies are critical in the organisation's quest for SCA and are discussed in par. 2.4 below.

2.4 CAPABILITIES AND CORE COMPETENCIES

Within the RBV, sources of output, i.e. the capabilities and core competencies of the organisation are closely linked to SCA (Oosthuizen, 2002:5). The strategic value of resources is indicated by the extent to which the resources contribute to the development of capabilities, core and distinctive competencies and ultimately, a competitive advantage for the organisation. Although resources, capabilities and competencies are interlinked, their distinctive values to the organisation differ, as discussed in par. 2.4.1 (capabilities) and par. 2.4.2 (core competencies).

2.4.1 Capabilities

There is a key distinction between resources and capabilities. Capabilities are what an organisation does, it is the capacity of a bundle of resources to perform some task or activity to achieve a desired goal; while resources are the source of an organisation's capabilities (Segal-Horn, 2002). Amit and Shoemaker (1993) define two key features in this distinction between capabilities and resources. Firstly, a capability is organisation-specific since it is embedded in the organisation and its processes. Secondly, the primary purpose of a capability is to enhance the effectiveness and productivity of resources in an organisation in order to achieve its targets. Capabilities are developed over time as a result of complex interactions that take advantage of the interrelationships between tangible and intangible resources, and are based on the transmission and sharing of information and knowledge as carried out by the workforce.

Thus, “while resources are the source of a firm’s capabilities, capabilities are the main source of competitive advantage” (Grant, 1991:119).

In the strategic management literature the emergence of the “dynamic capabilities” concept (amongst others, Teece, Pisano & Shuen, 1997; Eisenhardt & Martin, 2000; Zollo & Winter, 2002; Protegerou, Caloghirou & Lioukas, 2005) considers how some organisations seem to secure SCA in volatile and competitive markets.

Dynamic capabilities are defined as “a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness” (Zollo & Winter, 2002:340) and “the firm’s ability to integrate, build and configure internal and external competencies to address rapidly changing environments” (Teece *et al.*, 1997:516). Inherent in these definitions is the understanding that intangible assets, including the knowledge and skills of employees, can be reconfigured into routines to create capabilities (such as the ID model) that provide SCA in a changing market. Dynamic capabilities are viewed as opportunities to generate or acquire new core competencies, (see par. 2.4.2) and training offers one such opportunity, in that dynamic capabilities are built, rather than acquired in the market and they are embedded in the organisation. Makadok (2001) provides an expanded discussion on this, the relevance being that dynamic capabilities are built within the organisation – such as that which may be brought about with the development of specific procedures, e.g. within training (Grant, 1991; James, 2004), to ensure that the resources of the organisation will suit further requirements. More important, firm-specific capabilities’ purpose is to enhance the productivity of resources (Amit & Shoemaker, 1993; Makadok, 2001) and allow for the implementation of organisational value-added strategies.

The dynamic capabilities framework also introduces dynamic elements such as learning, which is a “process by which repetition and experimentation enable tasks to be performed better and quicker” (Teece *et al.*, 1997:520). This allows for reconfiguration of the organisation’s resources to accomplish an improved position and competitiveness in the industry. Learning within this framework has two implications. One, it involves organisational as well as individual skills, since the individual skills depend on them being employed within an organisation. Learning thus occurs on both an individual and organisational level. Organisation learning and the learning organisation pervade the literature. See for example Fiol and Lyles (1985); Dick and Carey (1990); Senge (1990); Dodgson (1993); Crossan and Guatto (1996); DiBella, Nevis and Gould (1996); Easterby-

Smith (1997); Brown and Seidner (1998); Senge (1998), Easterby-Smith, Burgoyne and Araujo (1999). However, the focus of this dissertation is on individual learning and the impact thereof on job-specific knowledge and productive behaviour, therefore organisational learning and the learning organisation will not be expanded on to a great degree. (Also see par. 3.4).

The second implication of learning within the dynamic capabilities framework is that learning requires common codes of communication and coordinated procedures that are intrinsic in new patterns of activity and/or routines through which knowledge is codified and disseminated.

Within the dynamic capabilities framework, knowledge codification is “when individuals codify their understandings of the performance implications of internal routines in written tools, such as manuals, blueprints, spreadsheets, decision support systems, project management software, etc.” (Zollo & Winter, 2002:342). For the purposes of this dissertation, the ID model is viewed as a “manual” for an organisational routine (i.e. the latter training) to build organisation core competencies, elaborated on in par. 2.4.2.

2.4.2 Core competencies

There are various views on and definitions of competencies suggested in the literature (see for example Nordhaug, 1993; Lado & Wilson, 1994; Hamel & Prahalad, 1994; Fahy & Smithee, 1999). These definitions refer to “some key constituent elements of competencies, such as skills, capabilities, learning, coordination, organisation and relationships” (Sanchez, 2004:519).

A further problem is that the term competencies is sometimes preceded by “core” and “distinctive”, it is sometimes used interchangeably with “capabilities”, which in turn is used interchangeably with “skills”, which is frequently preceded by “core”.

In this dissertation competencies are defined as something an organisation is good at doing, while core competencies are strategically important activities that the organisation performs better than other internal activities. Distinctive competencies are competitively value-added activities that an organisation performs better than its rivals (Thompson *et al.*, 2005:90-91). Competencies are accumulated and developed by, amongst others, organisation-specific knowledge creation, which are disseminated through specific knowledge codification procedures. Value is created when these knowledge codification

procedures or activities allow the organisation to generate, acquire or develop core competencies.

Core and distinctive competencies are seen as a collection of skills, technologies and learning that contribute to competitive success (Prahalad & Hamel, 1990). It is in essence what makes an organisation unique in its ability to provide value to customers. Therefore, in order to develop value-creating strategies, the task of management is to concern themselves with the organisation's core and distinctive competencies and eschew an accomplished fit of strategy and resource alignment in the quest for competitive success (Hamel & Prahalad, 1994; Collis & Montgomery, 1998).

With regard to how organisations invest in the development of competencies, Nordhaug (1993:28) offers four stages in a "competencies development process".

- Competencies planning includes relating generic business goals and strategies to the process of defining actual and future competencies gaps.
- External competencies acquisition through the recruitment of new employees, purchase of consultant services and co-operation with other organisations.
- Competencies development specifically through planned programmes and various forms of formal and informal learning (e.g. training, management development, internal seminars).
- Competencies utilisation by investing in and using new or extended knowledge in terms of organisational design, specialisation, employee participation.

The organisation must therefore be able to absorb and integrate knowledge (Prahalad, 1998) and share the knowledge across the organisation so that it can be effectively applied.

In essence, the competencies development process involves planning for it in relation to current and future organisational goals, acquiring it from outside the organisation, developing it through, for example, specifically training, and using the acquired competencies to the benefit of the organisation. The focus of this dissertation is on the development of core competencies, (i.e. that which an organisation is good at doing, e.g.

skills, technologies and learning) through an attempt at increasing constituents thereof in job-specific knowledge and productive behaviour.

In summary, the dynamic capabilities of an organisation are embodied in a pattern of activities through which the organisation aims to improve and sustain its core and distinctive competencies, which are sources of SCA. The capabilities and core competencies of an organisation are brought about through, amongst others, the job-specific knowledge and productive behaviour of the employees in the organisation. The employees, or workforce, form the human capital resources of the organisation. In par. 2.5 SCA and organisation performance through human capital are discussed.

2.5 SUSTAINABLE COMPETITIVE ADVANTAGE AND ORGANISATION PERFORMANCE THROUGH HUMAN CAPITAL

Human capital (in brief, the individual abilities, knowledge, skills and experience of the workforce) is seen as a strategic resource, which organisations must develop and apply successfully to attain competitive advantage in today's turbulent and highly competitive business environment (Kamoche, 1996; Saá-Perez & Garcia-Falcón, 2002; Sanchez, 2004).

Within the strategy literature, the RBV has aided in bringing "people" and "people-related" skills into close focus. Concepts such as knowledge (Grant, 1996; Liebeskind, 1996; Argote & Ingram, 2000), learning organisations (Senge, 1990; Fisher & White, 2000) and human capital (Dess & Picken, 2000; Wright *et al.*, 2001) as sources for competitive advantage have brought attention to the intersection of business-level strategy and human resource issues. Strategy represents fundamental choices about organisation intentions and implies the capabilities, competencies and resources, including employees and the human resource practices needed to realise those intentions.

Conceptual development in the field of strategic human resource management (SHRM) within the RBV perspective has achieved some consensus on the areas in human resource (HR) management practices in which SCA may be achieved. SHRM is predicated on two fundamental assertions. The first is that an organisation's human capital is of critical strategic importance. The second is that the HR practices in an organisation are instrumental in developing the capabilities and core competencies

required for SCA. This is reflected in Figure 2.1, the line of logic and relevance for this dissertation being described in points a – c following Figure 2.1.

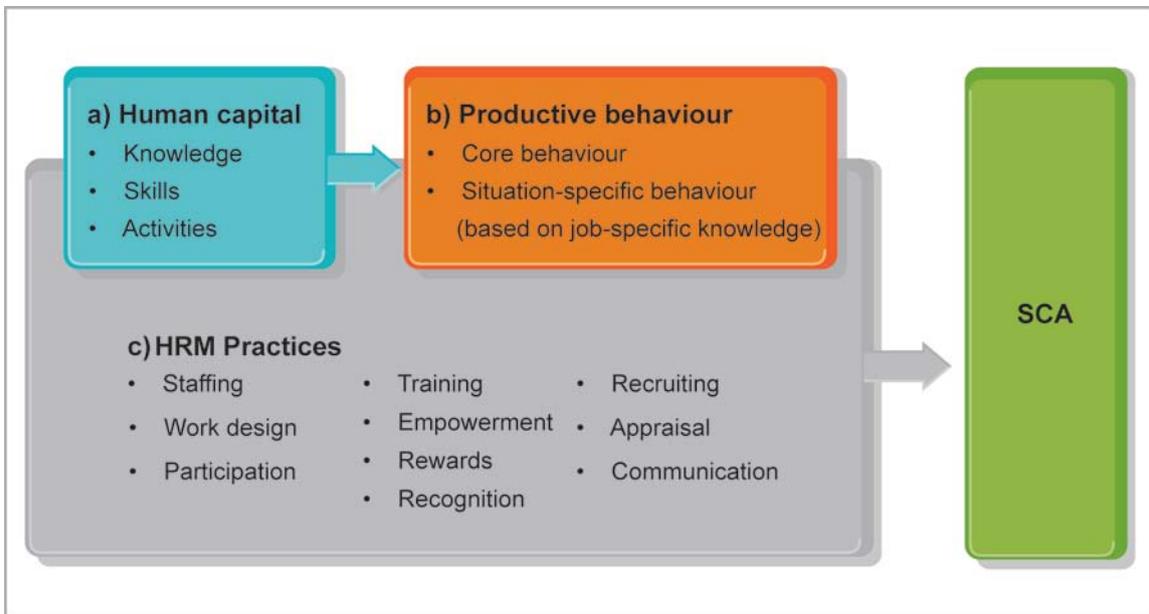


Figure 2.1: HR practices for SCA

Source: Adapted from Dunford *et al.*, 2001:9

- Human capital includes the knowledge, skills and activities employed by the workforce in an organisation. Competitive advantage may be achieved either through the development of job-specific knowledge and skills (as demonstrated through productive behaviour), or by achieving a better alignment between value chain activities and organisational strategy. In this dissertation, the ID model aims to improve job-specific knowledge and productive behaviour, to subsequently contribute to SCA.
- Productive behaviour within the organisation is increasingly being recognised as an important component in achieving SCA. Core behaviour is important in core and distinctive competencies, for example superior distribution; while situation-specific behaviour is employed in key situations, for example in customer contact procedures (Dunford, Snell & Wright, 2001) that relate to and are built on job-specific knowledge.
- It is through the human resource practices in the organisation, such as for example staffing, training and recruiting, that the organisation influences the human capital pool and elicits the desired productive employee behaviour.

In the literature, the combination of human capital, productive behaviour and HR practices can be seen to lead to SCA, provided these are sufficiently different and sufficiently able to aid in generating differentiation for the organisation. In and of themselves, HR practices may be a source for SCA, as they have the potential for being rare and inimitable and are the sources of value creation (Becker & Huselid, 2006:900). In addition, Porter (1996) argued that organisational capabilities are created and competitive advantage facilitated where internal activities are different and "... competitive strategy ... means deliberately choosing a different set of activities to deliver a unique mix of value" (Porter, 1996:64).

Further points relevant for the purposes of this dissertation emerge from Figure 2.1. Firstly, any discussion of the strategic role of human capital will implicitly focus on the productive behaviour of the people in the organisation. Becker *et al.*, (2001:20) define "strategic behavior as the subset of productive behavior that directly serve to implement the firm's strategy. Core behaviors ... flow directly from behavioral core competencies defined by the firm. These are behavior that are considered fundamental to the success of the firm, across all business units and levels. Situation-specific behavior ... are essential at key points in the firm or business unit's value chain". The focus of this dissertation will be on the impact of the ID model on situation-specific behaviour, which blends into core behaviour in that it provides the organisation with a differentiation.

Secondly, HR management practices consist of all the activities, policies and systems applied to manage the "people business" of the organisation, and various models exist in the literature (Terpstra & Rozell, 1993; Becker *et al.*, 2001; Dunford *et al.*, 2001). This dissertation specifically focuses on training as an HR management practice.

Thirdly, human capital as embodied in the knowledge, skills and activities of the workforce is seen to be impacted on, and developed by, amongst others, training, and this is where the ID model fits into the broader scope of HR practices through the development of knowledge and skills.

Lastly, from an RBV perspective, it is posited that business strategy demands a unique set of behaviour from the workforce, and that HR practices produce a unique set of behaviour and responses from the workforce. Wright, McMahan and McWilliams (1994) propose that a highly skilled and motivated workforce has greater potential to contribute to sustainable competitive advantage. Thus, the human capital must have both high levels of skill and the motivation to demonstrate productive behaviour. The concepts of core and

distinctive competencies are also of relevance in this regard. Many writers (see for example Leonard-Barton, 1992; 1995; King & Zeithamel, 2001) recognise the inseparability of competencies and the skills of the employees who comprise the competencies. Specifically recognised are the behavioural aspects of the workforce (i.e. to engage in behaviour that carries out the core competencies) and the role of HR practices in the development and maintenance of the core competencies. Therefore, to understand the competencies, the people who engage in the process, their skills (individually and together) and the behaviour they exhibit are relevant; as are the processes involved in the development and maintenance of competencies. Focusing on the people-related elements, core competencies thus provide the bridge between strategy and HR management.

The relevance of the RBV (see par. 2.2.1) and the development of core and distinctive competencies (see par. 2.4) have been outlined previously. The ID model, as a distinctive and revised human resource practice is thus resident in both strategy (potentially as an enabler for SCA) and HR (in the development of human capital, specifically job-specific knowledge and productive behaviour).

“We argue that these distinctive human resource practices help to create unique competencies that differentiate products and, in turn, drive competitiveness. Indeed, product differentiation is one of the essential functions of strategic management, and distinctive human resource practices shape the core competencies that determine how firms compete” (Cappelli & Crocker-Hefter, 1996:7).

Much attention on knowledge and how organisations generate, transfer, develop and integrate knowledge is evident in the strategy literature within the RBV perspective (e.g. Nonaka, 1991; Hedlund, 1994; Sveiby, 1997). Knowledge, with a focus on various aspects, has been relevant in the HR literature, for example knowledge and testing for job-related knowledge (Hattrup & Schmitt, 1990) or training the workforce to build job-related knowledge (Gephart, Marsick, van Buren & Spiro, 1996). While HR literature has focused on job-related knowledge, the strategy literature has focused more on market-relevant knowledge. The processes of creation, transfer and exploitation of knowledge provide common ground in both strategy and HR literature. Indeed, proponents of the knowledge-based approach to competitive advantage argue that the primary purpose of the organisation is to create and apply knowledge (Grant, 1996; DeCarolis & Deeds,

1999; Dunford *et al.*, 2001; Stiles & Kulvisaechana, 2004). It is in this creation and application of knowledge that the context for the contribution of this dissertation is found.

In the HR literature, the debate about knowledge is traditionally focused on an individual level, primarily associated with job-related knowledge; whereas the human capital literature includes the idea that knowledge can be shared amongst groups and institutionalised in organisation processes and routines (Wright *et al.*, 2001). Writings on High Performance Work Systems (see for example Becker *et al.*, 1997), Communities of Practice (see for example Wenger, 2000) and Business-Driven Action Learning (see for example Boshyk, 2002) are included in the literature, but are not discussed here. High Performance Work Systems focus on HR systems in totality, including remuneration, motivation, empowerment and others; Communities of Practice focus on collective learning in communities, organisational or outside of it, where agreed-upon pre-defined goals are pursued; and Business-Driven Action Learning focuses on methods that align strategic opportunities with individual executive leadership development and teamwork – all of which fall outside the scope and focus of this dissertation.

The focus is specifically on improving human capital through the development and implementation of a revised-from-the-traditional training practice (the ID model) to empirically evaluate the impact thereof on job-specific knowledge and productive behaviour as proxies for SCA. The literature clearly links the development of human capital with organisation performance (see, for example, Delaney & Huselid, 1996; Youndt *et al.*, 1996; Ichniowski *et al.*, 1997; Patterson *et al.*, 1997; Guest *et al.*, 2003; Stiles & Kulvisaechana 2004). For the purposes of this dissertation and based on the evidence in the literature, human capital development through the application of training activities (such as ID models), may be seen to serve as an enabler for sustainable competitive advantage, provided the ID model improves job-specific knowledge and productive behaviour.

The role of training in SHRM is discussed in par. 2.6

2.6 STRATEGIC HUMAN RESOURCE MANAGEMENT AND TRAINING

SHRM and particularly the influence of HR practices and policies on sustainable competitive advantage have generated much interest and debate within academic and practitioner environments. See, for example, Amit and Shoemaker, 1993; Pfeffer, 1994;

Becker and Gerhart, 1996; Youndt *et al.*, 1996; Becker and Huselid *et al.*, 1997; Ichniowski *et al.*, 1997.

What is important in the literature is that there is an increasing emphasis on behavioural strategies that rely on capabilities and core competencies among the workforce (Stalk, Evans & Shulman, 1992; Hamel & Prahalad, 1994), since they are not easy to copy and allow for effective responses to the demands of the market. Emphasis is on the effective implementation of organisational strategies, as well as the content, and therefore HR practices and policies (HR systems) are increasingly viewed as sources for sustainable competitive advantage. One of the strategic roles of the practices and policies of the HR system is, therefore, to support the development of core and distinctive competencies.

When organisations rely on human capital as a source of competitive advantage, they ultimately require the necessary productive behaviour to implement their strategies. The underlying source for job-specific knowledge and productive behaviour, both in terms of initial acquisition and the subsequent development and motivation, is contained in the organisation's HR system (Pfeffer, 1994), a support activity in the value chain.

SHRM is defined as "all those activities affecting the behaviour of individuals, in their efforts to formulate and implement the strategic needs of the business" (Schuler, 1992:18) and "the pattern of planned human resource deployments and activities intended to enable the firm to achieve its goals" (Wright & McMahan, 1992:216). Therefore, SHRM is the overall framework which determines the shape and delivery of individual strategies, e.g. to deliver fair reward or to improve performance, with the ultimate goal to create value through the human resources function and the practices and policies contained therein. In SHRM the following logic is applied to the fit between the skills of the workforce and strategy: HR activities and practices lead, amongst others, to a skilled workforce that engages in competitively different productive and functional behaviour for the organisation, thus forming a source of competitive advantage. This results in higher operating performance, which translates into increased returns and profitability, and thus results in higher market value (Becker & Huselid, 1998).

As discussed in paragraphs 2.3.1 – 2.3.3, value-creating resources must meet four conditions, three of which are applied for the purposes of this dissertation, namely a) value, b) rarity, and c) inimitability.

- a) The question of value relates to how HR practices and policies can develop and/or aid in value-creating strategies for the organisation.
- b) Rarity relates to how HR practices and policies can develop and exploit rare characteristics – if the same HR practice or policy is found in many competing organisations, then clearly those cannot be a source of sustainable competitive advantage for any of them. Valuable and rare HR practices and policies can provide above-normal returns for an organisation in the short term.
- c) However, if other organisations can imitate HR practices and policies, then, over time, they will provide no more than competitive parity (Barney & Wright, 1997). Therefore, if HR practices and policies are to create sustainable competitive advantage, they must be difficult to imitate.

These conditions are equally applicable to all HR practices and policies, including the specific ID models employed by organisations in training.

The features of strategic resources that enhance inimitability as described by Collis and Montgomery (1995) can also be seen to characterise some HR practices. These are path dependency, i.e. resources that are developed over time such that learning and experience provide a cumulative “first mover” advantage; and causal ambiguity, i.e. resources whose content and essential constituents are so subtle and difficult to understand that people outside the firm are not able to reproduce the resource in their own organisation.

HR practices and policies can play an important role in creating and sustaining an organisation’s competitive advantage, either through directly controlling or strongly influencing and developing elements of human resources characteristics. However, proposing that HR can influence an organisation’s performance is only part of the story. For HR to truly develop and maintain the outputs for competitive advantage, focus must also be on activities directed at and aspects of the organisation’s resources that will provide such competitive advantage (Barney & Wright, 1997).

The literature abounds with examples of HR practices, policies and systems that can provide competitive advantage. See, for example, Lado and Wilson, 1994; Pfeffer, 1994; Wright *et al.*, 1994; Boxall, 1996; Wright, Gardner and Moynihan, 2003; Tamkin, 2005. In

most of the writings, skills development and training is seen to be one of the HR practices contained within the broader system of practices and policies that can bring about competitive advantage.

The concepts of training and learning are often used interchangeably, although there are nuanced differences. "Training is instruction for a specific task. Learning, on the other hand is a continuous process. Training is one of the many tools used to build a learning environment. Learning encompasses an individual's acquisition and assimilation of experiences, information and daily activities" (Kirkwood & Pangarkar, 2003:10).

Training thus provides information to the employees which can only become valuable to the organisation if knowledge and application (i.e. learning) follow. For the purposes of this dissertation, the term training is used to encompass both information (i.e. job-specific knowledge) and learning (i.e. productive behaviour) as these are imparted through the ID model.

Therefore, training, as applied in the instance of this dissertation, relates to the development of human capital, i.e. the skills, job-specific knowledge and abilities of the people in the organisation as they manifest in productive behaviour. Human capital theory (Flamholtz & Lacey, 1981) distinguishes between general skills and organisation specific skills of human resources. General skills are those skills individuals have that provide value and are transferable across organisations, e.g. computer literacy. General skills are necessary for maintaining competitive parity and to provide the workforce with employability (Kissler, 1994). General skills are important and are ignored in training at organisations' peril. Specific skills provide value only to a specific organisation, for example knowledge of the organisation's specific planning process in line of sight with its vision, or the use of a particular technology relevant only to the organisation in question. Specific skills can contribute to sustainable competitive advantage and can be accomplished through investing in training and development of the workforce to perform work processes and procedures specific to the organisation (Barney & Wright, 1997) and, for the purposes of this dissertation, by developing and implementing a specific ID model to impart organisation job-specific knowledge and productive behaviour.

However, the literature also refers to shortcomings of existing training and skills development procedures (amongst others, Oliver & Fleming, 1997; Sumner *et al.*, 1998; Daniels, 2003), which prompted the development of the specific ID model put forward in

this dissertation. Thus, while the frame of reference of training within SHRM is evident from par. 2.6, it bears emphasising that the assumption that single HR practices *per se* bring about competitive advantage is both deceptive and erroneous. While individual practices bring about value in the value-rarity-inimitability framework, they are unlikely to be a source of sustainable competitive advantage in isolation. Rather, individual practices may be seen as enablers to bring about competitive advantage, provided the independent practices (such as the ID model) are viewed as interrelated components of a highly interdependent system (the SHRM system), and there is integrated effort to support the individual practices to make them part of the bigger organisation system as a whole. “The interrelatedness of the system make the advantage difficult, if not impossible for competitors to identify and copy” (Barney & Wright, 1997:15). The time and effort invested in developing an integrative, supportive system is a further element which makes it difficult for competitors to “catch up” in the short term. Research on bundles of HR practices confirms that organisations with integrated systems overall, wherein individual practices are supported by the whole, seem to obtain sustainable competitive advantage (Delaney & Huselid, 1996; Youndt *et al.*, 1996). It is thus important from the perspective of this dissertation, that there are back-end HR and organisational support systems within which the ID model is implemented and these will be elaborated on in par. 4.5.2.

Thus, strategic human resource management (the activities and planned HR deployments to help the organisation achieve its goals) is important for the development of human capital (the knowledge, skills and abilities of the workforce) that can provide value to the organisation, as amongst others, embodied in productive behaviour. One such activity is brought about through the training of the workforce, and instructional design is an important, if not a core, part of the process.

2.7 SUMMARY

Sustainable competitive advantage lies at the heart of organisation performance and strategic management, particularly business-level strategy, concerns itself with how to achieve and maintain a competitive advantage. Two schools of thought on how to attain SCA are pertinent for this dissertation: The RBV that regard resources as key for value-creation; and the PBV that considers position relating to cost or differentiation as key for value-creation. Both the RBV and PBV regard value chain activities as being fundamental

in producing value for the organisation through creating distinctive features, service and/or quality.

The choice of strategy is facilitated by beneficial deployment of the organisation's value chain that represents both primary and support activities in the business of the organisation. The particular focus for this dissertation is on training as an activity in human resource management, which impacts on the ability of the organisation to, through its workforce, display and apply capabilities and core competencies to its advantage.

The workforce, as an intangible resource of the organisation, is value-creating if they are rare, valuable and inimitable. Where this is so, resources provide the input and source material for capabilities and core competencies. Capabilities are what an organisation does; the capacity of bundles of resources to perform tasks; or activities to achieve goals. In order to cope with a turbulent and changing environment, dynamic capabilities are learned collective activities that enable an organisation to generate and modify its operating routines in pursuit of improved effectiveness. This is done through knowledge codification which can be contained in for example manuals, blueprints and support systems. In this dissertation, the ID model is put forward as one such "manual" aimed at building organisation core competencies.

Core competencies are strategically important activities that an organisation performs better than other activities and they are most often knowledge-based and residing in people. Core competencies are seen as a collection of skills, technologies and learning that contribute to competitive success. It is an essence of what makes an organisation unique in its ability to provide value to customers. The core competencies become distinctive competencies when valuable activities in the organisation are performed better than what they are performed by competitors and thus a superior resource strength results.

Human capital in an organisation, those individual abilities, knowledge, skills and expertise vested in its people, is regarded as a strategic resource that must be developed and harnessed by organisations to achieve SCA. Where the human capital resource is developed, competitive advantage may be achieved through a better alignment with and execution of organisational strategy, provided differentiation is achieved. Human capital development is a function of the HR support activity in the value chain. Development of that human capital, facilitated through, for example training, results in improved job-

specific knowledge and productive behaviour that enable improved capabilities and core competencies which can in turn lead to SCA.

The focus of this dissertation is on the improvement of human capital in an organisation through the development and implementation of a revised training procedure that aims to improve job-specific knowledge and productive behaviour as proxies for SCA. When organisations rely on human capital as a source of competitive advantage, they ultimately require the necessary productive behaviour from employees to implement their strategies. The underlying source to generate and develop this behaviour is contained in the HR system. Some individual practices in the HR system, e.g. training, lead amongst others to a skilled workforce that engages in productive and functional behaviour for the organisation, thus forming the potential for SCA. In this dissertation, the focus is on a specific way of training, disseminated through a particular instructional design model.

In Chapter 3 the literature relating to training and instructional design is reviewed, to provide the framework within which the ID model is developed and needs to deliver on.

CHAPTER 3

LITERATURE REVIEW ON TRAINING AND INSTRUCTIONAL DESIGN

3.1 INTRODUCTION AND BACKGROUND

This chapter reviews the literature to expand on the theoretical frame of reference and line of logic for this dissertation, as outlined in Figure 1.1:f and g.

Training, as one of the activities to develop human capital in organisations, faces increasing demands to deliver more than mere course-based outputs. The prevailing conception of the contribution and impact of training is that training may be viewed on one enabler for improving workforce, and therefore organisation, performance and effectiveness (see par. 2.5 and par. 2.6). The rationale for training is based on the self-evident notion that competent (i.e. well-trained) employees should perform more effectively and efficiently than less-competent employees (Brinkerhoff in Brown & Seidner, 1998). The impact of training is seen as culminating in organisational benefits (such as increased production or productivity, greater quality, more efficient process execution) that come about when improvements in individual abilities are brought about through training (see par. 2.5 and par. 2.6). With increasing complexity, and continuous changes in the external business environment, the value of a competent workforce, working to the benefit of the organisation's strategic value-creating success is becoming increasingly important (see par. 2.2).

In light of this, the broad, encompassing field known as training is facing an onslaught of serious change. The focus of training practices is seen to be on organisation performance and not merely on individual learning. There is a defined need to demonstrate that training plays a role in strategic initiatives and performance, core and distinctive competencies, organisation effectiveness and, ultimately, also the bottom line (see par. 2.6). There is a shift from training to learning and the heightened role of learning in work (Sugarman in Brown & Seidner, 1998). In addition, the audience at which training is directed, i.e. the workforce or learners, is receiving specific attention as adult learners (van Dyk, Nel & Loedolff, 1992; Merriam, 1993; Jarvis, 1995; Knowles, Holton & Swanson, 2005). The way

in which training is presented needs to adapt to changing demands and the ID models employed to deliver training by necessity also need adapting to the new demands and expectations. Offering training that merely improves the skills of the workforce is not enough. Training must visibly and substantially contribute to the fulfilment of business-level strategy (van Adelsberg & Trolley, 1999), through, amongst others, the improvement of job-specific knowledge and productive behaviour (see par. 2.2.1, par. 2.5 and par. 2.6).

Against this background, this chapter reviews the literature on training and instructional design. It does so by defining training and outlining the connection between training and organisational performance (par. 3.2). Continuous and ongoing changes in the external business environment impact on training, the demands placed thereon and how it adapts. The changes in demands on training and changes in training practices are discussed in par. 3.3 and a specific focus on learning is reviewed in par. 3.4. An overview of instructional design (par. 3.5) and ID models are reviewed (par. 3.6), which provides an overview of guidelines for ID models to provide the basis for the ID model put forward in this dissertation (see Chapter 4). A summary of Chapter 3 is provided in par. 3.7.

3.2 DEFINING TRAINING AND ITS CONNECTION TO ORGANISATIONAL PERFORMANCE

All work today, even menial work, requires some level of skills and knowledge. Organisational change and ongoing new challenges in the marketplace demand that the workforce perform better, and often in new ways, and usually training provides the inputs. Training has at its heart performance improvement, whether for individuals or organisations. Training in organisations aims to improve performance relevant to the business of the organisation as embodied in the job-specific skills and productive behaviour of individuals. The focus is on performance improvement for the organisation *per se*. Performance improvement implies that learning has taken place to enable better or different ways of doing things. Training and learning thus go hand in hand (also see par. 2.6), as training is instruction for a specific task, while learning happens when changed behaviour results. Thus, although training and learning are distinct concepts, they are interconnected. The relevance is illustrated in the following definition of training.

“Training and development focuses on identifying, assuring, and helping develop, through planned learning, the key competencies that enable individuals to perform current or

future jobs. Training and development's primary emphasis is on individuals in their work roles. The primary training and development intervention is planned individual learning, whether accomplished through training, on-the-job learning, coaching, or other means of fostering individual learning" (Wick & León, cited in Davis & Davis, 1998:42-43).

Contained in this definition is a number of points pertinent for this dissertation. One, training is the planned effort of an organisation to; two, help employees learn the job-related knowledge and skills they need to; three, do the job properly – i.e. exhibit and employ productive behaviour of benefit to the organisation. Training represents an organised and managed way to transfer knowledge and know-how required of employees to successfully perform a function in the value chain that ultimately benefits the organisation. Therefore, one of the decisive contributions of training is to improve organisational performance through the development and enhancement of job-specific knowledge and productive behaviour of employees that will add to organisational effectiveness and efficiency, which may ultimately impact on financial performance and sustainable competitive advantage. Indeed, "the increasing interest that firms have been showing over recent years in employees and in practices related to their management, especially training, can be explained by the general acceptance of the fact that human resources and organisational knowledge are, at present, two of the main sources of sustainable competitive advantage for the company" (Aragón-Sánchez *et al.*, 2003:975).

The literature provides much evidence of a relationship between HR practices (with training as one practice) and organisational performance. See for example Terpstra and Rozell, 1993; Pfeffer, 1995; Huselid, 1995; Hoque, 1999; Khatri, 2000; Murphy and Zandvakili, 2000; Tamkin, 2005. Empirical studies indicate a significant relationship between HR practices and organisational outcomes such as, amongst others, productivity (Arthur, 1994; Huselid, 1995; Youndt *et al.*, 1996; Hoque, 1999) and market value (Becker & Huselid, 1998; Lau & May, 1998). Specifically, the literature bears out that training enhances employee productivity (Bartel, 1994; Huselid, 1995; Black & Lynch, 1996; Barret & O'Connell, 2001; Paul & Anantharam, 2003).

Although these studies could not find direct causal connections between HR practices and organisational financial performance, there is clear evidence that each and every HR practice included in the studies has an indirect influence on the operational and financial performance of organisations – HR practices, including training, may therefore be viewed

as enablers in the line of logic connecting training, organisational performance and SCA. (Also see Figure 1.1).

Similarly, however, the literature also contains criticism relating to the HR practices – organisation performance link, often focusing on the lack of theoretical underpinnings of the research, and specifically the lack of description of the processes by which HR practices impact on organisation performance (Dyer & Reeves, 1995; Becker & Gerhart, 1996; Guest 1997; Wright *et al.*, 2003).

Purcell (in Worland & Manning, 2005:9) refers to the “black box” in which HR practices impact on organisational performance, since it is hard to explain when, how and why interconnections exist and are caused. There is thus a multi-layer framework in which HR practices and organisational performance is presented in the literature. Whilst criticisms in the literature are acknowledged, the focus for this dissertation falls outside the ambit of these criticisms (i.e. lack of theoretical underpinnings, lack of description of processes, “black box” regarding the when, how and why of interconnections). Rather, the growing body of evidence regarding the link provides context for the theoretical frame of reference and flow of logic (par. 1.2.2).

Given, on the evidence provided in the literature, the link between training and organisational performance established, it is necessary to consider the changing and changed environment in which training needs to deliver as this provides further context for the development of the ID model put forward. Changes in the demands on training and changes in training practices are subsequently examined in par. 3.3.

3.3 CHANGES IN DEMANDS ON TRAINING AND CHANGES IN TRAINING PRACTICES

3.3.1 Introduction

As mentioned in par. 3.1, training is facing an onslaught of serious change. This change is two-fold, the changes in demands on training as discussed in par. 3.3.2 and changes in training practices as discussed in par. 3.3.3.

3.3.2 Changes in demands on training

Human resource development, specifically through training, increasingly needs to cultivate job-specific knowledge and productive behaviour in order to sustain a competent and productive workforce. Training provides the inputs that enable employees to improve their abilities, skills and knowledge (Cascio in Jinabhai, 2005:85). In the South African context, the focus is on fast-tracking skills development since the skills shortage is viewed as one of the major impediments to not only the performance of organisations, but also the economic growth of the country and the well-being of South African citizens (Jinabhai, 2005; Madlana, 2007). In addition, “corporate South Africa can’t afford to simply wait for universities to deliver, it needs to invest in its own people” (Gillingham, 2008:16). In the past, short-term, quick-fix training was evidently the norm, but today the focus has shifted to long-term and ongoing training practices that visibly engender employee behaviour that is of value to organisations. In addition, there is a shift from workshops and seminars to more formal training in organisations and on increasing demands that training in organisations align to formal qualifications (Murdoch in Gillingham, 2008:16).

Thus, organisations in South Africa specifically are increasingly compelled to provide training that one, increases job-specific knowledge and skills relevant for the effective performance of both employees and the organisation; two, is ongoing; three, is formal; and four, aligns to formal qualifications. The relevance for this dissertation is as following: the ID model put forward in Chapter 4 aims to improve job-specific knowledge and productive behaviour (core and specific – see par. 1.1) through a formal, ongoing training intervention, which aligns to NQF requirements.

The primary goal of training is seen to be the contribution it makes to the knowledge and skills of employees, so that their productive behaviour contributes to the overall goals of the organisation. This is a change from the “training-for-training’s-sake” approach evident in many organisations. Training is often viewed as a separate function from employees’ work activity (Kirkwood & Pangarkar, 2003:11) which is problematic when the employee cannot integrate new knowledge and skills to improve core- and situation-specific behaviour. Therefore, training now should ensure the needs of the organisation regarding its capabilities and core competencies are considered (Anthony *et al.*, in Jinabhai, 2005:85) and incorporated into the development of training interventions. As discussed in par. 2.4, capabilities and core competencies are seen to be sources of organisational output within the RBV; both of which have an influence on organisations achieving SCA.

In summary, there are six major changes in the demands on training. One, training needs to develop job-specific knowledge and productive behaviour aimed at enabling organisations to achieve their goals. Two, training needs to be planned for within the broader strategic scope of the organisation and its business. Three, training needs to be ongoing, long-term and formal. Four, training needs to equip employees to transfer and apply knowledge and skills into their work activities. Five, training needs to be coordinated and developed with a cognisance of the capabilities and core competencies of the organisation so that it, six, improves behaviour of employees at relevant points in the value chain of the organisation. In the South African context, a seventh change in the demands of training applies, namely, training must have in mind alignment with formal qualifications as defined in the NQF and industry-specific SETAS and as legislated by the SDLA and SDA (see par. 1.1).

There are however also changes in training practices that have relevance for this dissertation. These changes relate by and large to changes in delivery systems and media, course-based once-off training, the use of digital technologies and a focus on learning rather than training. These changes in training practices are discussed in par. 3.3.3.

3.3.3 Changes in training practices

Today's training practices have already moved away from the "classroom only" model, and include e-learning, coaching, CD-ROMS, online learning, learning portals, take-home self-paced packages and many more. In fact, "traditional classroom training is an intervention of the secondary resort" (Brown in Brown & Seidner, 1998:8). Despite this, organisations still report that classroom-type (or facilitator-led) training is dominant (Bateman & Snell, 2002; Media Toolbox, 2003; Gillingham, 2008). Often, for managers and the workforce alike, learning equals course-based training (Poel & Van der Krogt, 2001), with little or no insights beyond course contents to learning and the application of relevant job-specific knowledge and skills that culminate in productive behaviour aligned with organisational goals.

Another change relates to the practice of isolated, "one-shot" training, which is changing to continuous learning. In the traditional model of training, the workforce typically received pre-prepared courses, was "trained" on the contents, and was then expected to apply this abstract knowledge in the workplace later. Now, the emphasis is on continually learning, and applying the knowledge in the workplace (Detterman, 1993; Kirkwood & Pangarkar,

2003; Jinabhai, 2005). In fact, as early as 1988, Kenney and Reid (in Sambrook & Stewart, 1999) reported a shift away from standardised training programmes to an emphasis on the learning process, and self-directed and self-managed learning.

New digital technologies are providing unprecedented opportunities for advances in facilitating and enabling learning. Two opportunities stand out, i.e. that of “access to” and “contents”. Digital technology allows access to learning contents on a 24 hours per day, seven days per week basis. In addition, contents can be inclusive of a variety of media (e.g. video, voice-over, graphics, animation) to enhance learning.

There is evidence that the new organisational training is moving from practices that offer broad, general training, to a curriculum that is fulfilling organisation-specific needs (El-Tannir, 2002; Daniels, 2003; Ketter, 2006). This specially tailored training aims at improving the skills and productivity of the workforce through the use of technology. Training containing organisation relevant contents and learning is more responsive to organisational needs, since it builds and enhances organisation-specific knowledge which contributes to core and distinctive competencies.

Newer thinking on training challenges the assumptions related to the relationship between training, learning and work. Learning is no longer regarded as solely a classroom activity necessary to enable the workforce to become more capable at work tasks. Rather, learning is seen more and more as a continuous work-based activity, necessary to cope with the changing business environment. The “old model” was training, then work, then more training. However, new positions about this require thinking more about learning and less about the traditional notion of training (Sugarman in Brown & Seidner, 1998). The “new model” posits learning, then work-which-includes-continuous learning. “We are not just learning to do the work better; we are building the organization’s knowledge base and revising its tools, processes, and products, as we work” (Sugarman in Brown & Seidner, 1998:65). Learning, learning in organisations and organisational learning have received much attention in the literature and warrant closer review (see par. 3.4).

The relevance of these changes in training practices for this dissertation is five-fold. First, there is an opportunity to include continuous learning and the application of job-specific knowledge in the development and design of the ID model. Secondly, self-directed and self-managed learning can be incorporated. Thirdly, the use of digital technology allows for 24-7 access to learning contents, which can be enhanced through a variety of how the

learning contents are presented. Fourth, the learning contents can be geared to deliver training aimed at improving core and situation-specific behaviour through improved job-specific knowledge that can ultimately benefit the organisation. Fifth, learning is to be an integral ingredient in the ID model.

The focus on learning and the literature regarding learning are examined next in par. 3.4 to appraise the relevance thereof for this dissertation.

3.4 THE FOCUS ON LEARNING

Learning, the learning organisation and organisational learning have become buzzwords in organisation management, HR development, training, education and psychology literature. It may be argued that this profound interest is prompted by the belief that learning (in individuals and organisations) is key to building and sustaining competitive performance.

There appears to be little consensus about exact definitions for learning, the learning organisation and organisational learning (Sun, 2003:153) and even where definitions are found, they are often contradictory and irreconcilable. See for example, Fiol and Lyles, 1985; Senge, 1990; Dodgson, 1993; Huber, 1991; Garvin, 1993; Nonaka and Takeuchi, 1995; Argyris and Schön, 1996; Crossan and Guatto, 1996; DiBella *et al.*, 1996; Lipschitz, Popper and Oz, 1996; Miller, 1996; Easterby-Smith, 1997; Starkey, 1998; Easterby-Smith *et al.*, 1999.

The following broad definitions are noted to determine the relevance of the focus on learning for this dissertation. Argyris and Schön (1978:2), two of the early researchers in the field, define organisational learning as “the detection and correction of error”. Fiol and Gyles (1985:803), define learning as “the process of improving actions through better knowledge and understanding”. Dodgson (1991:377) defines organisational learning as “the way firms build, supplement and organize knowledge and routines around their activities and within their cultures and adapt and develop organizational efficiency by improving the use of the broad skills of their workforces”. Huber (1991:89) states that learning occurs in an organisation “if through its processing of information, the range of its [organisation's] potential behaviour is changed”.

Adding complexity to the spectrum of definitions are the numerous theories and models of what learning is and the processes by which learning happens. See for example Piaget (1926; 1985) for stages of cognitive development; Dewey (1938; 1997) on elements of learning, viz. suggestion, problem, hypothesis, reasoning, testing; and experience and education; Maslow (1968) on the significance of self-actualisation in learning; Freire (1972) on an account of learning through problem-posing and liberatory education; Kolb (1984) on experiential learning; Gagné (1985) on types of learning viz. basic, motor and verbal learning, concept learning, problem solving, learning structures, the motivation and control of learning and learning decisions; Lave and Wenger (1991) on situated learning in communities of practice; Mezirow (1991) on psycho-analytical, behaviouristic and humanistic theories of learning; Rogers (2003) on the distinction between task-conscious or acquisition learning and learning-conscious or formalised learning.

Whether learning is viewed as a product (the end product or outcome of some process that results in a change in behaviour); a process (what happens when the learning takes place); or as a theory (postulations and explanations of why and how change occurs); learning as used in this dissertation refers to the concerted activity and effort that increases the capacity and willingness of organisations and individuals to develop, obtain and apply new knowledge and skills to improve job-specific knowledge and productive behaviour. With the focus on learning, training in organisations thus has to impact positively on the improvement of job-specific knowledge and productive behaviour. The link is clear – training needs to facilitate learning that needs to culminate in improvements in job-specific knowledge and productive behaviour.

These definitions and perspectives on organisational learning and learning as outlined above is what Hawkins (quoted in Stewart, 2001:142) calls “a change at the heart of our understanding of learning. A shift from viewing learning as being abrupt facts to learning as a more multi-faceted and dynamic process”.

As such, the line of reasoning that fostering learning in individuals can be transformed into improvements in activities and behaviour that may lead to increased efficiency and performance for the organisation, ties in with the RBV which holds that organisations can find strategic value-creation through the development and deployment of intangible resources (such as human capital) and skills contained in the workforce which contribute to the core and distinctive competencies of the organisation.

According to Senge (1990:3) learning organisations are “organizations where people continually expand their capacity to create the results they may desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together”. The learning organisation viewpoint focuses heavily on the work team and its objectives of performing better as a team, and how to learn how they learn.

When considering the literature on dynamic capabilities and learning, Zollo and Winter (2002:340) submit that dynamic capabilities arise from learning, amongst others through the codification of knowledge. As outlined in par. 2.4.1, and to highlight again here, dynamic capabilities (DCs) are relevant for this dissertation in five ways. One, DCs allow organisations to modify operating routines to build and configure core competencies to deal with the volatile environment – the training provided through the ID model is aimed to do this. Two, DCs offer opportunities to generate or acquire new competencies – the training provided through the ID model aims to, in itself, provide a competency for the organisation. Three, DCs are built in the organisation – as is the case of the proposed ID model – and four, ensure productivity of the workforce – as will be assessed in this dissertation. And lastly, learning within the DCs framework requires common codes of communication and coordinated procedures – as contained in the communication style and coordinated procedures in the ID model. The dynamic capabilities approach, apart from the writings on learning in organisations, and the learning organisation also connects to the discourse surrounding the knowledge-based view of the organisation (Nonaka & Takeuchi, 1995; Ferdinand *et al.*, 2004).

As mentioned, organisational learning, knowledge management and the learning organisation involve aspects of many different disciplines (e.g. sociology, psychology, organisational behaviour, and economics) and a dominant feature of the literature is the lack of convergence regarding precise definitions for these constructs.

Overall, the literature on organisational learning seems to focus on compiling and assessing processes of learning within organisations, while literature on learning organisations focuses on diagnostic and evaluative tools to identify, enhance and evaluate the quality of learning in organisations (Senge, 1990; Easterby-Smith *et al.*, 1999). The tenet of organisational learning is that fostering learning in individuals transforms improvements in behaviour which leads to competitive advantage for organisations. Organisations “learn” as individuals within it learn. Learning organisations on the other

hand are organisations where individuals continually create and expand their capacity to achieve the results they want (Senge, 1990:3). In organisational learning and the learning organisation the main thrust is on collective processes and individual controls over and inputs to learning, thus a further discussion thereof falls outside the scope of this dissertation.

Similarly, a further discussion on knowledge management falls outside the scope of this dissertation, as knowledge management broadly concerns the monitoring and facilitation of knowledge-related activities; the creation and maintenance of the knowledge infrastructure; transforming knowledge; and leveraging knowledge through the use of technology (Wigg in Hong & Stahle, 2003:9).

The importance of the focus on learning in the literature is important for this dissertation for four reasons.

One, organisations that want to keep pace with the changes and be or become leaders in the competitive arena, need to look at ways to induce and improve their employees' learning capability and optimise their knowledge (Grant, 1996). This implies that organisations need to ensure that their employees have a minimum threshold of job-specific knowledge and motivation to learn in order to be able not only to absorb new knowledge, but also be better able to apply what they have learned. For this dissertation, an improvement in job-specific knowledge levels will aid in the achievement of improved performance.

Two, empirical studies (see, amongst others, D'Netto & Sohal, 1999; Goh, 2002) show a significant and positive relationship between employee development and learning capability. Appropriate training lays the foundation to absorb knowledge, and in turn smooths the way for continuous learning that contributes to organisational performance. For this dissertation, allowance should be made in the ID model for appropriate (organisation-specific) training and continuous learning (a dynamic, ongoing process).

Three, learning happens when improvement in job-specific knowledge levels and the application of this knowledge in practice result in discernibly more productive behaviour in core and situation-specific situations within an organisation. For this dissertation, the ID model should incorporate opportunity for the application of job-specific knowledge to improve core and situation-specific behaviour.

Four, HR practices have a strong potential to shape and develop work behaviour (Ulrich & Lake, 1991; Soliman & Spooner, 2000; Shipton *et al.*, 2002). This means that organisations, through HR practices amongst others, need to manage the conditions and supply the tools to help employees incorporate new learning and change behaviour to support organisational requirements. Thus, it is important to have effective practices (at the micro level, ID models) and procedures (broader speaking, knowledge management and learning systems) to contribute towards training and developing people for desired organisational learning, and ultimately, performance. For this dissertation, the ID model may therefore be seen to be an effective practice that contributes to training and developing the workforce to the benefit of the organisation, provided it improves job-specific knowledge and productive behaviour.

The development of effective practices, at the micro level, ID models as a practice, is a focus for this dissertation. The literature on instructional design is reviewed next in par. 3.4 to provide the definition of ID and review prevailing ID theories.

3.5 OVERVIEW OF INSTRUCTIONAL DESIGN (ID)

Instructional design has been described as a process, i.e. the systematic development of instructional specifications; as a discipline, i.e. the branch of knowledge concerned with research and theory about instructional strategies and their development and implementation; as a science, i.e. creating specifications for situations that facilitate learning at all levels of complexity; as a reality, i.e. an unformulated idea that is developed into an instruction situation; as an instructional system, i.e. an arrangement of resources and procedures to promote learning; and as instructional technology, i.e. the systematic and systemic application and techniques from various theories to solve instructional problems (Berger & Kam, 1996).

Similarly, various terms and definitions are used interchangeably, for example instructional design, instructional system or systems design, instructional theory, instructional design models, instructional models (see amongst others Andrews & Goodson, 1980; Dick & Carey, 1990; Gagne, 1992; Dick, 1995; DeLisle, 1997; Dick, Carey & Carey, 2000; Clark, 2004b). To provide the framework within which instructional design and the permutations of the construct are approached in this dissertation, three main areas regarding instructional design are examined. These are defining instructional

design (par. 3.5.1), instructional design theory (par. 3.5.2) and developments impacting on instructional design (par. 3.5.3).

Instructional design models warrant a separate examination and the literature thereon will be reviewed in par. 3.6.

3.5.1 Defining instructional design

At its simplest level, ID may be defined as a system or process of organising learning resources to ensure learners achieve established and desired learning outcomes. ID is the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction. It includes the entire process of analysis of learning needs and objectives, and the development of a full delivery system to meet those needs and objectives. It also includes the development of instructional material and activities; and the putting into practice and evaluation of all instruction and learner activities (Gros *et al.*, 1997; Moallem, 2001). The salient points are that ID is an analysis of learning needs and objectives; ID is the development of a delivery system; ID is the development of learning material and activities; ID includes the tryout and evaluation of the system. ID includes all of these activities in an all-encompassing system.

Reigeluth (1999:7) defines ID as "... concerned with understanding improving and applying methods of instruction". More specifically, Moore, Bates and Grundling (in Mishra & Bartram, 2002:71) define instructional design as "... in essence, it consists of solving instructional problems by systematically analysing the conditions of learning and designing a satisfying learning experience based on this analysis. Therefore, instructional design refers to the systematic process of translating principles of learning and instruction into plans or specifications for instructional materials or activities".

The goal of ID is to create successful learning experiences and to engender the transfer of desired, and in the case of organisations, productive behaviour. The need for ID is clear, because of the role it plays in the learning experience, addressing aspects such as the growing demand for a skilled workforce that through, amongst others, job-specific knowledge, contributes to productive behaviour in organisations. In addition, ID addresses the issues of access to learning opportunities, outcomes-based training and learning and the transferability of skills between organisations and industries.

There are five main advantages of ID. One, from an organisational perspective, it provides a roadmap for the development of training interventions and speeds up the process. Two, it outlines the decision-making process in finding solutions for value-added organisational training. Three, it is based on tried-and-trusted methodologies, theories and models that assure quality of instruction and outcomes. Four, it delineates expected outcomes against which performance can be measured. Five, it assists in the planning, management, coordination and administration of a variety of tasks, stakeholders, role-players, outputs and timing and costing.

Instructional design, whilst offering solutions, also offers a wide range of challenges in practice, for example, an integrated view regarding instructional design theory is still lacking. Par. 3.5.2 reviews some of the prevailing views on instructional design theory.

3.5.2 Instructional design theory

As outlined in par. 3.5.1, precise definition for instructional design theory is difficult to find and rather obscure, as the term is used interchangeably with for example, instructional theory, instructional learning theory, ID models, and theory of instruction or theory in instructional design. See for example Kane and Marsh, 1980; Winn, 1997; Christensen *et al.*, 1998; Spector, 1998; Reigeluth, 1999; Schott *et al.*, 2001; Visscher-Voerman and Gustafson, 2004.

Schott *et al.*, (2001) offer an explanation of the subject matter of instructional (design) theory. The first level refers to observed instruction that is going on; the second level is the guidelines, rules and recipes of instruction and the third level “refers to the instructional theory, which means the whole set of theoretical concepts that are behind different instructional methods or different models of instructional design” (Schott *et al.*, 2001:347). To them, instructional (design) theory relates to an analysis and description of the methods of instructional design, a comparison of existing models of instructional design and the creation of new models of instructional design. This dissertation includes all three, viz., analysis and description of methods (see par. 3.6), an overview of existing models (see par. 3.6) and the creation of a new model (see Chapter 4). As such, this dissertation may be seen to offer instructional design theory.

Moore *et al.*, in Mishra and Bartram (2002:71) take it one step further – “instructional systems design is considered to be both a science and an art. A science because it is rooted in learning theories ... and an art because the designing of the instructional

materials is a highly creative process". In short, ID theory draws upon a diversity of disciplines (e.g. psychology, creative design, sociology, business management, education) in the construction and development of its theories and as such a precise definition remains elusive.

Reigeluth (1999) describes ID theory as consisting of (one) design, (two) methods that are (three) probabilistic and underpinned by a (four) particular philosophical approach. One, it is an orientation towards *design*, with a focus on the means to achieve the objectives of learning and development. Two, it provides, identification of the *methods* of instruction and the *situations* in which these methods apply. These methods may be broken into smaller components, especially if outcomes are dependent on a specific situation. Three, the methods in ID theory are *probabilistic* rather than deterministic, which means they increase the chances of achieving the objectives, rather than ensuring attainment of objectives, i.e. the methods are enablers. And four, the design and objective of ID theory is underpinned by a philosophical paradigm or approach.

The different approaches to ID are largely based on the instructional designer's philosophical paradigm and stance towards learning. See for example Jonassen (1994) and Reigeluth (1999) on new constructivist design theories for problem solving; Merrill (1999) on "first principles of instruction"; Cascio (1995) on the impact of technology and the need for complex knowledge; Richey (1998) and Driscoll and Dick (1999) on new context and technology-based design; van Merriënboer *et al.*, (2002) on complex learning. Almost all of the paradigms have, at heart, also a stance toward learning and how learning happens (i.e. learning theory). Philosophical and design paradigms in ID are thus inextricably linked to learning theory.

Although there are variations and permutations within each, three basic or foundational learning theories are generally acknowledged (Schuman, 1996). Behaviourism is based on observable changes in behaviour and focuses on a new or desired behavioural pattern being repeated until it becomes automatic. Cognitivism is based on the thought process behind the behaviour and focuses on observing changes in behaviour, but only as an indicator of what's going on in a learner's head. Constructivism is based on the premise that perspectives of the world are created by each individual, based on individual experiences and schema. Constructivism focuses on preparing learners to solve problems in ambiguous and/or real-life situations. Behaviourist learning theory is about behavioural change brought about by learning; cognitive learning theory is about the reorganisation of

internal knowledge structures; and constructivist learning theory is about how interacting with the environment, learners actively construct new meaning by incorporating new information into existing knowledge.

This dissertation approaches learning from a constructivist point of view, as it is argued that learning takes place when the learner is actively engaged in meaningful activities and projects (Kafai & Resnick, 1996; Jonassen, 1999), whereby new job-specific knowledge and productive behaviour are developed. Doolittle (2001) describes instructional design based on constructivism as containing eight principles. One, learning should take place in authentic and real-world environments. Two, learning should involve social negotiation and mediation. Three, content and skills should be made relevant to the learner. Four, content and skills should be understood within the framework of the learner's prior knowledge. Five, learners should be encouraged to become self-regulatory, self-mediated and self-aware. Six, learners should be assessed formatively, serving to inform future learning experiences. Seven, instructors/trainers serve primarily as guides and facilitators of learning. And eight, instructors/trainers should provide for and encourage multiple perspectives, contents provision and the ways in which learning is facilitated.

Instructional design incorporating these principles is compatible with the attributes of meaningful learning described by Jonassen, Peck and Wilson (1999), namely active learning, constructive learning, intentional learning, authentic learning and cooperative learning.

Although the definition of ID (par. 3.5.1) and ID theory (par. 3.5.2) are key to understanding ID, a number of developments in the last decade or so are impacting thereon. These are discussed next in par. 3.5.3.

3.5.3 Developments impacting on instructional design

3.5.3.1 Introduction

A number of developments impacting on instructional design emerge from the literature. These are technology and multimedia (par. 3.5.3.2); visual and graphic design (par. 3.5.3.3); approach to learners (par. 3.5.3.4); learning and learning theory (par. 3.5.3.5) and changing roles (par. 3.5.3.6). A summary of the developments impacting on instructional design and insights gleaned from multidisciplinary literature is provided in par. 3.5.3.7.

3.5.3.2 Technology and multimedia

Technology and the growth of information and communication technology has impacted greatly on instructional design and learning in a variety of ways. Technology can be used to develop and disseminate learning contents; learning contents can now be offered in multi-media format on computers; these become tools for learning.

Multimedia is the simultaneous use of pictures, text and sound to enhance the presentation of contents, and in the instance of this dissertation, learning contents, mostly using the computer as medium. Multimedia learning uses verbal, visual and auditory cues for learning, and is becoming increasingly investigated for use in the management education milieu (Mayer, 1997; 2001; Burke, 2007), especially since computers are pervasively found within organisations. Short-term working memory has been shown to increase if information (or learning contents) is presented in different forms using both verbal and visual material (Kalyuga *et al.*, 2000). The use of computers as cognitive tools to disseminate learning contents assists learners in organising, structuring and representing knowledge, especially since the learner is actively involved in using the tool to construct the knowledge (Jonassen & Reeves, 1996:695-697). Ultimately, multimedia theory “claims that a coordinated presentation of narration and pictures is effective because it guides learners’ cognitive processes in selecting and organizing relevant information to build cause-and-effect relationships” (Burke, 2007:416). Thus, the learner is actively constructing knowledge, rather than passively receiving it; and better learning occurs through verbal and visual learning material, rather than verbal material alone. It is in this, that a further development impacts on ID, namely the visual aspect of ID and the development of ID models.

3.5.3.3 Visual and graphic design

It is the contention in this dissertation that ID and visual and graphic design are integral parts of a whole, made easier through multimedia and technology. Indeed, in our world and the world of work in the century, we are becoming increasingly involved with images – photographs, videos, movies. Images, and the way we think about and use images are altering the way we learn. Already in 1992, Kirrane reported that large percentages of learners in training sessions don’t remember a time when there wasn’t television; and that increasingly, it seems many learners lack interest or skill in reading (Kirrane, 1992:60). Visual communication dominates almost all aspects of life and visual thinking is a primary part of our cognitive process. It then follows that innovative ID, developed and applied

within this 'new' visual milieu, needs to take cognisance of visual literacy as an underlying component.

Visual literacy refers to "the ability to accurately assign meaning to visual messages along with the ability to create and communicate with such messages. Visual literacy is the ability to assign meaning to a visual field so it can be predictably interpreted" (Rakes, 1999:14). Information and learning contents are represented also in visuals, which are integral to the meaning, and thus learning.

Both Gestalt theory (the whole is more than the sum of the parts, see for example, the Encyclopedia of Education) and semiotics (the study of the communicative power of symbols and signs, see for example Ryder & Rayner, 1998) are, amongst others, seen to provide theoretical homes for the construct of visual literacy. However, a discourse on this falls outside the ambit of this dissertation, as the use and implementation of visual literacy principles, not the theories underlying it, are applicable. Visual literacy principles are based on the ability for learning material to be decoded, understood, analysed and used by learners to construct meaning and knowledge within a learning context. This may be achieved through the use of design and/or graphic design, the definitions of which are elusive and difficult to find. The Merriam-Webster Online Dictionary defines design as "to create, fashion, execute or construct according to plan" and "to make a drawing, pattern or sketch", and graphic design as "the art or profession of using design elements (such as typography and images) to convey information or create an effect; also, a product of this art".

Visual and graphic design are relevant for the purposes of this dissertation, since it is argued that visual literacy through the use of visual and graphic design is essential in developing an ID model that aims to improve job-specific knowledge and productive behaviour.

Apart from discussions on technology and its impact on learning and ID, the literature provides additional insights to consider and incorporate when new age ID models are developed. These insights are gleaned from multidisciplinary perspectives, such as psychology, sociology, education, the management sciences and the world of design, since one of the main criticisms of ID is that it does "not appear to take a multidisciplinary approach to design, thereby omitting the most effective and innovative options for successful and creative online distance education environments" (Irlbeck *et al.*, 2006:171).

Although online educational environments are referred to, the criticism seems to hold equally true for other education and training environments. The developments and insights impacting on instructional design gleaned from the literature of psychology (the approach to learners as discussed in par. 3.5.3.4; learning and leaning theory as discussed in par. 3.5.3.5) and sociology (changing roles as discussed in par. 3.5.3.6) are presented below.

3.5.3.4 The approach to learners

In ID, developments regarding approaching (a) learners as adults and by considering (b) individual learning styles impact on the thinking regarding ID.

a) Learners as adults

The target learner audience and their idiosyncrasies are to be considered in ID model development. Specifically, in organisations target learners are adults, who learn in a very different fashion to children. The field of andragogics, i.e. “the art and science of helping adults learn” (Knowles, 1970:38) is extensive and well documented and will not be discussed here. However, insight into these target learners provides guidelines for ID model development, as outlined below:

- Adult learners need to understand why they are learning, i.e. they need to realise how they benefit from the new knowledge and how it can improve their own effectiveness.
- Adults are autonomous, self-directed individuals, needing to be free to direct themselves and their learning at their own pace and in their own style.
- Adult learners bring a greater volume and quality of experience to the learning situation, and utilising this as a source of reciprocal learning (as in group discussions, field experiences) may be beneficial.
- Adults are relevancy-oriented; they need to link what they learn directly to a situation. The learning situation should provide them ‘with life-centred, task-centred or problem-centred learning activities’ (van Dyk *et al.*, 1992:138). They need to participate, reflect and apply the knowledge imparted through the learning activities.
- Adult learners should be allowed to do a self-diagnosis of their needs for learning (Knowles, 1970:42), which means they should be provided with opportunities to

assess their own level of competence and gaps in present knowledge and skills (van Dyk *et al.*, 1992:141).

b) Individual learning styles

On an individual level the idiosyncrasies relating to the learning style of each individual learner are to be considered. Much has been written about individual learning styles (see, for example, Fleming, 1995; Felder, 1996) and a full investigation on this is not pertinent for the purposes of this dissertation, but an extraction of points to be considered by the instructional designer is mentioned.

The important point to emerge from the literature, is that learners preferentially take in and process information in different ways: by seeing, hearing, reflecting and acting, reasoning logically and intuitively, analysing and visualising, applying and doing. ID, at the lowest level, that incorporates a variety of learning styles in the instructional material will be beneficial to the target learners. The idea is not to let each learner learn exclusively in his/her preferred style, but rather to strive for a balance of instructional methods. When learners know what their preferential learning style is and adapt their learning strategies accordingly, they “make transitions to higher levels of personal and cognitive functioning” (Knox, 1986:25).

Levels of cognitive functioning are pertinent for learning and in learning theory as outlined in par. 3.5.3.5.

3.5.3.5 Learning and learning theory

In considering learning and learning theory in the reading of multidisciplinary literature, insights are provided regarding (a) learning processes; (b) the learning environment and context; and (c) a convergence of learning environments.

a) Learning processes

The learning processes of participation, reflection and application of knowledge or skills imparted through the learning activities form part of guidelines the instructional designer is to bear in mind. This has its roots in experiential learning theory (see for example Kolb 1984; Dewey, 1997), which essentially consists of three elements, i.e. one, exposure to facts, concepts, information and drawing on prior experience; two, application of the knowledge to a real-world situation; three, an analysis and assessment of one's activity through linking the learning to the real-world application. In essence this implies learners

will not make use of concepts and learning material unless they use them through some type of process. That is, learners are better able to master those activities that they practice. Here the idea is not merely that the learning makes a difference, it is how learners apply the concepts and attach meaning to, or make sense of that experience that matters. Of particular relevance for this dissertation, participation, reflection and application of knowledge become decisive when the learning is translated into meaningful job-related knowledge and productive behaviour to the benefit of the organisation, through a learning environment and context conducive to learning.

b) The learning environment and context

The learning environment and context in which learning takes place plays an important role in successful learning. The workplace is a major place for learning (Merriam & Brockett, 1997:151) and the training function in organisations is a purveyor of the learning facilitation. Within training and development, the attainment of performance outcomes based on specified goals is important. ID and the ID models developed and employed “should support the development of training programs for learners who need to learn and transfer highly complex cognitive skills or “competencies” to an increasingly varied set of real-world contexts and settings” (van Merriënboer *et al.*, 2002:39).

Schott *et al.*, (2001:377) refer to “frame of reference” based on the fact that instruction takes place in a specific and particular organisational setting which needs to be taken into account, as it is not manipulable or changeable. Each organisation has a different development context with respect to the team involved in ID development, timing parameters and budget amongst others, therefore “the specifics of each context likely require different design processes and activities” (Visscher-Voerman & Gustafson, 2004:69). It also goes beyond that, Morgan, Ponticell and Gordon (1998) discusses motivational factors relating to the learning environment that are the responsibility of the organisation. Those are an emphasis on learning and development, making programmes accessible and a concern with the success of the programme, which is both visible and expressed.

* Competencies in this instance refer to the skills, job-specific knowledge and productive behaviour required to perform tasks optimally and not organisational competencies that refer to strategically important activities performed well by the organisation.

These motivational factors relating to the learning environment are also related to the convergence of learning environments.

c) Convergence of learning environments

The learning environment is being influenced by a convergence of traditional face-to-face environments and environments that include the possibilities offered by technological innovation, amongst others.

In the past, face-to-face and “computer-based” learning environments have largely remained isolated due to the different media and method combinations used. However, there is now a convergence (Graham, 2004). The instructional designer should consider the role that technology plays in the learning environment and, where appropriate, apply and exploit technology in ID model design and development.

An increasing body of work in both academic and practitioner circles is referring to “blended learning”, when traditional face-to-face and technology and/or computer assisted learning and instruction are combined. However, there is a lot of ambiguity of what exactly is meant by the term (Graham, 2004). It may mean combining instructional modalities (or delivery media), combining instructional methods, and/or combining online and face-to-face instruction. Whatever the definition, there are many reasons and benefits for applying blended learning in the learning environment. These include for example, learning richness, access to knowledge, social interaction, personal benefit, cost effectiveness and ease of revision (Osguthorpe & Graham, 2003). In this dissertation, the view is that the broad, encompassing definition of blended learning applies, i.e. blended learning means a combination of delivery media, instructional methods and combining technology with face-to-face interactions, since “the importance of a blended approach to learning is that it ensures the widest possible impact of a learning experience and thus ensures that the organization optimizes productivity and delivers value to its customers” (Julian & Boone, 2001).

The characteristics of a truly blended solution are offered by Zenger (2001). These are completely integrated ID (not just “bolt-on”) modules and activities; a consistent framework, including terms, concepts, language, style and design; each method used is delivering its best, i.e. delivery methods and learning activities provide the best solution to fulfil its objectives; and variety, i.e. different learning approaches are catered for, there are on and off-line activities, opportunity for interaction, the learning contents are rich and

engaging. Where learning contents are rich and engaging, Haskell (2001:57) provides evidence that “people who are experiencing a positive effect” have an improved transfer of learning. Although “fun” is not directly mentioned, it ties in to the views of Mezirow (1991) who contends that the addition of an emotional dimension helps a learner to better remember contents. This is taken to imply that engaging learning contents, in combination with other positive learning experiences, should be incorporated into ID models. Engaging contents may also be seen to relate to amongst others the visual and graphic design elements in ID (see par. 3.5.2.3).

Within the convergence of learning environments, the literature also provides insights into the changing roles of some of the individuals involved in ID, as outlined in par. 3.5.3.6.

3.5.3.6 Changing roles

The literature provides insight into the changing roles of the (a) trainer or instructor and (b) ID developers as such.

a) Trainer or instructor

Within the training environment, there is a change from trainer or instructor-led to self-directed learning. This implies a change in the role of the trainer or instructor and the instructional designer needs to make decisions and put forward recommendations about how this is to be implemented in the ID model. ID has expanded from the “teacher”, to incorporating new media tools such as video and computers (Schott *et al.*, 2001:377), and the impact of this on the role of the trainer or instructor needs to be considered. In addition, the use of technology means that learning contents are available 24/7, and learners are not dependent on the trainer or instructor for the delivery thereof.

Lastly, although the literature on ID, ID theory, ID models and the processes involved is prolific, empirical information about what ID designers actually do is still scarce (Visscher-Voerman & Gustafson, 2004:69) and the role of ID developers as such ill-defined, as outlined in par. 3.5.3.6b below.

b) ID developers as such

The ID process may appear rigid and linear (Moore *et al.*, 2002:79) but in reality the process is not linear and ID designers often use their own creative flair and insight apart from their levels of knowledge and experience in the field. Despite the prolific nature of literature on ID, ID theory, ID models and the processes involved, the role of ID

developers as such may be seen to change in each development and application whereby ID is applied, based on the creative flair, insight, knowledge, experience and philosophical orientation of the individual ID developer.

3.5.3.7 Summary of developments impacting on ID and insights gleaned from multidisciplinary literature

In summary, the developments impacting on ID and insights gleaned from the literature which need consideration in the development of an ID model include the following:

- A consideration of and insight into the needs and demands of specifically adult learners.
- A consideration of and insight into individual learning styles.
- A consideration of and insight into processes and delivery media of learning, which implies an understanding and knowledge of prescriptive features of ID models.
- A consideration of and insight into the learning environment of the organisation where the ID model is to be implemented. This insight requires consideration of both desired learning outcomes and the use of technology and blended learning in the development of ID.
- A consideration of and insight into the incorporation of an emotional aspect into the contents and design of learning material.
- A consideration of and insight into the change from instructor-led to self-directed learning.
- An understanding of the individual and creative flair of the ID designer.

Instructional design, its definition, ID theory and developments impacting on ID are evident when reviewing the literature on guidelines for ID models, as is discussed in par. 3.6 below.

3.6 GUIDELINES FOR ID MODELS

The literature abounds with guidelines for and descriptions of ID models (see for example, Andrews & Goodson, 1980, for a comparative analysis of 40 ID models; Siemens, 2002, for a compact overview). Although, again, a precise definition of what an ID model is, is elusive, it is broadly seen to improve learning and instruction by following a systematic approach and improving the management of and decision-making relating to ID (Andrews & Goodson, 1980; Moore *et al.*, 2002).

Despite the vast number of ID models recorded in the literature, some basic guidelines and principles are commonly evident, namely, analysing the needs of learners and their learning environment; determining the desired learning outcomes and the learning objectives in support thereof; developing learning contents; developing assessment criteria and procedures; deciding on the most effective approaches for delivery; testing the full scope of the ID model; and adjusting and maintaining the whole system (Moore *et al.*, 2002:73).

For various descriptions on the basic guidelines for ID models, and a review of ID models consistently referred to in the literature, see Gagné (1985) on conditions of learning; Dick and Carey's (1990) prescriptions for an ID model based on breaking instruction down into smaller components targeted on the skills and knowledge to be taught; the Kemp ID Model (Kemp *et al.*, 1994) that defines nine components of ID in an oval shape representative of the continuous nature of ID; Smith and Ragan (1999) with their focus on analysis, strategy and evaluation of materials.

Essentially, most ID models have at their core the Analyse, Design, Develop, Implement, Evaluate (ADDIE) foundation. Moore, Bates and Grundling (2002) extend the ADDIE foundation and offer the following components of ID models, viz. analysis, design, development, evaluation, quality assurance and revision and adaptation – see Figure 3.1. This is a useful and succinct schematic, since it includes, to a more or lesser extent, all the components contained in most ID models in the literature.

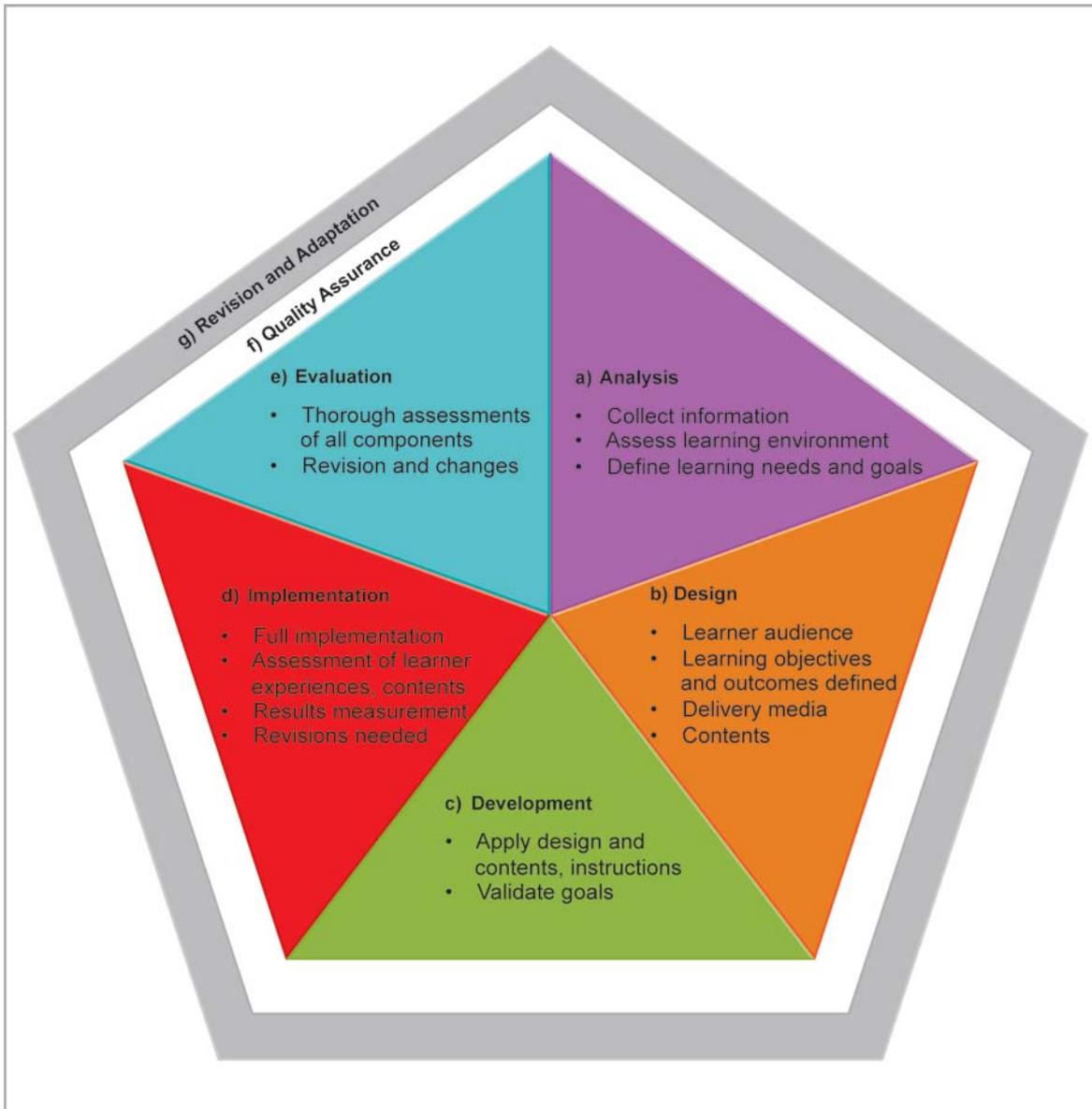


Figure 3.1: Components of ID models

Source: Adapted from Moore *et al.*, 2002:76

The description for each of the components of ID models as found in the literature and based on the ADDIE foundation is as following:

- a) *Analysis*: relates to the collection of material and information relevant for the assessment of the learning environment and defining the learning needs and goals.
- b) *Design*: flows from the analysis phase and relates to clearly defining the target learner audience, learning objectives and outcomes, determining the delivery media for the learning contents and the learning contents itself.

- c) *Development*: consists of applying the design and contents, instructions on how to use it, and validating the goals of the ID model against the design and learning contents.
- d) *Implementation*: includes implementation of the full ID model and its components, as well as an assessment which considers, amongst others, learner experiences, effectiveness of the learning contents, results measurement and analysis and required revisions.
- e) *Evaluation*: relates to the critical and thorough assessment and evaluation of all components of the ID model, what it does and does not achieve, how it impacts on the learners, and subsequently, their behaviour in the organisation as set against original learning goals and outcomes, the learning contents and overall performance. Also, it includes the revision of components when and where necessary.
- f) *Quality assurance*: is ongoing and included in all the components. This refers to, for example, ensuring the correct information is applied, learning contents development is relevant and the learning contents are faultless, design guidelines are followed and all required changes are implemented and checked.
- g) *Revision and adaptation*: refer to the process of fine-tuning the ID model on an ongoing basis, as more information becomes available or appropriate or testing shows up shortcomings.

In all of this, the designer needs to plan the learning experience to ensure, as far as is possible, that the learning achieves those objectives agreed on and specified by strategic imperatives, job-specific knowledge and productive behaviour required to improve capabilities and core competencies in the organisation in which the ID model will be implemented.

It is important to note that "... although models can be very useful in guiding designers, this work demands that designers apply sound scientific principles based on knowledge and theory from the fields of psychology, education, communications and technology, as well as creative skills. Designing learning materials is therefore not a process of simply following the prescriptive steps in neatly recorded models. The greatest aspect of this work is that it is fundamentally about people and innovation and thus cannot be fully

reflected in models. Design models therefore can be regarded as problem-solving procedures to guide designers in making decisions about their design” (Moore *et al.*, 2002:76).

3.7 SUMMARY

Training, as one of the activities to develop human capital in organisations, faces increasing demands to produce a competent workforce, with the required levels of job-specific knowledge and productive behaviour to serve as enablers for SCA for organisations through continued improved performance. Training in organisations is planned, aimed to develop the required job-specific knowledge and productive behaviour pertinent in the organisation which will ultimately impact on organisational performance. A significant relationship is found between training and productivity, and HR practices including training and the output and financial performance of organisations.

Changes in the demands on training and changes in training practices focus largely on providing employees with the skills and knowledge that culminate in productive behaviour for organisations. In South Africa in particular, the focus is on fast-tracking skills development to aid both organisations and the country to perform at higher levels than is currently the case. As mentioned in par. 1.1 and par. 3.3 the shortage of skills in South Africa is seen as a major impediment for improved economic growth and through the NQF, various industry training authorities exist to promulgate and enforce skills development. This legislated focus on fast-tracking skills development places different demands on training practices.

Training practices have to change and adapt to incorporate the demands brought about by the focus on performance. The relationship between training, learning and work has changed and learning has become key to training. Learning *per se* is an elusive construct to define, however, the result of learning is seen to be changes in behaviour – in this instance productive behaviour brought about through improved job-specific knowledge. Learning increases the capacity and willingness of organisations and individuals to develop, obtain and apply new knowledge and skills to improve productive behaviour. Modifying operating routines, such as the ways in which training is delivered, builds and configures core competencies in organisations that help them deal with a volatile and changing external environment. The development of effective training practices that

include learning, i.e. show improved job-specific knowledge and productive behaviour thus become pertinent if organisations want to remain competitive, and ID may form one such effective practice.

ID, in essence, is a pattern or plan that is put together to ensure the learning experience provides both learners and organisations with the skills and knowledge required to operate optimally. ID is concerned with understanding, improving and applying a method that improves relevant learning which is of benefit to individuals and organisations. As a roadmap for the development of training interventions in organisations, ID is of benefit in offering solutions for the development of job-specific knowledge and productive behaviour. As such, ID is inseparable from learning theory and has as its heart the description, development and application of methods, processes, procedures and activities to improve performance. Cognitivism, with its focus on behaviour and how changes in behaviour occur, aims to prepare learners to solve problems in ambiguous and real-life situations – pertinent for organisations wanting their workforce to improve job-specific knowledge and productive behaviour within their specific organisational context.

Multidisciplinary reading of the literature provides further insight into constituents of new ID. This includes the advent and growth of technology; the contribution of graphic design and visual literacy and visual learning; consideration of learners in organisations as adults; each with an own idiosyncratic learning preference; imparting specific skills and knowledge through exposure, application and assessment of learning; consideration of the particular context and “frame of reference” within which ID is developed and applied; opportunities offered by blended learning solutions; providing a fun, positive aspect to learning; the changed role of the instructor or trainer; and the knowledge, experience and art of the ID designer as such. These considerations are over-and-above the basic components contained in ID models as such, which have at their core the ADDIE foundation. Added to this “Analyse, Design, Develop, Implement, Evaluate” foundation, ongoing quality assurance and revision/adaptation form the backbone of ID models.

Against the background of this chapter, Chapter 4 presents the ID model developed out of the learning, guidelines (par. 3.4) and considerations for ID models (par. 3.5 and par. 3.6) gleaned from the literature.

CHAPTER 4

THE DEVELOPMENT OF AN INSTRUCTIONAL DESIGN MODEL

4.1 INTRODUCTION

Instructional design and instructional design models have wide acceptance in the training industry, as evidenced by the vast numbers of ID models available and the extent of literature on the subject as reviewed in Chapter 3. However, ID and ID models have also come under severe criticism for, amongst others, being too prescriptive, time-consuming, focused on formal learning only and being impractical in practice (Carliner, no date). In addition, the classic ADDIE foundation, despite providing a step-by-step approach for the development of complex training interventions, falls short in providing guidelines regarding all the components that need to be considered in the practical development and implementation of such ID models. In essence, despite the plethora of guidelines for and descriptions of ID models (see par. 3.6) it is difficult to obtain insights into and guidelines for the practical decisions, processes and activities involved in developing and implementing ID models. Also, since an ID model is often approached from within a specific discipline (e.g. education), multidisciplinary insights into and guidelines for the development of such ID models seem one-dimensional.

This chapter describes the development of an ID model based on learning and considerations from multidisciplinary literature and by incorporating additional components encompassing practical considerations. It does not ignore the strengths and durability of the ADDIE foundation, but revises it by broadening and deepening its scope in the ID model presented. "Designing instruction is both art and science – which makes it a craft. Thus, a good designer uses the tools of the trade, knowledge and skills, and then combines these with a personal touch to create a quality product" (Clark, 2004b).

A multidisciplinary approach is used in the development of the ID model as it endeavours to include richness, creative licence and a combination of constituent components that extend, broaden and deepen the ADDIE foundation. In the process of presenting the ID model, a description of the case organisation (where the ID model will be implemented) with respect to the various components of the ID model is included to illustrate how the ID

model is applied in practice. The case organisation (i.e. British American Tobacco South Africa or BATSA) in which the ID model is implemented will be presented and described in Chapter 5, par. 5.2.3.6a, to which the reader is referred for context and detail. In this chapter, the case organisation – as it pertains to the components of the ID model put forward – is mentioned and referred to, to illustrate and describe the development of the ID model in practice, based on a real world example. Also, the inclusion of this real world example aims to bring the ID model to life to provide the test-bed against which the ID model is developed and evaluated. Thus, this chapter aims to provide a description of and guidelines for an ID model in a practical real world situation by considering previous shortcomings and addressing these shortcomings by applying multidisciplinary insights, describing practical decisions, processes and activities and by doing so, offer an alternative and improved ID model for the new world of training.

Figure 4.1 presents a graphic representation of the ID model and at the same time reflects the way the ID model is developed and presented in this chapter. Par. 4.2 describes the organisational context; par. 4.3 outlines the instructional design and learning orientation of the ID model; par. 4.4 describes the ID model processes; par. 4.5 describes the ID model activities and an organisational prototype of the ID model in the organisation is presented in par. 4.6. Par. 4.7 provides a summary of this chapter on the development of the ID model.

Although the ID model and its graphic seem to suggest a linear process, this is not so, since simultaneous decisions and processes occur throughout the development. It is only represented in a linear format to enable the reader to obtain a step-by-step insight and understanding of what is involved in the development of the ID model put forward here.

4.2 ORGANISATIONAL CONTEXT

4.2.1 Introduction

The organisational context dictates to a large degree how and why ID models are and can be developed. This context includes the organisational character (par. 4.2.2), the project complexity (par. 4.2.3) and the available resources (par 4.2.4), all of which are described. A summary of organisational context is provided in par. 4.2.5.



Figure 4.1: The ID model

Source: Author's own

4.2.2 Organisational character

Organisational character is a qualitative assessment by the ID designer of the way the organisation works, and includes factors like levels of bureaucracy; decision-making and approval processes; organisational maturity in terms of the delegation of work, decisions and obtaining inputs; and the degree to which training interventions and ID models need to be structured and formalised. A qualitative assessment of organisational character

helps to initiate working relationships and assist in formulating processes, procedures and activities to be implemented during the development and implementation of the ID model.

In the instance of the case organisation (see par. 5.2.3.6a), high levels of bureaucracy exist which impact on decision-making and approval processes being slow as it always needs to escalate up; although delegation of work is evident, final decision-making rests with specific personnel only; and the ID model needs to be structured and formalised, due to three main reasons.

These reasons are firstly, to implement the ID model in this, or arguably any organisation, some structures and processes have to be defined to facilitate administration and evaluation. The second reason is that a structured approach enables the organisation to allocate both funds and personnel, as the scope and requirements relating to the development and implementation of the ID model are defined. The third reason is that, in the framework of the case organisation specifically, learning is designed to enhance on-the-job knowledge and productive behaviour through the implementation of the ID model. Both the job-specific knowledge and productive behaviour relate to the business strategy of the specific organisation and are aimed at building capabilities and core competencies to help differentiate the organisation in the industry and marketplace. A structured approach is required to ensure that learning takes place and positively influences relevant job-specific knowledge and productive behaviour.

In addition, Davenport (1999) argues that a more structured approach for learning is relevant when many employees need the same knowledge and skills at the same time; complex and specific information is found to be best conveyed in concentrated bursts; and the subject matter relates to the organisation as a whole – all of which are relevant in the instance of the case organisation.

Understanding the organisational character forms the basis for the ID designer to judge the project complexity.

4.2.3 Project complexity

Project complexity refers to a qualitative assessment by the ID designer on firstly, the number of meetings and degree of interaction anticipated in the project, for example, in highly bureaucratic and formal organisations project complexity increases. Secondly, project complexity refers to a qualitative assessment regarding the amount of work

required in developing new learning contents, or re-purposing existing learning contents. Thirdly, a qualitative assessment is made on the degree and extent of work required from a technical perspective if the ID model contains an IT component. A qualitative assessment of project complexity helps to allocate estimates of project scope, time lines and resources required for the development of the ID model.

In the instance of the case organisation (par. 5.2.3.6a), a large number of meetings is required – not only because the development and implementation of the ID model is a totally new way of doing training, but also due to the bureaucratic organisational character. The amount of work required in developing learning contents is extreme, because even where learning material contents are available, it needs complete re-purposing for use in the ID model to ensure that defined and relevant capabilities and core competencies of the organisation may be enhanced and improved. In addition, a large degree of technical work (programming, systems integration) is required. The development of the ID model thus needs an assessment of available resources to assist in planning, development and implementation.

4.2.4 Available resources

In the development of the ID model, available resources need to be defined in terms of people, budget parameters, timelines and IT requirements. This is an initial investigation into who will be responsible for what, the budget and timing expectations and requirements from an ID infrastructure perspective. Knowing what resources are available assists to determine shortcomings in resources so that alternative solutions and options may be explored and co-opted if necessary.

In the case organisation personnel from the Marketing Skills Development Department (MSD) take first-line responsibility, while subject experts and specialists within the case organisation are on stand-by for input when necessary. The ID designer has a full team consisting of conceptualisers, copywriters, renderers, art directors and programmers available. No budget parameters are set and the budget is determined by the scope and extent of the work, quoted as per the norm in the South African industry. Initial timelines set a completion date for the ID model 10 months away.

4.2.5 Summary

The organisational context is a qualitative assessment by the ID developer to get a preliminary insight into the scope, complexity and nature of the development of the ID

model, given available resources. It anticipates the level of interaction required and the degree of work to be done given the realities of the organisation in and for which the ID model is developed and implemented.

In the case organisation where the ID model is implemented, the scope, complexity and nature of the ID model development are deemed to be complex, due to the bureaucratic nature of the organisation; the high degree of development required for learning contents and technical infrastructure build.

At its heart, the ID model subscribes to a specific instructional design and learning orientation, as described in par. 4.3.

4.3 INSTRUCTIONAL DESIGN AND LEARNING ORIENTATION

4.3.1 Introduction

The instructional design and learning orientation of the ID model provides the underlying approach and orientation of the ID developer and the organisation towards ID and learning. It consists of learning theory (par. 4.3.2) underpinning the ID model and the ID theory (par. 4.3.3) and ID strategy (par. 4.3.4) contained in the ID model. A summary of the instructional design and learning orientation of the ID model is contained in par. 4.3.5.

4.3.2 Learning theory

As described in par. 3.4 learning as used in this dissertation refers to the concerted activity and effort that increases the capacity and willingness of organisations and individuals to develop, obtain and apply new knowledge and skills to improve job-specific knowledge and productive behaviour. For this ID model, constructivism, with its focus on preparing learners for real-life situations is the foundational learning theory, and the principles of constructivism (par. 3.5.2) are incorporated into the ID model as outlined in the paragraphs to follow below.

Learning does take place in an authentic, real-world environment, namely the workplace at the organisation; learning contents and skills are relevant to learners in that they pertain to job-specific knowledge and productive behaviour for the organisation; learning contents and skills are formulated and positioned within the framework of learners' previous knowledge, in that they build on job-specific knowledge required to do the job properly.

Also, learners are encouraged to become self-regulatory, self-mediated and self-aware in that learners work through learning contents in their own time, at their own pace and they do assessments as and when they are ready within a pre-defined timeframe. Learners are assessed formatively through the completion of in-field tasks moderated by their managers (see par. 4.5.2.4); the managers are guides and facilitators of learning rather than instructors or trainers (see par. 4.5.1.2b and par. 4.6.5); and multiple perspectives are made provision for both in the way the learning contents are presented (see par. 4.5.1.3 and par. 4.5.2.2) and individual learning styles are accommodated (see par. 4.5.2.3).

For the purpose of this ID model an overall simplistic view of the learning process is taken whereby learning is viewed as consisting of three stages, viz. the cognitive, associative and autonomous stages (Anderson, 1983). The purpose of the cognitive stage is to build knowledge, and in this ID model it is contained in the learning contents and the way in which it is designed (see par. 4.5.1.3 and par. 4.5.2.2). The associative stage is where knowledge is applied, and this is catered for in this ID model in the in-field tasks (see par. 4.5.2.4). The purpose of the autonomous stage is to reinforce knowledge, which is built into the ID model through the combination of module objectives, learning contents and module summaries (see par. 4.5.1.3 and par. 4.5.2.2) and the practical application of the knowledge through the in-field tasks (see par. 4.5.2.4). These stages are acknowledged in the literature, for example, Anderson, 1983; Piaget, 1985; Drisoll, 2000; Winn and Snyder, 1996.

Learning theory and instructional design theory are inextricably linked and the ID theory underpinning the ID model is discussed next in par. 4.3.3.

4.3.3 ID theory

As discussed in par. 3.5.2, Reigeluth (1999) describes the elements of ID theory as an orientation towards design; identification of the methods of instruction and situations where they apply; and probabilistic outcomes. In essence this refers to the means used to achieve the objectives of learning and includes the learning contents and how it is treated (see par. 4.5.1.3 and par. 4.5.2.2), the approach used as the ID and learning orientation (par. 4.3) and the delivery media and techniques used to optimise learning (see par. 4.5.1.2 and par. 4.6). All of these are elaborated on in the specific paragraphs as indicated. The ID theory underpinning the ID model precipitates the ID strategy, as outlined in par. 4.3.4.

4.3.4 ID strategy

ID strategy refers to the plans and decisions made in the development of the ID model. Although it is intricately linked to both learning theory (par. 4.3.2) and ID theory (par. 4.3.3), ID strategy includes the practical aspects of getting things done; it occurs on an ongoing basis and involves all the components of the ID model, as presented in par. 4.4 and par. 4.5 following the summary in par. 4.3.5.

4.3.5 Summary

Instructional design and learning orientation comprise the philosophical and learning approach followed by the ID designer. It includes orientation to and decisions about which learning theory underpins the ID model, what means are used to achieve the objectives of learning both in terms of delivery media, learning contents and practical considerations.

The instructional and learning orientation form an integral part of the ID model processes (par. 4.4) and ID model activities (par. 4.5) which are subsequently presented.

4.4 ID MODEL PROCESSES

There are five main processes involved in the development of this ID model. These are the processes relating to decisions (par. 4.4.1), resource allocation (par. 4.4.2), project management (par. 4.4.3), quality assurance (par. 4.4.4) and implementation (par. 4.4.5). These processes are reflected in Figure 4.2.

4.4.1 Decisions

4.4.1.1 Introduction

In the development of the ID model a number of overarching decisions are made. These do not refer to ongoing everyday decisions but are decisions of a strategic nature regarding learning requirements (par. 4.4.1.2) and business requirements (par. 4.4.1.3). These decisions are organisation-specific and where the ID model is applied in other organisations, may require additional aspects to those presented in par. 4.4.1.2 and par. 4.4.1.3.

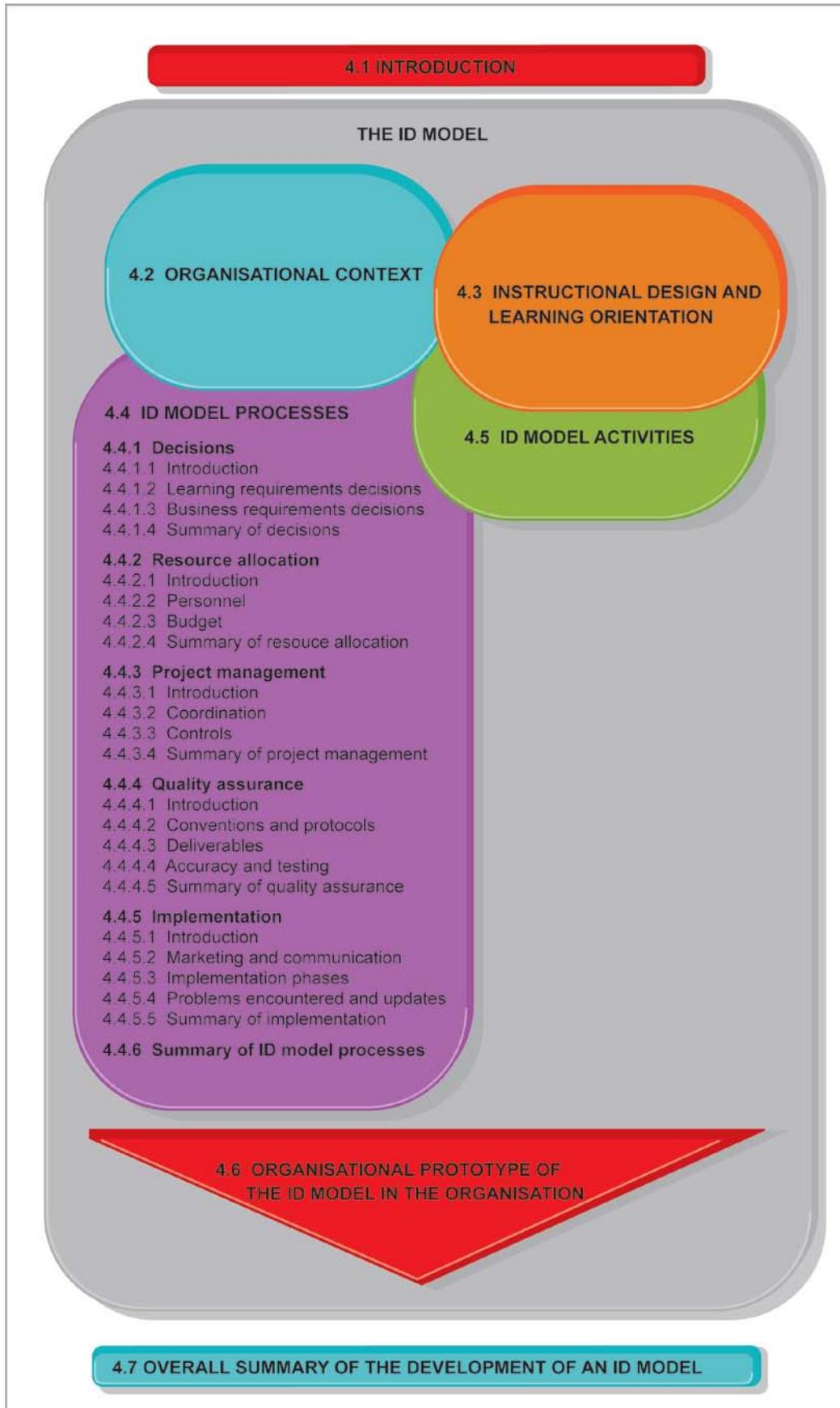


Figure 4.2: ID model processes

4.4.1.2 Learning requirements decisions

Key to the development of the ID model is the identification of the learning requirements. The learning requirements include defining the (a) nature of the job-specific knowledge and skills that have to be imparted through the ID model; and (b) the required outcomes to be achieved by the ID model.

a) Nature of job-specific knowledge and skills

In order for the training intervention facilitated by the ID model to align with the strategic intent of the organisation, it is necessary to define the relevant knowledge and skills required to produce productive behaviour from the workforce that is of benefit to the organisation. In this dissertation relevant knowledge is defined as job-specific knowledge, and relevant skills as those skills that will improve and enhance productive behaviour (see par. 1.1), where productive behaviour consists of core behaviour (integral for successful competitive performance) and situation-specific behaviour (essential at particular points in the value-chain of the organisation).

In the case organisation (see par. 5.2.3.6a for a description of the case organisation), job-specific knowledge includes functional knowledge (i.e. how to do the job), cross-functional knowledge (i.e. where the function fits into the organisation as a whole and what other functions do) and relevant soft skills knowledge (i.e. those behavioural patterns that improve customer relationships, for example negotiation and communication skills). In the evaluation of the ID model (see Chapter 5 and Chapter 6), the impact of the ID model on job-specific knowledge as defined here will be assessed.

In light of the nature of the job-specific knowledge and skills, the required outcomes to be achieved by the ID model are defined.

b) Required outcomes to be achieved by the ID model

The outcomes required of the ID model are specified from four perspectives, i.e. one, organisational strategic outcomes; two, functional outcomes; three, learner outcomes and four, learning outcomes. These outcomes are defined because they provide the link between the practical, functional development of the ID model *per se*, to broader encompassing organisational strategic imperatives. Thus, by specifying the outcomes from the four perspectives of organisational strategic, functional, learner and learning outcomes, both the micro-focus (i.e. ID model) and macro-focus (i.e. as an enabler for

SCA) are addressed. The required outcomes to be achieved by the ID model are covered in the next paragraphs.

One, from an organisational strategic perspective, the ID model is to provide outcomes related to the intangible human resources as manifested in the job-specific knowledge and productive, on-the-job behaviour of specific members of the workforce, which is to enhance the organisation's service offering to its customers.

Two, functional outcomes relate to the learning contents of the ID model. The specific functional outcomes specified for the purposes of this ID model are to increase job-specific knowledge, cross-functional knowledge, soft skills knowledge, the application of this knowledge to manifest in job best practices, and to decrease out-of-field days for training purposes.

Three, learner outcomes relate to the impact on both managers and learners as they pertain to knowledge and on-the-job performance aspects. For the purposes of this dissertation, the ID model is to extend the role of managers; facilitate more interaction between managers and their teams; to upskill the learners in skills which may also be used outside the organisation; to make the learners more knowledgeable about their jobs specifically, and the organisation at large, to allow for a better understanding of job functions and the application thereof, and in the process bring about an improvement in job-specific knowledge and productive behaviour.

Four, for each module in the learning contents, a number of specific learning outcomes are defined that relate to the contents and/or the practical skills to be demonstrated to indicate proficiency. This is organisation-specific and encompassed in module objectives (see par. 4.5.1.3 and Appendix 1 for an example from the learning contents itself).

The definition of the learning requirements is not isolated from the organisation and the business requirements decisions that need to be made in the development of the ID model.

4.4.1.3 Business requirements decisions

In the development and implementation of any training intervention, there are a number of decisions to be made from an organisational perspective in order to define the business requirements of the ID model and its outcomes for the organisation. These decisions

relate to (a) learning needs and goals; (b) reasons for the training intervention facilitated by the ID model; (c) perceived benefits to be brought about by the ID model; (d) risk assessment; (e) success criteria; and (f) constraints on the development of the ID model.

a) Learning needs and goals

Learning needs and goals refer to an investigation into and evaluation of what the learning needs and goals are, i.e. why is a training intervention required; what job-specific knowledge and skills exist; where are the shortfalls and; specifically what is to be achieved from a strategic perspective, a functional perspective and a design perspective.

In the case organisation, the learning needs are clear, focused and succinct – the organisation did not previously have a structured, field-force specific training programme, which enabled these members of the workforce to become job-ready quickly, understand and apply job functions within the broader organisational perspective and have cross-functional knowledge and soft skills (e.g. presentation, communication and negotiation skills) to fully equip them to provide the levels of service and productive, output-related and productive behaviour required by the organisation. The ID model thus has to upskill the learner audience in their knowledge of the organisation, the industry in which it operates, specific and cross-functional job contents, the execution of these jobs and the soft skills which support them, i.e. overall job-specific knowledge and productive behaviour.

In the case organisation (as described in par. 5.2.3.6a to follow), three distinct sets of goals are identified for the training intervention facilitated by the ID model. These are, one, organisational goals, two, learner goals and three, goals for the ID model specifically.

One, from an organisational perspective in the case organisation, the goals for the training intervention are to be succinct and practical and provide a basic understanding of the marketing discipline and its role and function within the organisation in a short space of time; to require as little time “out-of-field” as possible; to use technology as the main delivery vehicle, with managers as facilitators; and other mechanisms (e.g. practical application of learning material) providing support; to be compatible to the National Qualifications Framework (NQF); to be flexible and adaptable; to start building a universal and visual (learning) language within the organisation; and to provide visible gains in on-the-job knowledge and application thereof, also evidenced in improved productive behaviour. Overall, the organisational goal is to provide training through the ID model

which enhances productive, core and situation-specific behaviour to support and expand the capabilities and core competencies of the organisation.

Two, from the perspective of the field force representatives (i.e. learner audience in the case organisation), the training intervention through the ID model is to be delivered in easy-to-use and understand bite-sized chunks; designed to aid retention of job-specific knowledge and understanding; to provide opportunity to apply the knowledge; and to improve on-the-job performance, thus, productive behaviour for the organisation. Overall, the learner goal for the training intervention through the ID model is to deliver job-specific knowledge and practical knowledge in easy to understand and pragmatic learning contents and application exercises to facilitate productive behaviour in line with capabilities and core competencies of the organisation.

Three, from the perspective of the ID model specifically in the case organisation, it is to improve job-specific knowledge, the application thereof in practice and overall on-the-job performance. Specifically the ID model must develop better understanding of the specific function (i.e. the marketing field force representatives) within the organisation; capture attention, and, by using adult learning principles, learning preference styles and engaging concepts and learning mechanisms, aid in instilling a learning culture within the organisation; provide opportunities for practice, recall and assessments; contain a final assessment to indicate mastery of learning; and have specific and measurable objectives for each learning module. In addition, combined learning goals specifically pertaining to the ID model are defined.

The combined learning goals of the ID model may therefore be summarised on three levels, as is illustrated in Figure 4.3 and described in i) – iii) following.

- i) Strategic goals are those learning goals which relate to the ultimate strategic performance of the organisation, and include an improvement in productive behaviour, both core and situation-specific behaviour as they apply to on-the-job performance. This is to bring about service differentiation for the organisation, which impacts on increasing the capabilities and core competencies of the organisation.

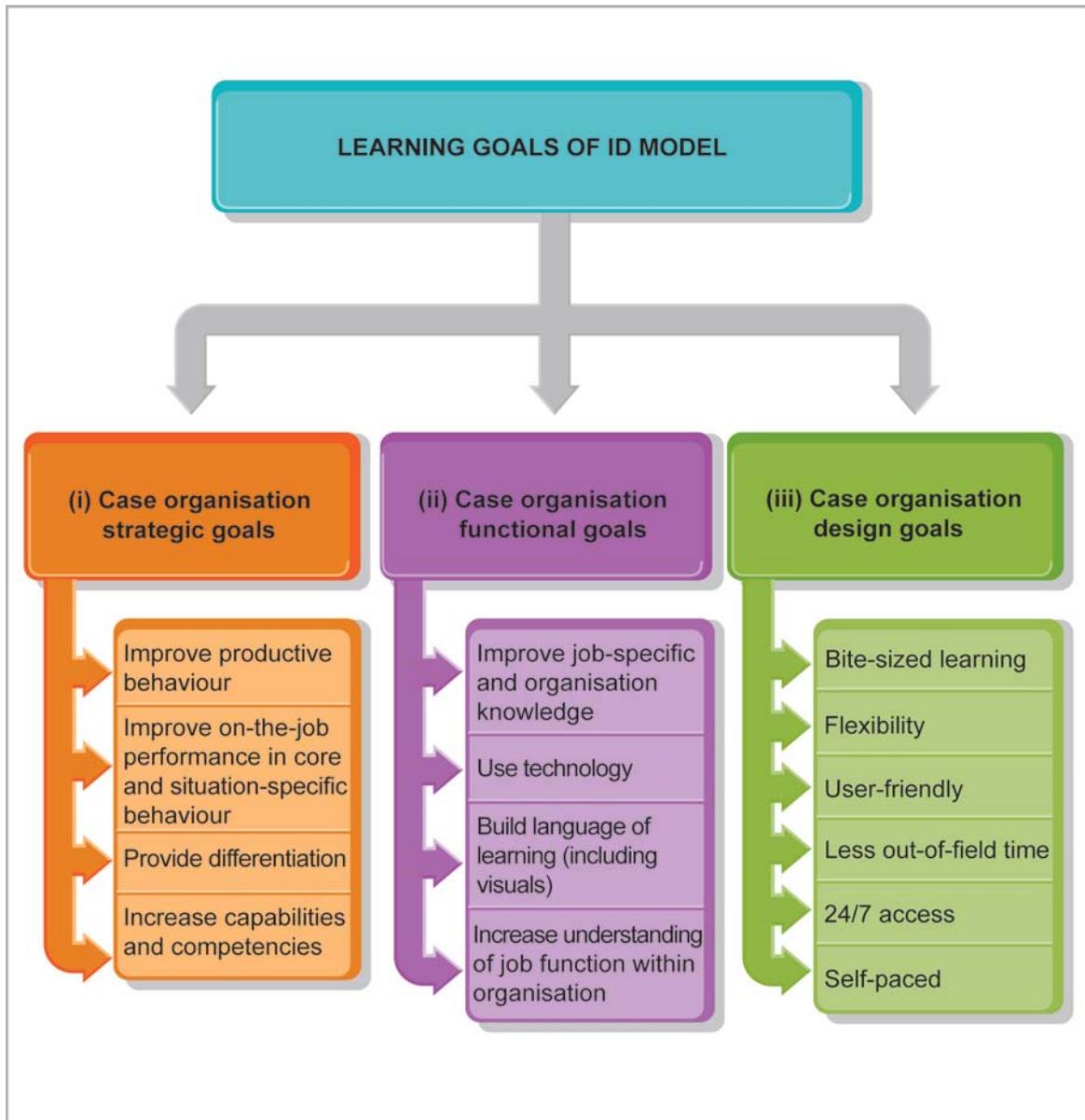


Figure 4.3: Learning goals of ID model in case organisation

- ii) Functional goals are those goals which relate to the job-specific knowledge and skills of the workforce (i.e. the learner audience) regarding both the organisation and their specific job function within this broader whole. Also, it involves the use of technology (i.e. for the dissemination of the learning contents) which provides a time-saving and 24/7 access to the learning material. A further functional goal is to build a universal visual learning language (see par. 4.5.1.4). Functional goals may be seen to relate to situation-specific behaviour (see Figure 1.1) whilst strategic goals relate to core behaviour.
- iii) Design goals include those pertinent to the way the learning contents are presented, i.e. bite-sized learning, a flexible and user-friendly ID model to which learning

contents may be added as and when required; and those goals pertinent to when and how the learning is done, i.e. not requiring out-of-field time, self-paced and 24/7 access to the learning contents.

In essence, the training intervention through the ID model is to improve core and situation-specific knowledge and behaviour to serve in the enhancement of organisational capabilities and core competencies and by proxy, SCA (see par. 1.2.2 and par. 3.2).

In order to strengthen the business case for the development of the ID model in the case organisation (and which may be seen to serve as an additional guideline in the development of similar ID models in future), it is necessary to define the (b) reasons for the training intervention facilitated by the ID model, spell out (c) perceived benefits to be brought about by the ID model and go through (d) risk assessment.

b) Reasons for the training intervention facilitated by the ID model

In the case organisation the reasons for the development of the ID model are to shift training to an outcomes-based ID model, with defined evaluation and success criteria (see par. 4.4.1.3e); to address shortcomings of previous training interventions by applying a new age, innovative ID model based on proven and reviewed ID theories and design; to use technology to enhance learning and further upskill the workforce in the use of such technology to save on training costs in the long term; and to increase job-specific knowledge and productive behaviour. The principles of the ID model put forward are generic and may be applied in any organisation with similar goals and reasons (as discussed here) to implement this revised ID model, different to current practices.

c) Perceived benefits to be brought about by the ID model

In the case organisation the perceived benefits are defined to be an enhanced retention and understanding of job-specific knowledge and the implementation thereof in the field by the field force representatives. The ID model is based on proven learning and instructional design theory which has a positive impact on learning outcomes and the application of this learning in practice; therefore, increased efficiency of the field force representatives in the application of their functional tasks. Little out-of-field time is required, as the learning is self-paced and the learning material made available on electronic devices, offering 24/7 accessibility and providing learner-centric contents, which provides optimum use and channelling of resources by not extracting the employees from their daily functions. Learners access learning material at their own pace and in their own

time and mastery of learning material is achieved at the speed suitable for each individual learner and through accommodating the different learning styles of individuals. The role of managers is enhanced and an implied benefit of this is the upskilling of managers. The learning contents are based on an integrated approach to include cross-functional and soft skills learning. Lastly, training budgets are anticipated to be lower than in the past, since no out-of-field time is required, and training does not occur at venues away from the workforce place of work.

d) Risk assessment

The risk assessment in the case organisation is approached from three perspectives. Firstly, risks associated with the implementation of the ID model; secondly, risks associated with *not* implementing the ID model; and thirdly, implied risks to the ID model. These risks have relevance for the purposes of this dissertation, since any or all of them may impact on the ultimate ability of the ID model to achieve the required outcomes and specified learning needs and goals (see par. 4.4.1.3a).

Firstly, there are a number of risks associated with the implementation of the ID model. These are mentioned below and will be considered in the final evaluation of the ID model.

Change management is critical for moving the organisation to a new training and learning paradigm and mindset – i.e. a change management programme needs to be part of the implementation of the ID model. There may be lack of priority on the ID model implementation due to other new and pressing projects and objectives; there may be a potential lack of buy-in from stakeholders, and resistance from managers who have to provide “additional” facilitation inputs. The lack of relevant facilitation skills and other performance gaps amongst managers; implementation costs; resource costs; and time to launch are further potential risks associated with the implementation of the ID model.

Secondly, in the case organisation there are also a number of risks seen to be associated with not implementing the ID model. These risks need to be assessed over a period of time, and therefore fall outside the scope of this dissertation, which is completed after development and implementation of the ID model, but within a relatively short period of time for risk assessment. There are however, a number of risks associated with not implementing the ID model that can be defined now.

If training of the field force representatives maintains the status quo in the case organisation, performance will, it is argued, at best, remain as is or even decline. There will be a continued lack of cross-functional interaction, inputs and understanding; knowledge improvement and the application of job-specific knowledge will remain unsatisfactory. The full potential of field force representatives will remain unrealised, since they have little or no exposure to cross-functional inputs or the development of soft skills. Overall personal development pathways will remain limited and therefore demotivating, and these members of the workforce will need to receive training out-of-field at expensive central venues which negatively impact on training budgets. Line management involvement in individual development will remain a secondary priority.

Thirdly, “implied risks” for the case organisation relate to organisational and subjective elements which may impact on the ID model. These include a lack of buy-in and support at senior stakeholder levels; resistance to change from workforce and managers; resistance to recognise gaps in and shortcomings of current course contents and training practices (i.e. criticism of current interventions is not well-received and therefore a new practice such as the ID model may be actively resisted which would cause overall failure of implementation); lack of relevant expertise and functional knowledge of managers.

However, these risks would be mitigated should the training intervention facilitated by the ID model achieve certain success criteria as defined by stakeholders in the case organisation, as outlined in par. 4.4.1.3e below.

e) Success criteria

From the perspective of the case organisation, success criteria are simply defined as “a measurable improvement in job-specific knowledge” and “a perceived and observable improvement in core- and situation-specific behaviour embodied in the application of increased job-specific knowledge and skills”. The achievement or not of the success criteria form an integral part of the evaluation of the ID model and will be discussed in Chapter 6 - Research results, analysis and interpretation.

From a broader organisational perspective, there are, lastly, business decisions to be made regarding constraints on the development and implementation of the ID model.

f) Constraints

Obviously, given the organisational context, the availability of resources both human and financial, and realities in the operating procedures and environment, any training intervention of this nature is bound to experience constraints. An anticipation of these constraints in the development of the ID model is essential, since it eliminates unrealistic expectations and scope-creep in the execution of the project.

Although, in the case organisation, constraints are seen to largely centre on budgetary and financial issues, in reality they also centre on stakeholder support and buy-in, and field force manager support and willingness to take on additional responsibilities as facilitators in and assessors of the ID model (see par. 4.5.1.2b).

Before the resource allocation is discussed, a summary on decisions in ID model processes is offered (see par. 4.4.1.4).

4.4.1.4 Summary of decisions

In the development of the ID model, there are overarching decisions regarding learning requirements and business requirements decisions that need to be taken. This is necessary to ensure the business case for the development of the ID model is watertight and also to make sure that expectations are managed because the organisation has a clear understanding and there are pertinent specifications of what the ID model sets out to achieve.

From a generic, ID model perspective, learning requirements decisions refer to a definition of the nature of the job-specific knowledge and skills to be imparted by the ID model. In addition, the outcomes of the ID model from an organisational strategic, functional and employee perspective are delineated to be in line with business requirements. The decisions relating to business requirements embody a specific definition of the learning needs in the organisation, i.e. what is the training shortfall; the goals to be achieved both from the perspective of the training intervention per se and also the ID model specifically. These goals centre on the “what” and “how” and “why” contained in the delivery media, the learning contents, the organisational strategic and learner perspectives and the ID model specifically. Business requirements decisions also relate to business case issues within the organisation and include reasons for the training intervention, its perceived benefits, a risk assessment and defined success criteria and a consideration of the constraints impacting on the development of the ID model.

In summary, from the perspective of decisions in the case organisation, the learning requirements regarding job-specific knowledge and skills are defined to be functional, cross-functional and soft skills knowledge. The required outcomes of the ID model are defined as being organisational strategic (i.e. provide and enhance job-specific knowledge and productive behaviour to improve the offering of the organisation to its customers); functional (i.e. increase the defined job-specific knowledge and application thereof); learner-related (i.e. extend the role of the manager, facilitate interaction, upskill learners in a broader sense than organisation-specific and bring about an improvement in job-specific knowledge and productive behaviour of benefit to the organisation); and learning outcomes (i.e. organisation-specific and embodied in module objectives in learning material). Business case issues within the case organisation pertain to reasons for the training intervention (i.e. to shift to an outcomes-based ID model to address shortcomings of previous training interventions); benefits (i.e. an enhanced retention and understanding of job-specific knowledge and the implementation thereof in the field by field force representatives); a risk assessment (i.e. risks related to implementing, or not implementing the ID model and implied risks); success criteria (i.e. simply a measurable improvement in job-specific knowledge and a perceived and observable improvement in core and situation-specific behaviour embodied in the application of job-specific knowledge and skills) and constraints (i.e. budgetary/financial and lack of buy-in).

Overall, constraints may largely be brought on through resources, or a lack thereof, thus resource allocation (par. 4.4.2) as a further process in the development of the ID model is discussed next.

4.4.2 Resource allocation

4.4.2.1 Introduction

In the instance of the development of the ID model put forward in this dissertation, resource allocation needs to be approached both from the perspective of the case organisation, and from the ID developer and team. In further implementation of the ID model in other organisations, it may be that it is an internal development from within the organisation itself, and then appropriate personnel (par. 4.4.2.2) need to be allocated to cover the tasks as described here, under (a) ID developer team and case organisation resources and (b) financial resources.

4.4.2.2 Personnel

A number of personnel, all with specific tasks are required from both the (a) ID developer team and (b) the case organisation team.

a) ID developer team

These resources refer to the team the ID developer puts together to enable the execution and completion of all tasks related to the development of the ID model. Since this is ID developer or organisation specific, only a broad description is provided.

From the perspective of the ID developer team, the following tasks are completed by experts as indicated below:

- ID developer: responsible for the ID model design, functionality, theoretical basis, implementation, evaluation and revisions or updates.
- Contents developer: responsible for compiling the learning material framework and subject matter.
- Copywriter: responsible for crafting the learning contents in easy-to-understand and appropriate-for-the-learner-audience language.
- Visualiser/conceptualiser: responsible for working with the copywriter to put pictures to the words and to create a visual language.
- Renderer: responsible for bringing the pictures to life, using design protocols and graphic design principles.
- Programmer: responsible for the IT component of the ID model, both in terms of putting the learning contents onto learners' electronic devices and the back-end integration of the ID technical infrastructure with the IT system of the organisation.
- Quality controller: responsible amongst others for checking of learning contents, technical viability and operation of the ID model, back-end systems testing and assurances that agreed-on protocols are adhered to.

Tasks and therefore personnel required vary from project to project, but the above summary suffices for the purposes of the development of this ID model. The ID developer team does however not operate in isolation, and on the side of the organisation in which the ID model is developed, tasks and personnel that may be involved are outlined in the (b) section below.

b) Case organisation team

- Direct contacts: responsible for the day-to-day liaison and administrative functions, in the case organisation, members of MSD responsible for deploying the training activity.
- Subject specialists: responsible for specialist input, feedback and approval on organisation-specific learning contents, for example legal, distribution, planning.
- Technical expert: responsible for working with the programmer on the ID developer team to ensure seamless integration with the case company proprietary IT system and help find solutions to technical problems where required.
- Sign-off committee: responsible for final approval and sign-off on all components of the ID model.

All of these resources are catered for within a specific budget that falls under financial resources and are allocated as the budget (par. 4.4.2.3) for the development of the ID model.

4.4.2.3 Budget

Broadly speaking, financial resources are allocated by the case organisation based on a production cost estimate supplied by the ID developer. Once approved, this estimate becomes the production budget, that is signed off by the case organisation and production of the ID model commences.

4.4.2.4 Summary of resource allocation

Under the resource allocation process, the ID developer and organisation for which the ID model is developed allocate and assign resources to facilitate the overall development, administration and execution of all components of the ID model. This occurs within a framework of project management (par. 4.4.3) to ensure the appropriate coordination and control functions are done.

4.4.3 Project management

4.4.3.1 Introduction

Project management refers, in its broadest sense, to the coordinated and planned process whereby all components of a project – in this instance the development of the ID model – are managed and administered from a coordination and control perspective. Although project management is a discipline in its own right, with various methodologies and techniques underpinning it, for example PRINCE2, for the purpose of this dissertation only the coordination (par. 4.4.3.2) and control (par. 4.4.3.3) functions are highlighted, as a formal project management methodology such as PRINCE2 is not employed.

4.4.3.2 Coordination

In the development of the ID model a major challenge is to have a project plan that is coordinated from a holistic perspective. This means not only coordinating the budget, timelines and deliverables for the development of the ID model, but also all processes and activities to facilitate implementation and completion of the ID model on time, on budget and delivering on expectations.

In the instance of the development of the ID model put forward in this dissertation, the ID developer fulfilled this role. The coordination of all components in the development of the ID model needs to be controlled to ensure all goals are achieved.

4.4.3.3 Controls

Not only do controls serve to ensure that all learning needs and goals - see par. 4.4.1.3a - are achieved, they also highlight potential problems and address these problems; make sure that everything in the development of the ID model is happening as and when it should; and confirm that conventions and protocols (for example treatment of the learning contents, style of writing, navigation system for learning contents on electronic device – see par. 4.4.4.2) are followed and correctly executed and applied.

4.4.3.4 Summary of project management

Project management processes in the development of the ID model serve the function of coordinating and controlling all events, actions, processes and activities. Although formal project management methodologies and techniques may be employed, in the development of this ID model coordination and controls processes form the essence of project management. In formal project management methodologies, quality assurance

would be included as a project management process. However, due to the extended and broad scope of the quality assurance required for the development of the ID model, this is presented as a separate and specific process as discussed in par. 4.4.4 following

4.4.4 Quality assurance (QA)

4.4.4.1 Introduction

In the development of the ID model quality assurance stretches across and touches all ID model processes and ID model activities. QA is a feature of the ID model which is pertinent in everything that is done. Information is double-checked and confirmed with the organisation in which the ID model is implemented; the decisions regarding ID and learning theory, the learner audience, delivery media and contents are carefully tailored and confirmed both in terms of organisational and learning goals; the learning contents are tested on the electronic device (where used) to see if the technology can carry the design; in-field tasks are discussed with and verified by both managers and field-force representatives in terms of their do-ability. A constant aspect of QA is the editing and verifying of the learning contents in the courses and the technical workings of the ID model and its supporting ID framework. QA comes into its own during the implementation stage, when all that is not working, or is unclear, is revised and rectified. QA is thus an organised system of checks-and-balances that ensures conventions and protocols (par. 4.4.4.2) are adhered to; deliverables (par. 4.4.4.3) are clearly defined and delivered upon; and accuracy and testing (par. 4.4.4.4) of all components of the ID model occur timeously and correctly and remedial actions implemented when necessary.

4.4.4.2 Conventions and protocols

Conventions and protocols refer to the defined “rules” of the development of the ID model. It is a blueprint and template that dictate how the learning contents are treated, for example in a light, easy-to-read manner or in a formal organisational tone of voice. This may be specified to the smallest common denominator, for example is upper or lower case used in organisation-specific terminology such as Marketing Activity Planning.

Also, in the instance of this ID model, where learning contents are in electronic format, the conventions and protocols dictate how the navigation on the system works, for example a forward button  allows for navigation to the next “page” in learning contents, and  denotes a site map containing all learning contents in one place, from which any module may be accessed.

These conventions and protocols also apply in a broader, ID model sense, in that they, for example, specify the timeframes in which learners have to complete courses and the portfolio of evidence on the learners that is kept by the manager (see par. 4.6.6.3 and par. 4.6.6.4).

The conventions and protocols form the quality assurance frame for the deliverables (par. 4.4.4.3) in the development of the ID model.

4.4.4.3 Deliverables

In essence, the deliverables in the development of the ID model refer to the courses and learning contents (see par. 4.6.3) contained within a specific training intervention with its relevant name and the ID model in its entirety (see Figure 4.1). Quality assurance on all deliverables needs to be conducted on an ongoing and planned basis.

In the instance of the case organisation, QA is conducted at weekly progress and status meetings on all deliverables. This ensures that accuracy and testing (par. 4.4.4.4) occur on an ongoing basis and problems relating are addressed timeously and adequately.

4.4.4.4 Accuracy and testing

Within QA, accuracy of all components of the ID model and the testing thereof to confirm accuracy is of paramount importance. A quality ID model is one without mistakes – whether electronic problems or errors on a large scale, or typing errors or inconsistency of the use of conventions and protocols on a small scale.

4.4.4.5 Summary of QA

Stringent quality assurance on all components in the development of the ID model ensures that it can stand up to scrutiny – and use. Unless there are defined conventions and protocols of how things, all things, are to be done; and these are checked thoroughly in all deliverables contained in the ID model, organisations will, at best, have a mediocre product in their ID model that may do more harm than good.

From an organisational perspective, the implementation (par. 4.4.5) of the ID model forms the pinnacle of both the ID model processes and ID model activities.

4.4.5 Implementation

4.4.5.1 Introduction

Once the ID model is completed, the implementation thereof in the organisation for which it is designed occurs. However, it is not just a once-off implementation, ideally it is preceded by marketing and communication (par. 4.4.5.2) and a number of implementation phases (par. 4.4.5.3) to ensure a smooth roll out. Once implemented, it is inevitable that there may be problems encountered and updates may be required (par. 4.3.5.4). These aspects of the implementation process in the case organisation of the development of the ID model are subsequently discussed.

4.4.5.2 Marketing and communication

Where the training intervention facilitated by the ID model is bringing about a major shift or change in training practices – as is applicable in the case organisation – it is prudent to embark on a marketing and communication programme that informs, explains, excites and promotes the imminent roll out of the ID model, the reasons for the change in training practice and the benefit to both individuals and the organisation for doing so.

In the instance of the development of this ID model, a “teaser” was sent out to learners and senior management, using visual imagery from the visual language contained in the ID model to inform them of “an exciting happening, due to change the way the organisation and you learn and use information that will help all of us perform better”. (In retrospect, this marketing and communication programme was too superficial, and in the implementation of a similar or this ID model in other organisations a bigger, more coordinated and planned marketing and communication programme is recommended).

The process of implementation of the ID model in the case organisation was achieved through various phases, described next in par. 4.4.5.3.

4.4.5.3 Implementation phases

This section describes the implementation of the ID model in the case organisation, by outlining the (a) pilot and testing phase; (b) the launch and roll out phase; and (c) the field feedback and evaluation phase.

a) Pilot and testing phase

On completion of the ID model development, a specific region was selected and the ID model implemented. The purpose was to test the ID model in its entirety – from the download of the learning contents; to the way the electronic devices performed; the execution of and manager feedback on tasks; completion of the assessments; the use of templates and LAMS. Interviews were conducted with the manager and team from the selected region and their feedback was used to prepare for the national implementation of the model. This feedback is incorporated in Chapter 6 on results, analysis and interpretation and will be highlighted as research results from the pilot study. In summary, however, very few problems relating to the implementation as such were reported, and the implementation proceeded to a launch and roll out phase.

b) Launch and roll out phase

Prior to the launch of the ID model organisation-wide, i.e. on national scale, a “teaser campaign” was launched. This consisted of an “advertisement” distributed to learners and managers alike, which communicated the “new way of learning” in the visual format of the full learning programme. The goals were to create anticipation and excitement, and also to communicate the benefits inherent in the ID model and the new way of facilitating training within the organisation.

The full ID model was then rolled out to all learners in all regions. Once in use, feedback was obtained from learners and managers to obtain an evaluation of the ID model, as will be discussed in Chapter 6.

c) Field feedback and evaluation phase

After the ID model had been implemented and operational for a few months, a field feedback questionnaire was applied in a test region to obtain preliminary feedback on the implementation and the ID model (see Appendix 2 for pilot phase feedback questionnaire including results summary). These results are discussed in Chapter 6. Results were used to determine an initial reaction to and evaluation of the ID model to provide input on comments that needed improvement or change. This was done by MSD personnel in regional sessions held as follow-up to ID model implementation.

Through the implementation feedback questionnaire and discussions by MSD personnel during regional follow-up sessions, problem areas encountered were identified and updates required were specified as outlined in par. 4.4.5.4.

4.4.5.4 Problems encountered and updates required

Overall, very few problems relating to the ID model as such were encountered and reported during the implementation process of the ID model. Rather problems were of a (a) technical and/or (b) personal nature, as described below.

- a) *Technical problems*: related to problems with the download of the ID model from the central IT server; the time it took to download; varying server connections which “dropped” downloads halfway through; too many learners in one region wanting to download simultaneously.
- b) *Personal problems*: related to learner levels of computer literacy.

From the perspective of the implementation of the ID model in the case organisation, updates required of the ID model pertained to increasing server capacity to facilitate smooth downloads from the central server; and for those learners who required it, a computer skills and literacy course was made accessible.

Both these sets of problems and updates fall outside the scope of this dissertation, since they are organisation-pertinent, rather than ID model pertinent, and as such will not be expanded on further.

4.4.5.5 Summary of implementation

On completion of the ID model it was implemented in the organisation for which it was designed. This implementation occurred in various phases. For the case organisation, the phases included a marketing and communication phase; an actual implementation phase consisting of a pilot and testing phase, launch and roll out phase; field feedback and evaluation phase; and a phase whereby problems encountered and updates required were defined and addressed.

A summary of the ID model processes is presented next in par. 4.4.6, after which the ID model activities will be discussed in par. 4.5.

4.4.6 Summary of ID model processes

In the development of the ID model, five main processes are identified. These processes are of an ongoing nature and do not necessarily follow chronologically. In the development of the ID model, particularly since it brought about a complete shift in the

way training interventions are presented in the case organisation, decisions regarding both learning requirements and business requirements were made. The learning requirements decisions refer to a definition of the nature of the job-specific knowledge and skills to be imparted and the outcomes to be achieved.

In the ID model in the case organisation the outcomes were defined as organisational strategic, functional, learner and learning outcomes. The purpose of defining the job-specific knowledge and skills and outcomes is to ensure focus and advance relevant learning that result in productive behaviour of benefit to the organisation. The business requirements in the organisation refer to specific learning needs and goals to be achieved and reasons for the training intervention facilitated by the ID model.

In the case organisation the ID model needs to upskill field force representatives in job-specific knowledge and functional and cross-functional knowledge, since they previously were not exposed to training of this nature. The overall goals of the ID model focus on strategic goals to help bring about service differentiation for the organisation; functional goals to increase job-specific knowledge and skills that may culminate in more productive behaviour; and design goals that provide guidelines of how the learning contents are presented. In addition, decisions about business requirements are made by defining both the perceived benefits and possible risks of the ID model. Success criteria for the ID model are defined as a measurable improvement in job-specific knowledge and a perceived and observable improvement in core and situation-specific behaviour embodied in the application of increased job-specific knowledge and skills. Constraints pertaining to the ID model relate to resources and resource allocation is therefore a further process in the development of the ID model.

In the process of resource allocation, teams are put together by the ID designer and the case organisation. The extent of these teams and the roles of members of each team are organisation and ID developer specific, and this may also have an impact on the required budget, a further resource to be allocated.

To ensure that all components in the development of the ID model happen on time, accurately and in line with overall goals, the process of project management ensures coordination and control of resources, processes, activities, deliverables and quality assurance. Quality assurance in itself is presented as a process in this ID model, as it is an organised system of checks-and-balances that ensures conventions and protocols are

adhered to; deliverables are defined and delivered upon; and, through testing of all components contained in the ID model, accuracy and quality may be assured.

The implementation of the ID model is the process whereby the ID model is rolled out and applied in an organisation. In the instance of the implementation of ID model in the case organisation, the implementation process was preceded by a marketing and communication programme to create awareness of and excitement about the ID model. The ID model was launched on a small, pilot scale first to obtain feedback and address problems, after which it was rolled out nationally in all regions where the case organisation operates. Few problems were encountered in the roll out of the ID model in the case organisation.

Underpinning the ID model processes are four main activities relating to the development of the ID model. These are presented in par. 4.5.

4.5 ID MODEL ACTIVITIES

There are four main activities pertinent to the development of the ID model. These are the design activities (par. 4.5.1); the development activities (par. 4.5.2); possible future revisions and updates (par. 4.5.3) and the evaluation (par. 4.5.4). The ID model activities are shown in Figure 4.4.

4.5.1 Design activities

4.5.1.1 Introduction

The endeavours of the design activities in the development of this ID model pertain to the delivery media (par. 4.5.1.2) of the ID model and how these are to be used; learning contents design (par. 4.5.1.3) relating to how this is put together and visual language (par. 4.5.1.4) that follows on from learning contents design and relates to the graphic design and visual aspects of the learning contents. These design activities involve not only tasks related to making the design activities happen, but also chronicle how specific activities are executed in practice in the ID model *per se*.

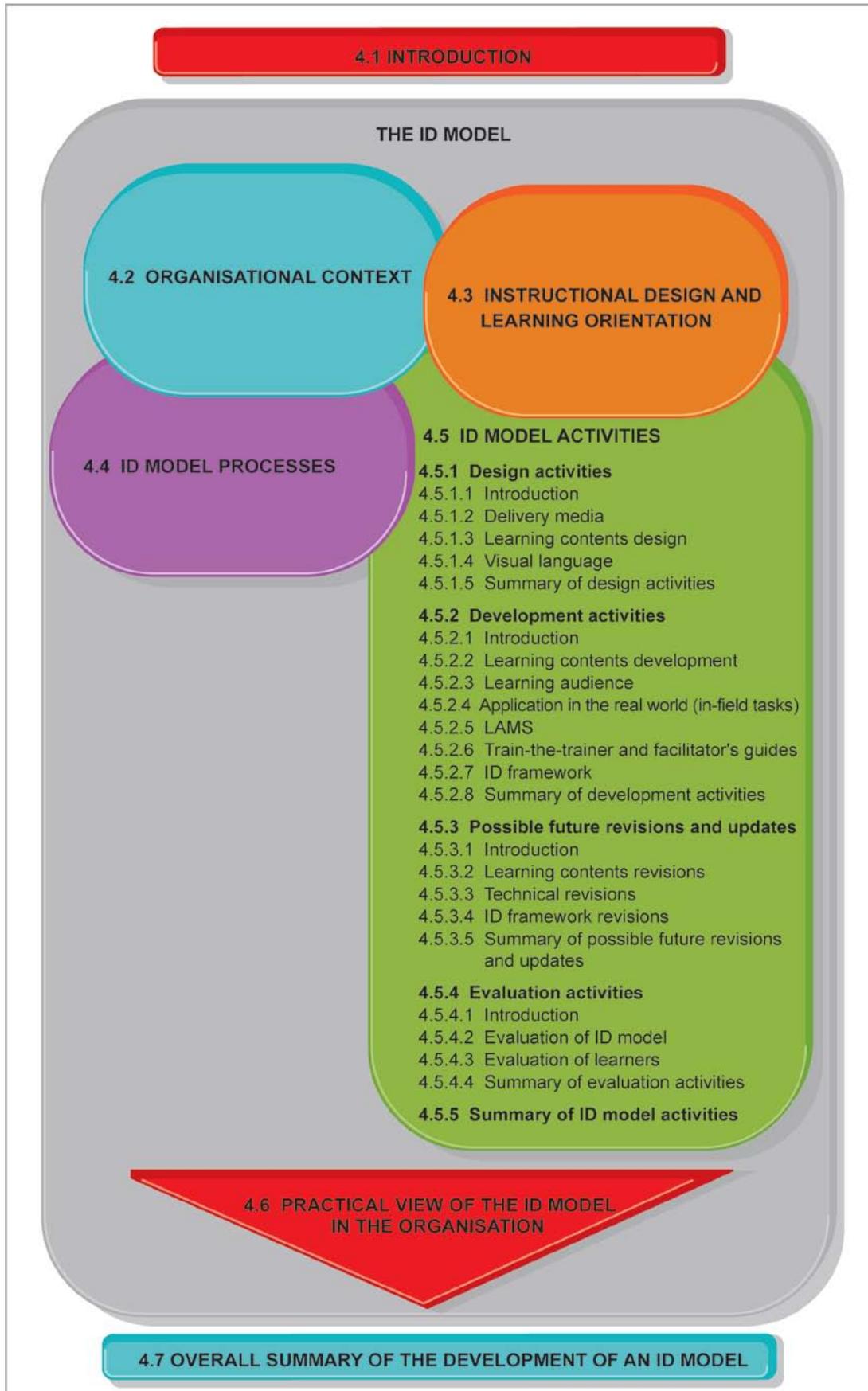


Figure 4.4: ID model activities

4.5.1.2 Delivery media

Delivery media are the vehicles used to facilitate the learning to be disseminated through the ID model. In this ID model, there is a direct delivery medium, i.e. (a) the electronic device; and an indirect delivery medium, i.e. (b) the role of the manager, both of which are described below.

a) Electronic device

The electronic device, in the case organisation a NetBook (a personal computer with limited technical capabilities), contains the full learning contents that provide the learning material in an electronic programme. This programme contains all contents in an easy-to-use system comprised of “factoids” – i.e. easy-to-understand chunks of information which describe the “what”, “why” and “how to” of the learning material. The “what” is the contents of, e.g. the job; the “why” is an explanation of where it fits into the broader organisation; and the “how to” is a description of how to do things, e.g. make a sales call. In addition, the in-field tasks – the application of the knowledge to reinforce learning – are embedded in the learning contents (also see par. 4.5.2.4).

The electronic device thus contains all the relevant learning contents in a succinct and visually stimulating format that, with the aid of text, explains learning contents in a “factoid” manner, which is brief, easy-to-understand, job-specific and organisation relevant.

b) Role of the manager

The role of the manager, in this ID model, is that of facilitator. In this ID model, the managers who form part of the ID model are direct line managers of the field force representatives, i.e. they are area managers who have a number of field representatives reporting to them. Apart from being facilitator, the manager has to identify problem areas of each individual learner and provide input on how to improve. This is an integral part of the ID model, as the job-specific knowledge and productive behaviour and the improvement thereof are related to core and situation-specific behaviour pertinent for capabilities and core competencies that contribute to SCA. The role of the manager is therefore to facilitate learning through interaction with learners, providing remedial inputs when necessary and to assess and evaluate the behaviour of the learners.

The role of manager as facilitator is important in this ID model in that the manager gives individual input and feedback to each team member on how tasks are performed; how they can be improved; what the learner needs to focus on; where the learners’ individual

problem areas are. Since the manager is privy to the learning style of team members (see par. 4.5.2.3c) inputs are geared to make use of that knowledge about individual learning styles to improve learning. For example, a learner with a preference to read/write may be given additional reading matter on a topic by the manager; an aural preference learner may be given a presentation by or discussion with the manager.

In this ID model, the manager is also an observer and an assessor. As observer, the manager accompanies learners in-field to assess how well in-field tasks are completed. If unsatisfactory, the manager provides remedial inputs and advises the learner on how improvements can be made. As assessor, the manager decides if the learner has adequately demonstrated proficiency in the specific in-field task and then approves and signs off the in-field task. A full record of all completed in-field tasks, comments and sign-offs for each learner is maintained.

In the case organisation, three reasons pertain to the decision to include the manager as a “delivery medium” in this ID model. Firstly, it is an organisational strategic objective to get managers more involved with their teams whilst simultaneously increasing manager skills to cater for the succession pipeline in the organisation. Secondly, in the case organisation face-to-face, personal “tuition” is seen to be complementary to the technical delivery of the course contents and learning material. Thirdly, since the implementation of the ID model in the case organisation entails a dramatic departure from previous classroom-based methodologies, communication from first-line management is required to ensure an organisation-wide understanding of methods, rationale and benefits.

Following from the tasks around the delivery media and how this is to be used in the ID model, are the activities relating to the learning contents design, as presented in par. 4.5.1.3.

4.5.1.3 Learning contents design

The learning contents are the actual learning material contained in the ID model. This learning material consists of various courses, in this ID model called skills ranges, which contain information, visual representations of the information, learning objectives and summaries, all divided into various modules. A module contains a specific learning topic, for example marketing planning, or organisational vision, mission and strategic imperatives. In the learning contents design, three design activities occur, (a) activities

relating to course contents; (b) activities relating to module architecture; and (c) activities relating to ID architecture, each of which is discussed below.

a) Activities relating to course contents

The course contents contain the learning material in a detailed body of knowledge. Apart from the job-specific, cross-functional and soft skills knowledge that is to be imparted through the learning contents, it includes a best practice manual that clearly stipulates how things are to be done (e.g. problem-solving procedures) and the specific practices in the job function (e.g. ordering, administration). Since the case organisation wants to have the courses certified and registered at their industry Sector Education and Training Authority (SETA), the learning contents also have to contain all relevant qualifications for a course of this nature as set out by the NQF. These qualifications are determined by the outcomes contained in the learning material, i.e. what are learners able to do and what is the proficiency of learners on completing a course. This falls outside the scope of this dissertation and is therefore not expanded upon, however, it ties back to the upskilling of the South African workforce, to assist in making the country more competitive, as discussed in par. 1.1 and par. 3.3.

The course contents in this ID model are delivered through visuals and text of the learning information. Various skills ranges (i.e. incrementally complex information levels) consist of topic modules, disseminating strategically relevant and pertinent learning contents. A course and a skills range are, in this dissertation, one and the same thing.

The compilation of the course contents comprises three main principles, viz. to contain all information required for the job-specific knowledge and skills inherent in the job function; to consist of five skills ranges or “courses”; and to have various modules per skills range that incorporate organisational knowledge, job-specific knowledge and soft skills. Figure 4.5 reflects the ID model course contents plan for these principles.

Learners start with the introductory skills range, which contains a large amount of job-specific learning, and some learning related to organisational knowledge and soft skills. As learners progress through the skills ranges, job-specific learning decreases, whilst learning about organisational knowledge and soft skills increases. To elaborate, as illustrated in Figure 4.5, the introductory skills range contains a large amount of job-specific information, which in essence gets the learner job-ready in a short space of time.

The job specific skills range starts incorporating more organisational knowledge (e.g. innovation) and soft skills (e.g. problem solving).

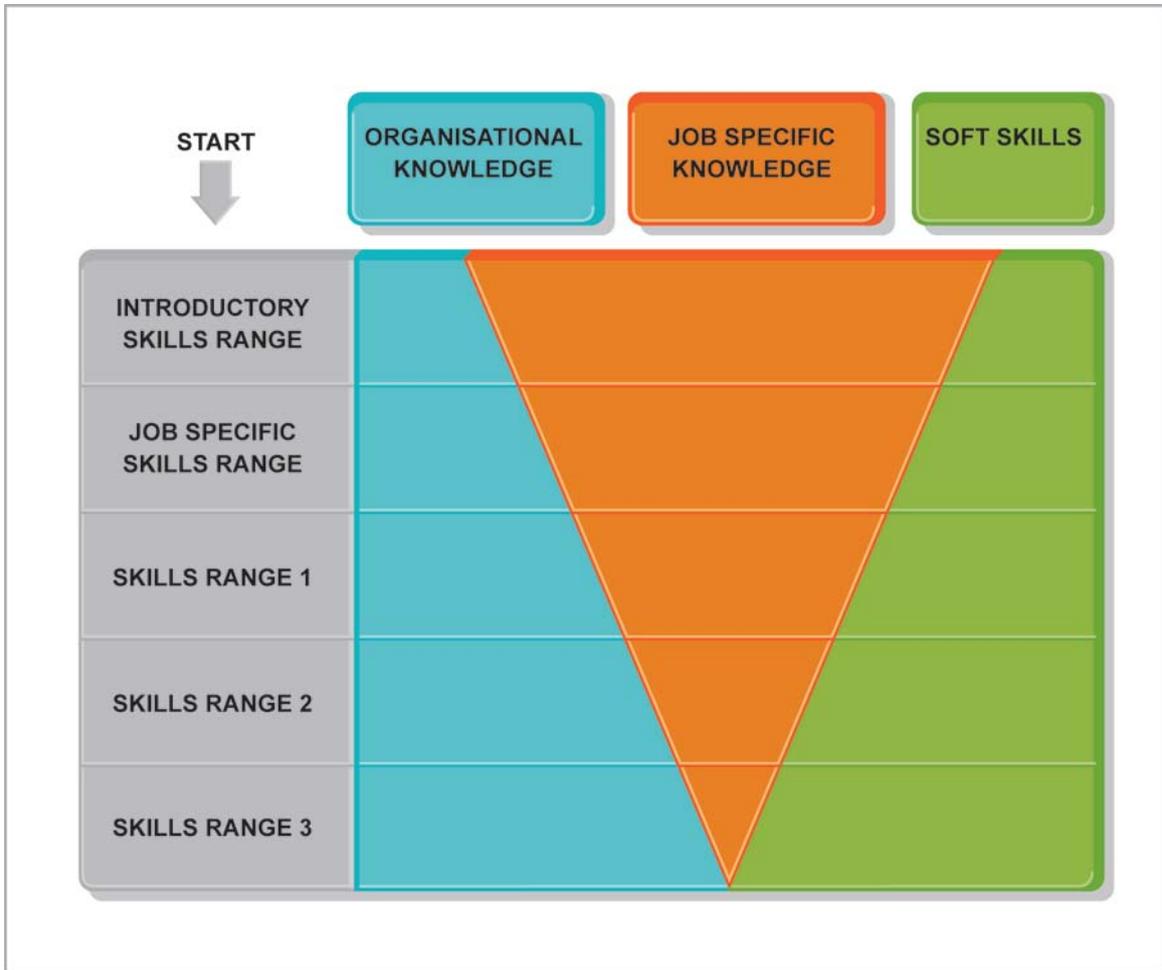


Figure 4.5: ID model course contents plan

Source: Author's own from the ID model

Skills ranges 1-3 contain less job-specific information, since the learner obtained this contents knowledge from the introductory and job-specific skills ranges. As the learner progresses through the skills ranges, progressively more and more complex organisational knowledge (e.g. project management, strategic thinking) and soft skills (e.g. managing change, delegation) are incorporated. The principle in the case organisation is that once the learner has completed all skills ranges he/she will be ready for a managerial position. In the case organisation, completion up to skills range 1 is compulsory. This ensures that learners are proficient in all the required job-specific knowledge, as well as supporting organisational knowledge and soft skills to promote and improve productive behaviour of benefit for the organisation.

Each skills range thus consists of topic-specific modules that address the relevant learning material, whether it is job-specific, organisation knowledge or soft skills related.

Due to the fact that the learning contents in the ID model developed for this dissertation are organisation-specific and purposely so, and the learning contents merely populate the ID model and are not pertinent for the purpose of determining why and how the ID model works, learning contents detail is therefore not supplied. In order to illustrate the treatment of the contents through visuals and text, see Appendix 1: Example of learning contents. An important principle is illustrated here, i.e. the learning contents are not merely text-based, but also consist of visual imagery which enhances learning through bringing in an emotional aspect and “fun” (see par. 3.5.3) which further improves transfer of learning.

Overall, the course contents in this ID model are compiled to provide learners with the skills and job-specific knowledge they need to perform better in their specific jobs and ultimately to build organisation capabilities and core competencies. While the course contents overall address the job-specific and organisational knowledge needs, each module is designed to reinforce and enhance the learning through a specific approach to the module architecture. The activities relating to the module architecture are presented in par. 4.5.1.3b following below.

b) Activities relating to module architecture

The activities relating to module architecture delineate how the learning contents are to be arranged within the individual modules. Figure 4.6 reflects how the individual module architecture is constructed in the ID model put forward in this dissertation. For the purposes of illustrating how the module architecture relates to the learning contents, a simplified example of a “sales call” is used throughout.

The module architecture in the ID model put forward in this dissertation consists of seven parts, as discussed in i – vii below.

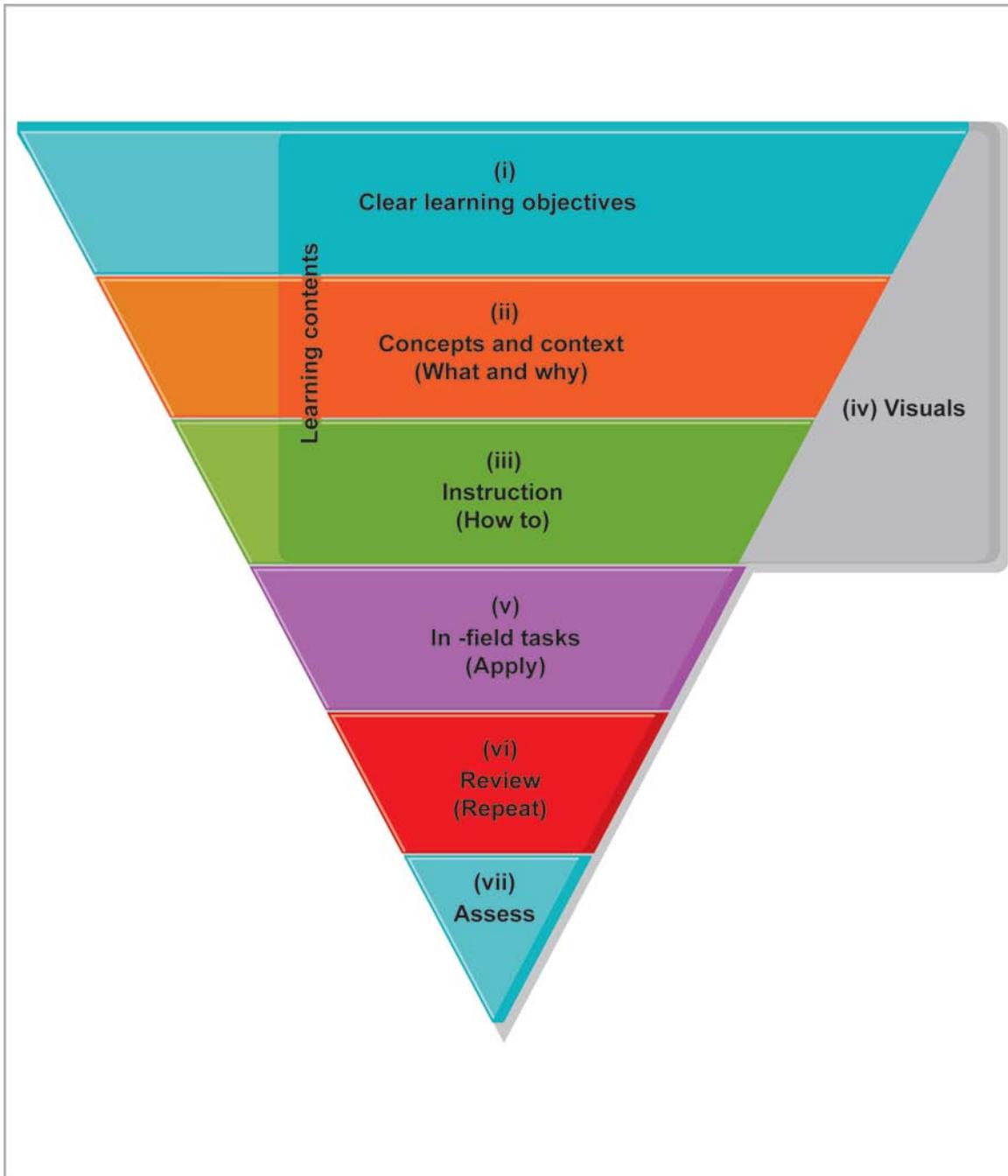


Figure 4.6: Module architecture

- i) *Clear learning objectives*: Each module, at the outset, specifies clear learning objectives. This spells out what the learner will understand and be able to do on completion of the module. For example, in a sales module the objectives are to understand what a sales call entails; to understand the sales process; to understand and apply presentation and negotiation skills; to understand and apply stock take.

- ii) *Concepts and context:* Following on from the module objectives, the learning contents which contain the concepts (i.e. *what* it is that you are learning) and context (i.e. *why* do you need to know that) are presented. For example, you are learning what the steps are in making a sales call. You need to know this to ensure you function optimally when communicating and interacting with customers and can successfully obtain and administer sales orders.
- iii) *Instruction:* In this part of module architecture, the learning contents describe *how* to do the activity or concept ('what') covered in the learning material. For example, learning material for a sales call will include the steps involved, the tools available to make a successful sales call, such as presentation skills, the process to go through when in an outlet making a sales call and the administration involved in completing a sales call.
- iv) *Visuals:* The learning contents in this ID model contain both text-based and visual information. This is based on two premises: to cater for "visual" learner styles and also because "people who are experiencing a positive effect" (Haskell, 2001:57) have an improved transfer of learning. For this ID model, it is contended that engaging, creative and visual contents aid in learning (also see par. 4.5.1.4).
- v) *In-field tasks:* This is discussed in more depth in par. 4.5.2.4. What is relevant from the point of view of the module architecture is that the in-field tasks allow learners to *apply* knowledge.
- vi) *Review:* This process involves the learner and manager interacting – either for the learner to present a task, or for the manager to provide feedback on a task completed and observed in-field. If a learner is deemed to not have mastered the learning outcomes, the task (and/or module) is to be repeated.
- vii) *Assess:* The module architecture is designed to accommodate the full learning process, i.e. cognitive (building) knowledge is developed in the "what and why"; associative (applied) knowledge is developed through the in-field tasks; and autonomous (reinforced) knowledge is developed through a combination of all elements in the model. In the assess activity, the learner gets evaluated on his/her degree of job-specific knowledge (see par. 4.5.2.5) through the LAMS.

In order to facilitate the learning via the delivery media, course contents and module architecture, activities relating to ID architecture pertain, as discussed next in par. 4.5.1.3c.

c) Activities relating to ID architecture

ID architecture refers to the activities learners undertake when working their way through the course contents and modules. Figure 4.7 presents the flow and structure of the modules within a course as contained in the ID model in the case organisation. This structure and flow is repeated within courses. The contents of Figure 4.7 come from the learning material in the ID model in the case organisation and provide an illustration of the visual treatment of the learning contents (also see par. 4.5.1.4 and Appendix 1).

The ID architecture in the ID model in the case organisation thus follows six steps. Step 1, the learner assesses knowledge and skills levels prior to embarking on the learning contained in the ID model. This is done on the LAMS (see par. 4.5.2.5 on LAMS). Step 2 involves the learner to start the learning process and work through the learning material. Step 3 involves the learner completing the appropriate in-field tasks (see par. 4.5.2.4 on in-field tasks) and step 4 involves the learner presenting the completed in-field tasks for that module to his/her manager. If an in-field task is completed successfully it is signed off by the manager and once all in-field tasks are completed successfully the learner moves to step 5. In step 5 the learner again assesses knowledge and skills on the LAMS. After successful completion of all in-field tasks and LAMS assessments in the particular module, the learner moves on to the next module and the process is repeated.

In summary, the ID model course contents plan (Figure 4.5) is built into the ID architecture, in that the ID model consists of five courses or skills ranges, each with a number of modules depending on the required topic areas. Within each course, the learning material contains job-specific, soft skills and organisational knowledge learning material. In introductory courses the emphasis is on job-specific learning contents, while in later courses the emphasis shifts to more soft skills and organisational knowledge learning material. In order to achieve the learning outcomes and specific learning objectives, each module is compiled in a specific manner, as reflected in Figure 4.6 on module architecture. Figure 4.7 shows the flow and structure of modules and courses. These are the activities contained in the learning contents design. The visual language of the learning contents is presented in par. 4.5.1.4.

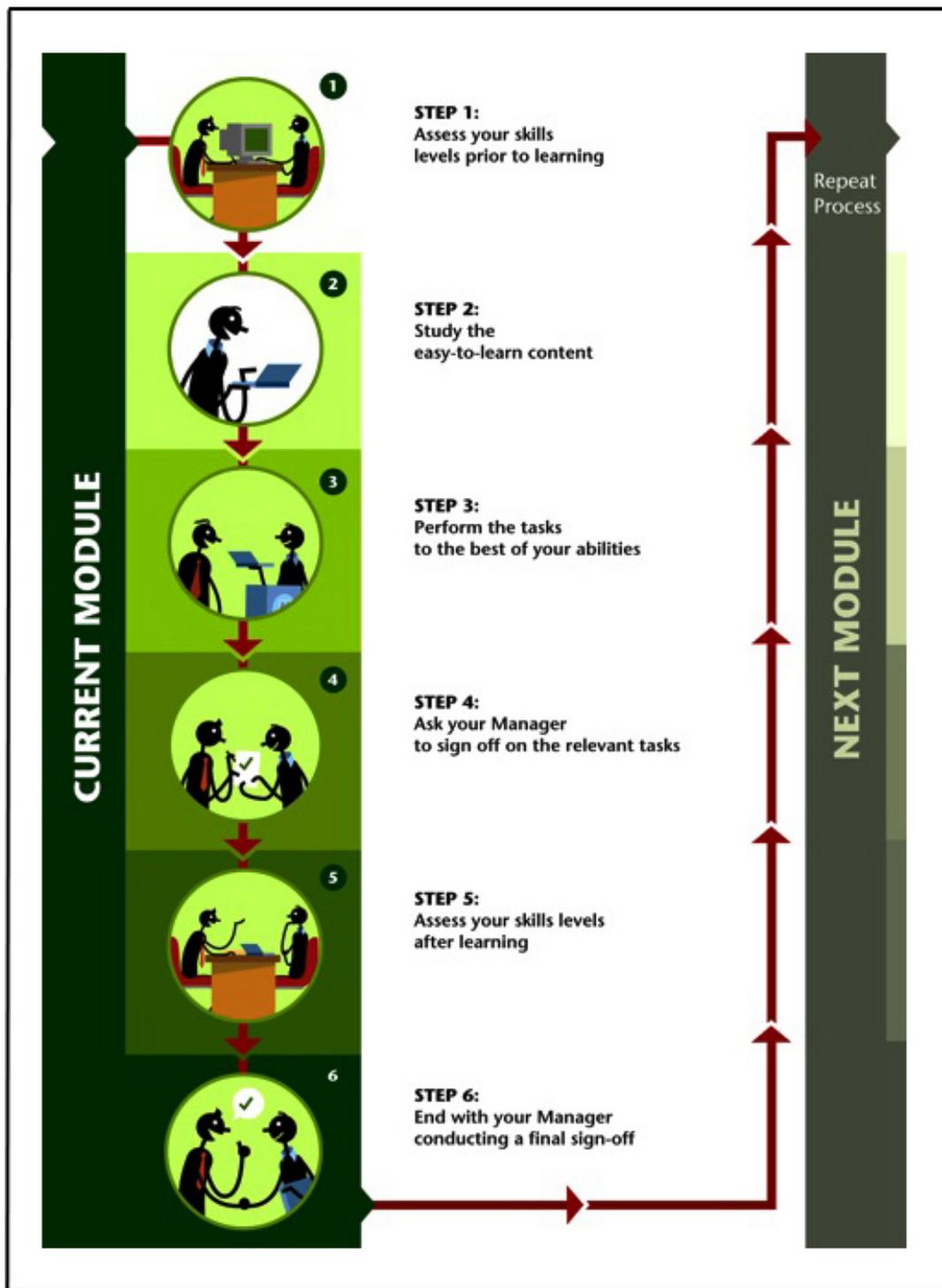


Figure 4.7: Flow and structure of modules and courses

Source: Learning contents in case organisation

4.5.1.4 Visual language

The visual language (through specific visual imagery) is developed in conjunction with the text-based information to create a ‘visual language’ within the case organisation. This visual language is intended to “tell the story of the learning” on its own, without necessarily

depending on the text-based information. Not only is the visual language created to aid those learners with a visual learning preference (see par. 4.5.2.3c), but also to reinforce learning by offering more than one depiction of the learning material contained in the course contents.

A further point applies. The visuals are designed so as to form part of a visual learning language within the case organisation. This is done by using consistent graphic imagery in all courses and all modules to represent various knowledge sections. For example, a specific visual icon will represent the sales call, which is a visual summary of the steps involved. The benefit of this is that once all learners have worked through the learning contents, they have the same 'picture' in their heads regarding the job-specific knowledge and principles underlying their behaviour for the organisation in the marketplace.

Multimedia and the use of computers for learning, as in the instance of the case organisation, allow the ID designer to incorporate and use graphic design and video, sound and movement to great effect in the presentation of learning contents (also see par. 3.5.3.2). Through the use of consistent iconography to represent various aspects of the learning material, an organisation-specific visual literacy is embedded that strengthens learning and elements of job-specific knowledge that is visually represented which serves as a visual frame of reference to enhance understanding of the learning material.

4.5.1.5 Summary of design activities

Design activities describe and inform not only the tasks that happen when the ID model is designed and developed, but also how certain activities are constructed and take place within the ID model. Delivery media relate to the activities on how learning will be facilitated through, in this ID model, the use of computers for the dissemination of learning contents and line managers as facilitators and assessors of the learning. The learning contents are underpinned by the structure of the ID model course contents plan, which explains the various courses and how they are made up (Figure 4.5); the module architecture which explains how each module is constructed (Figure 4.6) and the flow and structure of modules and courses (Figure 4.6) which describe the sequence of steps when the learning contents are worked through. In this ID model, an organisation-specific visual language is incorporated into the design activities, with the purpose of creating a universal visual language in the case organisation to promote consistent learning. These design activities are informed by specific development activities, as presented next in par. 4.5.2.

4.5.2 Development activities

4.5.2.1 Introduction

Development activities in the development of the ID model revolve around learning contents development (par. 4.5.2.2); the learner audience (par. 4.5.2.3); application in the real world through in-field tasks (par. 4.5.2.4) of job-specific knowledge imparted through the ID model; an assessment of the levels of job-specific knowledge imparted through a Learning Assessment Management system or LAMS (par. 4.5.2.5) in this ID model; the upskilling of managers to fulfil their extended roles of facilitators and assessors of learning through train-the-trainer or TTT and facilitator's guides or FGs (par. 4.5.2.6) and the ID framework (par. 4.5.2.7) within which the management and administration of the ID model and all its components reside. A summary of development activities is presented in par. 4.5.2.8.

4.5.2.2 Learning contents development

The activities regarding learning contents development pertain to the actual compilation, writing and graphic design of the learning material as it will appear in the various courses and modules. These activities involve, for example, sourcing new learning contents where such learning contents may not exist in the organisation; re-purposing existing information to fit the learner audience and the style of the ID model; and developing new organisation-specific learning contents by obtaining inputs from subject and function experts within the organisation.

The learning contents are developed and aligned with the overall learning needs and goals (see par. 4.4.1.3a) specified by the organisation.

The learning contents applicable in the ID model put forward in this dissertation are not presented for three reasons. One, the learning contents are aimed at increasing job-specific knowledge and productive behaviour specific to the case organisation. Much of the learning contents are proprietary to the case organisation and some learning contents are specifically developed to build organisation core competencies. In implementing the ID model in other organisations, learning contents relating to the job-specific knowledge and productive behaviour for that particular organisation need to be developed. Two, the learning contents relate to very specific learning needs and goals within the case organisation (see par. 4.4.1.3a). Three, the case organisation considers the course contents as confidential, since it contains organisation and trade specific procedures

crucial in the building and maintenance of competitive advantage. Also, the learning contents contained in the ID model as such may be viewed as a dynamic capability of the organisation (see par. 2.4.1).

In the application of the ID model in other organisations, it is important that learning contents are designed specifically for that organisation. It is the contention of this dissertation that ID models applying “off-the-shelf, one-size-fits-all” learning contents, will not contribute significantly to SCA. Tailor-made contents answerable to organisation and job-specific knowledge culminating in productive behaviour are deemed to be one of the key factors in ID models serving as enablers for SCA.

Central to the development activities is an understanding of the learner audience and their profile, discussed next in par. 4.5.2.3.

4.5.2.3 Learner audience

One of the development activities is to obtain a profile of the learner audience so that the ID designer can decide how this learner audience is to be approached through the ID design to optimise learning. Since each learner audience in the organisations where the ID model may be implemented is different, the (a) learner audience profile in the case organisation is described, to illustrate how the ID model accommodates various idiosyncrasies relating to this learner audience as (b) adult learners, with (c) different individual learning styles.

a) Learner audience profile in the case organisation

In the case organisation, the learner audience is specific members of the workforce, i.e. field force representatives who call on and service customers in the retail and wholesale trade. Table 4.1 reflects the profile of this learner audience in the case organisation.

As can be seen from Table 4.1 the learner audience profile in the case organisation brings with it its own practical challenges for the development of the ID model. In age terms, the learner audience ranges from 25 to 55 years of age, which has implications about the receptivity and openness with which a new and different way of training will be received. From a job function point of view, the majority of learners are in the distribution function, whilst others are in the trade marketing function, which has implications on how the learning contents contained in the ID model are to be tailor-made to be relevant and applicable to the entire learner audience.

Table 4.1: Learner audience profile in case organisation

Age	Between 25 – 55
Job function	Distribution (majority) and trade marketing
Years with organisation	Between two and 30 years
Information technology access to:	
NetBook (i.e. basic PC)	All
Intranet	Only trade marketing function representatives
Internet	Only trade marketing function representatives
PC literacy	Low to fairly adequate
Regions	All regions in South Africa
Population groups	White, Black, Coloured, Asian
Gender	Male and female
Number (as in September 2005)	377

Source: BATSA, 2005

A further complicating factor is the fact that learners have been with the case organisation anywhere between two and 30 years. Since an organisational decision was made in the case organisation that all of the field force representatives had to go through the learning, resistance is expected from those learners who are “old hands” and have been doing their jobs well, for as long as the last 30 years, in some cases. In terms of access to technology, all learners in the case organisation have their own electronic devices (i.e. NetBooks, a basic PC with few technical capabilities and no sound card), but since those learners in the distribution function do not have access to either the organisation’s intranet, or the internet, the ID model has to supply a stand-alone course without the benefits which may be gained by applying e-learning in the sense of interactivity and online facilities. In addition, learners have only recently been given the electronic devices, thus PC literacy is varied, and ranges from low to fairly adequate. The implications of this for the ID model is that it needs a simple design, with ease-of-use and not requiring any degree of technological expertise for access to and use of the course material in the ID model. Learners operate in all areas of South Africa, also outlying areas, which has implications on how the ID model learning contents are to be distributed and put onto the electronic devices. Since learners represent all four major population groups in South Africa, consideration has to be given to previous inferior education systems which disadvantaged the other-than-white groups. Both genders were represented in the learner

audience and, at the time of the implementation of the ID model (January 2005), a total of 377 field force representatives were employed by the case organisation.

In the development of the ID model, the learners, specifically as adult learners, are accommodated, as discussed in par. 4.5.2.3b following.

b) Adult learners

Activities surrounding the learner audience as adults have specific implications in the development of the ID model, i.e. adult learners (i) need to understand why they are learning; (ii) are self-directed; (iii) bring experience to the learning situation; (iv) are relevancy-oriented and should do a (v) self-diagnosis of their needs for learning.

i) Need to understand

The need to understand why they (i.e. the adult learners) are learning is addressed in two ways in this ID model. Prior to the implementation of the ID model, a launch phase is carried out whereby presentations are held to highlight the need for upskilling and cross-functional training. Also, the modules contain objectives that highlight specific learning outcomes that will be achieved and why these are pertinent and important.

ii) Self-directed

As adults are self directed, the ID model is designed to allow learners to learn at their own pace, in their own time. Also, within the courses (par. 4.5.1.3a) learners can complete different modules in any order.

iii) Bring experience to the learning situation

Adults bring experience to learning. Although not overtly incorporated, the in-field tasks and the way in which tasks have to be reported on (i.e. presentations) draw on the experience of the learners.

iv) Relevancy-orientated

Adults are relevancy-oriented and therefore the contents of the ID model are aligned with the contents of the everyday job functions of the learners, including soft skills such as negotiation and conflict handling which may be relevant. In addition, the in-field tasks are designed to apply directly to those core job functions, for example make a sales call, do a stock take.

v) Self-diagnosis

Self-diagnosis is useful for adult learners. This is addressed in the ID model by getting all learners to do a pre-assessment on the LAMS prior to starting on any course. This allows learners, even those who have been with the organisation for a long time, to see if they achieve a “pass” or “fail” in terms of job-specific knowledge levels.

Based on the instructional design and learning orientation for this ID model, it is pertinent that individual learning styles are also catered for. A specific activity surrounds the determination of different individual learning styles.

c) Different individual learning styles

A wide range of inventories for the determination of individual learning styles is available, for example Smith, 1982, who reviewed 15 such instruments; Dunn and Dunn, 1999. For the purposes of this ID model, a simple and easy-to-use inventory is required that does not engage in deep psychological or complex calculation requirements. The principle is that each learner in the organisation should determine his/her learning style through a quick and easy, yet proven inventory. As such, the VARK inventory, developed by Neil Fleming (2002) of Lincoln University, New Zealand is applied in the model (see [.VARK-learn.](#) for details). The VARK questionnaire is easy-to-use (see Appendix 3) and VARK questions and results focus on the ways in which people like information to come to them and the ways in which they like to deliver their communication. Learning styles are divided into visual (V), aural (A), read and write (R), and kinesthetic (K). Visual learners have a preference for graphical and symbolic ways of representing information – pictures tell stories for them. Aural learners prefer to “hear” information. Read/write learners have preference for information printed as words and kinesthetic learners prefer to do, although this style is also multi-modal (see Fleming, 1995; 2002).

Before embarking on the learning contained in the ID model, the first step in the case organisation is for learners to go online ([.VARK-learn.com/](#)) and obtain their preferred learning style by completing the questionnaire. Advice on best methods for learning is provided. The learner style is communicated to the manager, who needs to apply appropriate-to-the-style guidance and input throughout the learning process. For a full description on style modalities, learning strategies, help sheets and application of the questionnaire, visit [://www.VARK-learn.](#). The case organisation is using a license for the use of the VARK model, which is based on the number of users per year.

In the ID model, all learning styles are incorporated in one or other way. For example, within the course contents, both visual imagery for visual learners and text for read and write learners are incorporated. For aural learners, the ID model incorporates interaction with managers and for kinesthetic learners, the in-field tasks are designed to apply the “learn-by-doing” principle important for these learners.

By creating an awareness of the learning style of each individual learner, and by incorporating relevant aids such as the visual imagery and in-field tasks into the ID model, the ID designer believes learning will be enhanced. This will be investigated in the evaluation of the ID model in the empirical stage of the research. The inclusion of an easy-to-use and easy-to-administer learner style tool as an integral part of the ID model is one of the elements that set this ID model apart from other ID models.

In order to strengthen associative knowledge (i.e. learn by doing) and to accommodate learners in the kinaesthetic learning style, application in the real world through in-field tasks form an integral activity in the ID model, as discussed next in par. 4.5.2.4.

4.5.2.4 Application in the real world (in-field tasks)

An important aspect of the ID model as an enabler for SCA relates to the application of learned knowledge in practice, i.e. once job-specific knowledge relating to productive behaviour is imparted, it needs to be applied in practice to entrench the learning. Instruction needs to be customised and based on authentic tasks (Reigeluth, 1996:4).

To facilitate customised instruction based on authentic tasks, each module in the ID model contains practical in-field tasks relating to the learning contents, whereby the learner has to apply the job-specific knowledge and principles contained in the learning contents in a practical, in-field situation. These in-field tasks are designed to align with the learning outcomes stipulated by the organisation, and relate to those specific job functions that enable the organisation to perform better overall through improved service delivery and on-the-job performance of its employees. In-field tasks are designed to be done on-the-job, i.e. “learning by doing”, for example how to handle customers objections, whereby the learner, when in a conflict situation, applies the principles contained in the course contents, and reports back on it, or has his/her manager observe how the task is implemented, who provides remedial input and guidance on how to improve. The execution of in-field tasks, whilst happening in-field, also requires learners to provide feedback and/or a presentation to their managers on how the specific in-field task is done.

For some in-field tasks, the manager accompanies the learner in-field to observe how in-field tasks are executed, and facilitative advice and guidance are based on these observations. For the purpose of this dissertation, this observation is important, since it forms an input to evaluate the level III application questions (see par. 1.5.3).

These in-field tasks are developed and designed according to a specific process, which is of importance in the ID model as such, and for the larger organisation too. This process consists of four steps, viz. a) definition, b) behaviour, c) activity, and d) execution, each of which is discussed below.

a) Definition

In this stage of in-field tasks development, the job-specific knowledge, skills and activities required to fulfil the specific job-function to which the in-field task applies are defined and specified. For example, for a sales call knowledge of the customer is required, presentation and negotiation skills are needed and activities to be done include stock rotation and order form completion.

b) Behaviour

In this stage of in-field task development, the behaviour that is required and important to the organisation (i.e. core and situation-specific) is defined. For example, in the sales call superior service is to be provided through a thorough knowledge of the organisation, the industry in which it operates, the organisation's brands and the ability to conclude sales quickly and efficiently.

c) Activity

In this stage of in-field task development, specific activities which make up the task are defined. These are situation-specific behaviour upskilling to improve and enhance core behaviour. For example, in the sales call the learner needs to demonstrate knowledge about the customer, present a business idea for, say, a stock increase, apply negotiation skills and complete the stock rotation and order form, and obtain the permission for a stock increase from the customer.

d) Execution

In this stage of in-field tasks development it is specified how the learner is to complete the in-field task, and it combines all three steps above. Thus, the in-field task in the learning material would be for example, to follow through on the sales call:

“On your next visit to a grocery outlet, do a presentation to the owner on the benefit of our brands to his business, and get him to increase his stock order. Use presentation and negotiation skills. Also complete the stock order form and your usual activity of stock rotation. Your manager needs to accompany you on this sales call. However, before then, do the presentations that you will do to the retailer to your manager, and incorporate his/her recommendations into the presentation to the retailer”.

The in-field tasks are one of the key components of the ID model. The job-specific knowledge and productive behaviour to be learned and applied through the in-field tasks, relate directly to core and situation-specific behaviour which are pertinent in the strategic performance of the organisation, provided job-specific knowledge and productive behaviour are improved. Should this be so, the ID model may be seen to serve as an enabler for SCA, as it is designed to influence and enhance job-specific knowledge and productive behaviour that relate to core and distinctive competencies. The in-field tasks facilitate the enhancement of defined job-specific knowledge and productive behaviour.

However, the application of knowledge alone is not enough. A measurement on the degree to which job-specific knowledge improves through the implementation of the ID model is pertinent. This is facilitated through a learning assessment measurement system developed specifically for the case organisation, as outlined in par. 4.5.2.5.

4.5.2.5 Learning Assessment Management System (LAMS)

LAMS is an integral part of this ID model in the case organisation in that it provides the measurement of job-specific knowledge and knowledge improvement. For this purpose, a battery of multiple-choice items is compiled for each module. Although the ideal would be to also include open-ended questions whereby learners could demonstrate wider understanding of the learning contents, the technical back-end IT system of the case organisation on which the LAMS assessments are resident does not, as it currently stands, allow for that. This is seen to offer opportunity for the improvement of the ID model in future when the technology is updated. However, it is felt that the in-field tasks are, for purposes as defined at the particular point in time, adequate for demonstrating understanding. In order to determine whether or not the learning disseminated by the ID model brings about an improvement in job-specific knowledge, learners do a pre-assessment (before starting on a course); and upon completion of the course, a post-assessment is done. These pre and post-assessment scores provide the measurement of the ability of the ID model to improve job-specific knowledge levels quantitatively. LAMS is

resident on the central server of the case organisation. When learners are ready to do the assessment, they make arrangements with their manager, whereby the following procedure is followed:

- Time for the assessment is made.
- The manager records the learner's employee number, date of assessment and the module relating to the assessment on his/her PC.
- Through a log-in code only the manager knows, the LAMS is accessed and the learner completes the relevant LAMS assessment.
- The LAMS indicates a "fail" or "pass", whereby "pass" is allocated if the learner scores 80 percent on the assessment. If the learner fails, the particular module is to be repeated and an additional assessment done on completion.

Appendix 4 provides an example of LAMS results.

Apart from the manager being the conduit through which LAMS assessments of job-specific knowledge levels are undertaken, managers are also facilitators and assessors in the practical activities of the ID model. A potential pitfall in the ID model is that not all managers are equally experienced or proficient in their jobs. In order to at least partly ensure that managers have the skills appropriate to fulfil their role in the ID model, two solutions are applied. An immediate solution in the form of a "train-the-trainers" programme; and a long-term solution in the form of "facilitator's guides" are included in the ID model as discussed in par. 4.5.2.6.

4.5.2.6 Train-the-trainers (TTT) and facilitator's guides (FGs)

To enable line managers to fulfil their extended roles as facilitators and assessors within the ID model, they are given specific training as facilitators and assessors related to the learning contents and activities in the ID model through (a) train-the trainers (TTT) and the provision of (b) facilitator's guides (FGs).

a) Train-the-trainers (TTT)

The TTT programme takes the form of a three day workshop per region, whereby managers are taken through the courses, the in-field tasks, the way input to the in-field

tasks is to be given, the rationale for the ID model and the importance of their role within it. The TTT is both learning contents and activity-oriented and presented by the experts in skills development in the MSD department.

b) Facilitator's guides (FGs)

A total of six FGs is compiled and serves as a long-term and ongoing reference work for managers to support them in their role in the ID model. There is an overall FG which outlines the philosophy, theoretical background, perceived benefits, learning outcomes and principles inherent in the ID model. Then, for each course (from the introductory skills range to skills range 3, see Figure 4.5) a specific FG is compiled. These FGs also contain the in-field tasks and provide a detailed guideline for the manager on how in-field tasks are to be completed, what inputs could be given and how in-field tasks are to be assessed prior to sign-off. The FGs also contain templates the manager uses to keep a record for each learner in terms of in-field tasks completed, evidence thereof in the form of notes and/or presentation material and to give sign-off on completion of modules and courses. These notes and records are required for NQF and course accreditation purposes. The FGs are in the form of Word documents installed on managers' PCs and are thus easily updated and amended, via the central server, when required. All the templates, records of completion of courses for individual learners, evidence supporting completion of in-field tasks and sign-off evidence are centrally kept in the ID framework, as elaborated on in par. 4.5.2.7.

4.5.2.7 ID framework

The ID framework combines all the activities and support systems surrounding the management and administration of the ID model in the case organisation. This entails the (a) technical infrastructure, (b) overall management system, and (c) the practical activities. On the whole, the ID framework is proprietary to the case organisation since it is resident on and developed for the organisation's technical infrastructure facility. However, brief explanations for each of the elements in the ID framework are provided below.

a) Technical infrastructure

The technical infrastructure at the case organisation provides and contains the administration system of the ID model, i.e. through the access that managers have to the organisation's intranet via their PCs, all record templates and FGs are available. In addition, the LAMS is accessed through the technical infrastructure and records are kept on whether learners passed or failed and the number of attempts for each learner to pass

or fail a specific course. The back-end administration system on the technical infrastructure contains FGs, record templates, access to LAMS, learner records in terms of courses completed, learner records in terms of evidence presented for tasks completed, records on time, i.e. how long learners take to complete a course, and which learners are due for course completion, evaluation records for in-field tasks application and assessments.

The technical infrastructure is also used to download the course contents onto learner's electronic devices (i.e. the NetBooks) when they "dock on to" the central server. This is a seamless procedure that only requires learners to "double-click" on a learning icon. The full learning contents are then downloaded and installed on the NetBooks.

The updating and management of the technical infrastructure forms part of the overall management system in the ID model.

b) Overall management system

Although the overall ID framework is resident on the organisational technical infrastructure, an overall management system of the ID model is facilitated by specific personnel of the case organisation. One, there is a specific department (i.e. MSD) responsible for communicating about the ID model and technical infrastructure to the case organisation at large. Two, this department is responsible for continually reviewing and revising (where appropriate) the ID model and supporting technical infrastructure. Three, this department is also responsible for the development of the knowledge assessment questions on the LAMS. Thus, although the ID framework is largely resident on the technical back-end, a specific department facilitates human management interventions relating to the ID framework and revisions or updates. This department is also responsible to continually review the practical activities for learning in the ID model to improve job-specific knowledge and productive behaviour

c) Practical activities for learning in the ID model

To ensure not only the success of the ID model *per se*, but the learning imparted through it, the practical activities need to be kept as simple and uncomplicated as possible. In the case organisation, the practical activities for learning in the ID model are simple to follow for both learners and managers. A pre-assessment on LAMS determines and records learners' current relevant and job-specific knowledge levels, after which the learner downloads the learning material and starts working through the learning contents. In-field

tasks are done, input obtained and signed off if learnings have been achieved and demonstrated. Upon successful completion of all in-field tasks, the learner does a post-assessment to determine relevant and job-specific knowledge levels, and provided a score of 80 percent is achieved, the learner progresses to the next module. Thus, the practical process of the ID model is simply:

Step 1: Pre-assessment of relevant and job-specific knowledge levels on LAMS prior to starting a course.

Step 2: Learner downloads course and goes through learning contents.

Step 3: Learner completes in-field tasks and obtains feedback from manager.

Step 4: If in-field tasks are completed successfully, manager signs off all in-field tasks. All modules are completed and signed off. Manager completes records.

Step 5: Learner does post-assessment on LAMS. An 80 percent score provides a pass and the learner repeats the process with the next course.

The ID framework (i.e. technical infrastructure and overall management system) remains “invisible” to the learners although these components form the back end to making the ID model work.

4.5.2.8 Summary of development activities

Delivery activities in the development of the ID model have a bearing on the people involved, i.e. learner audience; how the job-specific knowledge to be imparted through the ID model is applied and assessed; how supporting learning mechanisms – in this instance the line managers – are upskilled for their extended roles; and the back-end ID framework system that supports the management and administration of all components of ID model activities.

In the case organisation, the learner audience has a profile that may be said to be representative of other, similar organisations. A broad spectrum of ages is represented, both male and female, of the four main population groups in South Africa and resident in all regions of South Africa.

As adults, delivery activities in the development of the ID model incorporate those principles proven to make adults learn better, i.e. understand why they are learning; allow them to be self-directed and use the learning experience they bring to the learning; provide information on the relevancy of what it is that they are learning and give them the

opportunity to do a self-diagnosis of their learning. In addition, as learners all have individual learning styles, the ID model incorporates a tool whereby individual learning styles may be determined, and these learning styles are catered for in the ID model learning contents and the delivery media employed.

Learning material is disseminated through an electronic device (NetBook), that allows for some use of multimedia to enhance the contents. This technological delivery is supported by a human touch through the role of the managers who serve as facilitators and assessors of learning. However, since not all managers are equally proficient in these roles, they are upskilled through a TTT programme and 24/7 access to FGs covering all support and input information.

To reinforce learning, in-field tasks let learners apply job-specific knowledge in the real world of their everyday work and the degree to which this job-specific knowledge is improved through the ID model is measured quantitatively through the LAMS.

The ID framework combines all the activities and support systems surrounding the management and administration of the ID model. In the case organisation it contains the technical infrastructure with templates, records, documents and an overall technical management infrastructure supported by a specific group of employees. However, to learners and users of the ID model in the case organisation, the practical activities follow an uncomplicated five-steps, namely a pre-assessment of job-specific knowledge levels; downloading and going through the learning contents; completion, feedback and sign-off on in-field tasks; record-keeping by managers; and a post-assessment of job-specific knowledge levels.

As discussed in par. 1.1 and par. 1.2.1, organisations operate in an environment of pervasive and ongoing change. This precipitates changes in the demands on training and changes in the demands on training and changes in training practices (see par. 3.1 and par. 3.3.3). Changes in the environment and subsequent changes in demands on training and training practices will be omnipresent in the future. Any ID model, both in the development thereof in the present and anticipation of keeping it pertinent going into the future, needs to build into its design a component allowing for possible future revisions and updates, discussed in par. 4.5.3.

4.5.3 Possible future revisions and updates

4.5.3.1 Introduction

In the development of any ID model, change should be anticipated. The external, internal and operating environments; changed industry and market conditions and/or internal organisational strategic changes may precipitate this change. Although the ID model put forward in this dissertation is developed (and implemented) at a specific point in time, allowance for possible future revisions is built into the design of the ID model to keep it as an open, dynamic and evolving system and to sensitise the organisation for which the ID model is developed (and where it is implemented) to both anticipate possible future revisions and updates as and when required and to allocate resources going forward.

In essence, there are three main areas where change may require possible revisions in future in the ID model. These are learning contents revisions and updates (par. 4.5.3.2); technical revisions and updates (par. 4.5.3.3) and ID framework revisions and updates (par. 4.5.3.4). Since learning contents, the technical infrastructure and ID framework in this ID model are specific to the case organisation, this section provides only a broad strokes description of the ID model activities involved in possible revisions and updates.

4.5.3.2 Learning contents revisions and updates

The activities surrounding learning contents revisions include updates to the learning material both within courses and modules as and when required. It may also be necessary to revise the visual language in the instance where iconography and graphic design used in the ID model become outdated. In addition, new learning contents may be added from time to time to keep the learning contents topical and up-to-date with actual circumstances in the business of the organisation and to continuously improve job-specific knowledge and productive behaviour of benefit to the organisation in a changing environment. Learning contents revisions may form part of a formal, ongoing activity, or it may be implemented on an ad hoc basis as and when required by the organisation or dictated by changes.

With the increasing development and sophistication of the offerings of information technology, technical revisions and updates to the ID model may be required.

4.5.3.3 Technical revisions and updates

Ongoing advancements in the capabilities of technology may require revisions and updates to the delivery media if computers are involved. For example, during the course of the implementation of the ID model for this dissertation, the electronic devices used by the field force representatives (learner audience) changed from the NetBook (a basic function PC) to Dell laptop computers (a high-end PC with advanced technical specifications and capabilities). The impact hereof is discussed in par. 7.3.6.1 in Chapter 7.

Changes in technology and increased technical sophistication in future may also impact on the ID framework.

4.5.3.4 ID framework revisions and updates

The ID framework, as the activities and support systems surrounding the management and administration of the ID model (see par. 4.5.2.7), is also impacted on when technical specifications and the IT infrastructure in an organisation change. For example, in the case organisation, when the ID model was implemented, LAMS capabilities did not allow for reporting on or the tracking of the progress of individual learners. The technical specifications have subsequently changed towards the end of 2007 and therefore revisions and updates are required to the ID framework of the ID model in the case organisation.

4.5.3.5 Summary of possible future revisions and updates

Changes, whether in the external or internal environment and within the organisation where the ID model is developed and implemented, impact on the ID model and revisions and updates may be required. These revisions and updates may be to the learning contents, technical revisions or to the ID framework as technological capabilities improve and the ID model should, in anticipation of change, be adaptable and open-ended to allow for revisions and updates to be made as and when necessary.

The evaluation of the ID model is an important activity within organisations, since this provides the feedback on and assessment of its success or not. Par. 4.5.4 presents the evaluation activities for this ID model.

4.5.4 Evaluation

4.5.4.1 Introduction

The purpose of evaluation is to assess the value and effectiveness of the ID model. The evaluation consists of two main aspects, namely the evaluation of the ID model itself (par. 4.5.4.2) and the evaluation of learners (par. 4.5.4.3) to assess the impact of the ID model on job-specific knowledge and productive behaviour.

The evaluation of the ID model forms the basis for the empirical investigation of this dissertation and a full evaluation is presented in Chapter 7 on the summary, conclusions and recommendations emanating from this research.

4.5.4.2 Evaluation of ID model

For the purposes of this dissertation, the evaluation model of Kirkpatrick (1994) is used for the evaluation of the ID model (see par. 1.3.4). It is important to note that Kirkpatrick's evaluation model, as many times as it is held as the ultimate model for evaluation, is also criticised for being inflexible. However, even when looking at more comprehensive and flexible models, it is evident that the basic levels of Kirkpatrick's model have been incorporated into these to a more or lesser degree (Martineau, 2000:392). For the purpose of this dissertation, however, the Kirkpatrick model is applied for the evaluation of the ID model, as "... the classics are the classics – what we know often is a result of having learned, tested, rejected and recognized the enduring qualities of foundational research in any field" (Martineau, 2000:392).

The Kirkpatrick (1994) model consists of four levels of evaluation, three of which will be used in the evaluation, as explained below.

a) Level I evaluation: Reaction

This level evaluates how the participants in a training intervention feel about their experiences. It simply evaluates how well participants liked their participation in the training and the ID model. For the purposes of the evaluation of the ID model in this dissertation, participants include both the learners and their managers, and qualitative feedback is obtained. In addition, learners and managers rate all components of the ID model to obtain further insight into reaction to the ID model.

b) Level II evaluation: Learning and job-specific knowledge improvement

Learning is defined by the principles, facts and information that are understood and absorbed by the learners. When this is evaluated, an assessment is made about the extent to which skills, knowledge and/or attitudes of learners have changed. For the purpose of this dissertation qualitative feedback from both learners and their managers is obtained, focusing on questions such as what knowledge was acquired, what skills were developed or enhanced and what attitudes changed. In addition, quantitative measures regarding knowledge levels pre and post the implementation of the ID model are extracted from LAMS, to provide an evaluation of the impact of the ID model on job-specific knowledge.

c) Level III evaluation: Application

In Kirkpatrick's original model he named this level behaviour. However, behaviour is the action that is performed, while the final results of the behaviour are performance. Both relate to being productive, so for the purposes of this dissertation level III evaluation involves assessing the learners' ability to perform learned skills and apply knowledge practically, on-the-job. This is evaluated by the manager (observation of in-field tasks execution) and qualitative feedback from managers and learners about the application of learned job-specific knowledge and consequently performance relating to productive behaviour is evaluated.

d) Level IV evaluation: Results

In Kirkpatrick's model this measures the encompassing results and impact of the training intervention (or ID model), including elements such as efficiency, teamwork, morale, employee turn-over. It also attempts to measure the results of training as it directly affects the organisation's bottom line, cost effectiveness and quantitative value of benefits to the organisation. This falls outside the scope of this dissertation, since the focus here is the impact of the ID model on improved job-specific knowledge and productive behaviour; and not on, for example, morale, teamwork or financial ROI measures.

In addition, success criteria for the ID model as defined by the organisation are also evaluated to determine the value and effectiveness of the ID model. Success criteria for the ID model are those criteria defined by the organisation as being important to achieve, i.e. the evaluation criteria to be applied in judging the ID model from an organisational success perspective. The success criteria – or action standards for the ID model in the case organisation - are defined in broad and not quantitatively specific terms, since the

development and implementation of the ID model are viewed by the case organisation as part of a bigger strategy of developing a culture of learning in the longer term. The ID model would be seen to work by the case organisation if:

- No out-of-field time for the learning is required.
- Increased understanding of the organisational big picture, and where the job of the learner audience fit in is facilitated.
- More knowledge regarding the specific job function and processes and procedures within the organisation is demonstrated through improved quantitative job-specific knowledge as measured by LAMS.
- A greater degree of interaction between managers and their teams occurs.
- Better perceived and observable on-the-job performance results.

These criteria are by and large qualitative in nature, which implies that judgement of the performance of the ID model in the case organisation will depend on the perceptions of it by learners, their managers and other stakeholders in the organisation and supported by a quantitative improvement in job-specific knowledge and pre and post implementation of the ID model in the case organisation.

The other evaluation aspect in ID model activities relate to how learners are evaluated in the ID model itself.

4.5.4.3 Evaluation of learners

In this ID model, learners are evaluated from two perspectives, namely proficiency at practical implementation of learning material in-field, and the level of job-specific knowledge improvement as measured through LAMS. The practical implementation relates to the improvement of core and situation-specific behaviour that are at the heart of this dissertation in that they aid in building capabilities and core competencies which are enablers for SCA. The judgement of practical implementation proficiency is executed by managers and observed in-field and evidenced by managers retaining a portfolio of evidence of proficiency in in-field tasks for every learner.

Improvement of knowledge is measured through LAMS, (see par. 4.5.2.5). The long-term plan for LAMS is for it to consist of a large number of questions per module, also allowing for open-ended questions from which the technical system would then randomly extract questions as each learner registers to do the assessment. However, as LAMS currently stands, due to back-end technological limitations, the battery of assessment questions is fixed per module, and all learners do the same assessments. LAMS thus provides a quantitative measure on the degree of improvement of job-specific knowledge facilitated by the ID model.

4.5.4.4 Summary of evaluation activities

Evaluation activities revolve around an assessment of the value and effectiveness of the ID model. This evaluation is both qualitative and quantitative in nature and serves to ratify the development and implementation of the ID model, provided the evaluation is positive.

In this dissertation, the evaluation of the ID model is done through an empirical investigation that looks at an evaluation of the ID model itself; and an evaluation of what the ID model delivers in respect of increased job-specific knowledge and improved productive behaviour. The ID model itself is evaluated in terms of how all components are rated; reaction, i.e. how learners and managers feel about the ID model; degree of learning, i.e. the extent to which the ID model contributes to improved job-specific knowledge and productive behaviour in core and situation-specific situations; and the application of this job-specific knowledge and productive behaviour through improved performance.

The impact of the ID model on job-specific knowledge of the learners is measured quantitatively through LAMS, by using a pre and post-assessment to measure job-specific knowledge levels before and after implementation of the ID model. The level of improvement of job-specific knowledge provides an evaluation of the impact of the ID model on learners and the improvement of productive behaviour. In addition, the impact of the ID model on learners is assessed qualitatively through in-field tasks with regards to their abilities to perform after implementation of the ID model. Learners are thus evaluated both through the levels of improvement (or not) of job-specific knowledge and productive behaviour before and after the implementation of the ID model in the case organisation.

Although summaries have been provided for each ID model activity, a summary of the ID model activities as a whole is presented in par.4.5.5.

4.5.5 Summary of ID model activities

In the development of the ID model, four main activities are pertinent. These activities relate to making things happen in both the ID model itself and the way the ID model is evaluated. In making the ID model happen, there are design and development activities focused on the what, how and why implicit in the ID model. The 'what' relates to activities regarding what needs to be learned, i.e. learning contents; the 'how' relates to how the learning contents are to be presented and disseminated, how learning is to be reinforced and advanced, how the learning is to be measured and supported and revised and updated; and the 'why' relates to an understanding of the learner audience and the technical infrastructure that supports the learning.

Specifically, design activities endeavour to use and optimise the delivery media (in this instance through an electronic device and human involvement) by designing learning contents that are relevant, organisation-specific and visual. In development activities the learner audience is considered and accommodated in how the learning contents are presented and how learning is optimised by incorporating application of the learning contents in the real world through in-field tasks. A measurement of the learning is obtained through LAMS which provides an evaluation of the impact of the ID model on levels of job-specific knowledge. To further reinforce learning (and to provide additional assessment of both the ID model's impact and learners' ability to apply this knowledge), the managers are upskilled through TTT and reference tools in the form of FGs are provided. This is supplemented and supported by an ID framework in which all the managerial and administrative components of the ID model reside.

With change being inevitable, both in the external environment and within the organisation, the ID model activities make allowance for possible future revisions and updates to learning contents, technical revisions and revisions to the ID framework.

The success or not of the ID model rests on its evaluation, which forms the focus for the empirical investigation in this dissertation and evaluation of both the ID model itself and an evaluation of learners are incorporated. The ID model itself is evaluated in terms of how individual components are rated; reaction to the ID model; the degree of learning imparted by it; and how it impacts on behaviour, i.e. the application of the job-specific knowledge imparted by the ID model in practice, observable through changes in productive behaviour. Learners are evaluated through the degree which the ID model increased (or not) their levels of job-specific knowledge and an evaluation of how the ID model

facilitates perceived and observable improvements in the application of job-specific knowledge and skills.

The development and description of the ID model as proposed in this chapter are advanced as encompassing the principles and practices of the ID model, which may be seen to be of very little practical purpose to learners and their managers, who are participants in the ID model. Also, other stakeholders in the organisation may have little interest in these underlying principles and practices, therefore an organisational prototype of the ID model in the case organisation – i.e. a description of how the ID model is experienced, seen and used by both learners and their managers – is offered in par. 4.6.

4.6 ORGANISATIONAL PROTOTYPE OF THE ID MODEL IN THE CASE ORGANISATION

4.6.1 Introduction

Figure 4.8 reflects the organisational prototype of the ID model in the case organisation and the structure of this section, par. 4.6. The organisational prototype may be viewed as the visible face and workings of the ID model to participants (i.e. learners and managers) and other stakeholders in the case organisation; whilst the ID model overall (see Figure 4.1) may be viewed as the contextual and underpinning components of the ID model. The organisational prototype in the case organisation is seen and experienced through the electronic device (par. 4.6.2); the training intervention name (par. 4.6.3); the learning actions (par. 4.6.4); the role of the manager (par. 4.6.5); and the ID model technical infrastructure (par. 4.6.6) as outlined in paragraphs following. A summary of the organisational prototype of the ID model in the case organisation is offered in par. 4.6.7.

4.6.2 Electronic device

The electronic device forms the most visible aspect of the ID model since this is the medium through which learning contents and in-field tasks are accessed. The electronic device (in the case organisation the NetBook PC, or latterly Dell laptop computers of the learner audience) forms the main vehicle for the dissemination of the learning material of the training intervention. (Also see par. 4.5.1.2a).

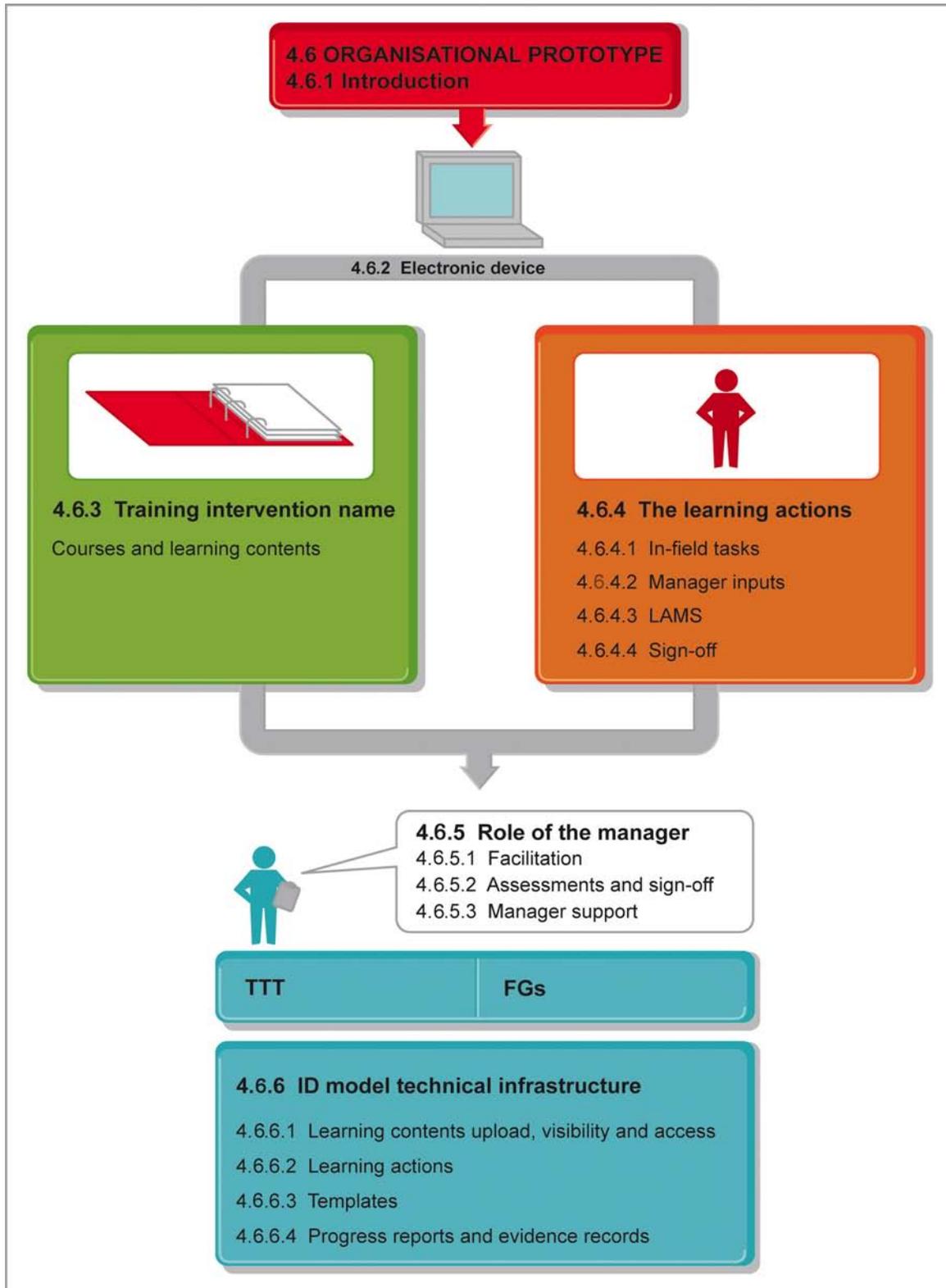


Figure 4.8: Organisational prototype of the ID model in the case organisation

4.6.3 Training intervention name

Through the electronic device, the learners access the various courses and modules (see par. 4.5.1.3 and par. 4.5.2.2) by accessing the learning contents through a specific

training intervention name. These courses and modules also contain the learning actions to be performed by the learners during their completion of the courses.

4.6.4 The learning actions

What the learners have to do is complete the relevant in-field tasks (par. 4.6.4.1); obtain manager inputs (par. 4.6.4.2); complete the learning assessment on LAMS (par. 4.6.4.3); and obtain sign-off (par. 4.6.4.4) from the manager.

4.6.4.1 In-field tasks

For each module the learners have to complete the in-field tasks pertinent to that module (see par. 4.5.2.4). These in-field tasks are submitted to the manager either via email; or by the learner doing a presentation to the manager; or by the manager accompanying the learner in-field to observe how a specific task is completed. This provides the manager the opportunity to give input to the learner on how the task is carried out.

4.6.4.2 Manager inputs

On receiving or observing in-field tasks by the learners, managers provide both remedial input and advice on how the tasks may be completed more proficiently, or he/she advises that the learner is ready for a knowledge assessment through LAMS.

4.6.4.3 LAMS

When learners are ready to do the knowledge assessments they gain access to LAMS (see par. 4.5.2.5) and complete the assessments online. A result is provided and if all in-field tasks and assessments pertaining to the course the learner is doing are completed successfully, sign-off is obtained.

4.6.4.4 Sign-off

The manager provides sign-off on a course once all in-field tasks and LAMS are completed successfully. Sign-off for each individual task is captured in a specific template, making allowance for evidence of completion to be kept, and records of the performance of the learner retained. The role of the manager thus forms an important visible component of the prototype of the ID model in the case organisation.

4.6.5 The role of the manager

In this ID model the managers fulfil two main roles (also see par. 4.5.1.2b), namely that of facilitation (par. 4.6.5.1) and that of assessments and sign-off (par. 4.6.5.2).

4.6.5.1 Facilitation

The managers are the “human face” of the ID model in the case organisation and their role in facilitation is threefold. Firstly, they have to provide input and feedback to learners on the in-field tasks. This may be of a remedial, motivational and/or corrective nature. Secondly, they have to facilitate the record keeping and evidence collection of the learning by learners. Lastly, they need to facilitate a supportive atmosphere and environment conducive to learning. Further to this, they are the arbiters of assessments and sign-off on learning.

4.6.5.2 Assessments and sign-off

A further role of the manager is to assess and judge the proficiency of the learners in the completion of the in-field tasks. Only on judging that in-field tasks are completed proficiently does the manager sign off thereon. In addition, the manager allows for access to LAMS so that the job-specific knowledge assessments may be completed. Support is provided for managers in their role in the ID model.

4.6.5.3 Manager support

In order to support the managers in the role they fulfil in the ID model, a TTT programme is presented and FGs containing all guidelines and relevant information is supplied (also see par. 4.5.2.6).

Although not directly visible, the ID model technical infrastructure facilitates the experience with and use of the ID model in the case organisation, as outlined next in par. 4.6.6.

4.6.6 ID model technical infrastructure

In the organisational prototype of the ID model in the case organisation the ID model technical infrastructure consists of the learning contents upload, visibility and access (par. 4.6.6.1); learning actions (par. 4.6.6.2); templates (par. 4.6.6.3) and progress reports and evidence records (par. 4.6.6.4).

4.6.6.1 Learning contents upload, visibility and access

Visible to the stakeholders in the case organisation is the learning contents and the accessibility thereto through the ID infrastructure of the organisation. This access to and visibility is represented by an icon on the intranet of the case organisation reflecting the

name of the training intervention facilitated by the ID model in the case organisation. Contained in the learning contents are the learning actions.

4.6.6.2 Learning actions

The ID model technical infrastructure in the case organisation makes both the submission and assessment of learning actions, i.e. the in-field tasks and LAMS, visible to learners' managers and other stakeholders in the organisation. Managers also see and have access to templates (par. 4.6.6.3) and progress reports and evidence records (par. 4.6.6.4).

4.6.6.3 Templates

In the ID model technical infrastructure in the case organisation, managers have access to templates that they use for sign off on in-field tasks and other records necessary for NQF and organisational purposes.

4.6.6.4 Progress reports and other evidence records

The ID model technical infrastructure in the case organisation also offers managers access to progress reports that they may draw on the status and progress of their team members in working their way through the learning contents. It gives managers access to records of evidence of in-field tasks' submission and sign off and serves as the general repository of all managerial and administrative records relevant in the execution of the training intervention facilitated by the ID model in the case organisation.

The organisational prototype view of the ID model in the case organisation, when compared to the full ID model and all its components, is thus simplified as may be seen in the summary of the organisational prototype of the ID model in the case organisation as outlined in par. 4.6.7 below.

4.6.7 Summary of organisational prototype of the ID model in the organisation

From the perspective of the stakeholders in the case organisation – both those directly involved such as learners and their managers, and indirectly involved such as other departments and stakeholders – the ID model is visible as a training intervention consisting of four components. The first is the training intervention itself, visible under a specific training intervention name and containing courses and modules relating to the learning material resident on the electronic devices of the learners. The second is the learning actions that need to be completed when the learning is happening and consists of

in-field tasks to be executed, manager input and sign off to be obtained and an assessment of learning completed through LAMS. The third visible component is the role of the manager and the support thereof, including the facilitation and assessment roles, sign off and approval responsibilities and access to and use of support such as FGs and attendance to TTT. The fourth visible component of the ID model organisational prototype in the case organisation is the ID model technical infrastructure, which carries the upload and visibility of the learning contents; the templates and record-keeping facilities and ability for completion and submission of in-field tasks and LAMS; and the progress reports and evidence records for each learner.

Although summaries have been provided for each of the components of the ID model as represented in Figure 4.1, an overall abbreviated summary of the development of an ID model is offered in par. 4.7.

4.7 OVERALL SUMMARY OF THE DEVELOPMENT OF AN ID MODEL

Chapter 4 describes the development of an ID model based on learning and considerations gleaned from a multidisciplinary reading of the literature and stance towards ID. In essence, the ID model consists of four main components that culminate in how the ID model is actually seen, experienced and used in the organisation itself through the organisational prototype of the ID model in the case organisation.

The first component of the ID model pertains to organisational context and this is a judgement by the ID developer on the organisational character, project complexity and available resources. This judgement, mostly qualitative in nature and often based on the experience of the ID developer, serves to initiate working relationships; formulate processes, procedures and activities required; and to obtain a perspective on the scope of the project. Available resources inform the judgement in both human and financial terms; by what is available in the organisation in terms of learning contents and technical infrastructure and the anticipated amount of work required before the ID model may be implemented.

The second component of the ID model pertains to the orientation to learning and ID, both from the point of view of the organisation and that of the ID developer. Learning theory, ID theory and ID strategy underpin this component. In this ID model, learning is simply

viewed as consisting of three stages, i.e. cognitive, associative and autonomous learning. This is supported in a constructivist approach to learning, which focuses on preparing learners for real-life situations, in this instance, the real-world working environment. Flowing from the orientation to learning and ID are the processes and activities contained in the plans of how to put the ID model together, how the ID model will work and how it will be seen and used in the organisation.

The third component of the ID model describes the ID model processes, relating to learning and business decisions that are made – in relation to the nature of the job-specific knowledge and skills to be imparted and the required outcomes to be achieved by the ID model; a definition of the learning needs and goals and reasons for the training intervention; the perceived benefits of the ID model; a risk assessment; defined success criteria and constraints. Once these decisions and assessments are defined, resources may be allocated and project management and quality assurance processes commence. Project management processes serve the functions of coordination and controls, while quality assurance processes ensure conventions and protocols are adhered to; deliverables are clearly defined and accuracy of all components of the ID model is achieved through thorough testing, to enable the ID model to be implemented timeously and for the ID model to work. The implementation process of this ID model is achieved through various phases, including a pilot and testing phase; a launch and roll out phase; a field feedback and evaluation phase; and a phase whereby problems encountered and updates required are defined.

The ID model processes as presented are not necessarily chronological, but all are aimed at the development of an ID model that brings about improvements in the levels of job-specific knowledge and productive behaviour exhibited by the target learner audience in the organisation.

The ID model processes are supported by four main ID model activities that involve not only tasks related to making things happen, but also to chronicle and describe how and why what is done. The first of the main ID model activities centre around design activities. These activities relate to the delivery media for the ID model and how these are to be used; the learning contents and how this is to be constructed through courses and modules, consisting of text and visuals.

Development activities form the second set of ID model activities and revolve around the actual learning contents development of putting together organisation and relevant job-specific learning material; activities relating to the application of learning through in-field tasks and the assessment of job-specific knowledge levels through LAMS; the human support activities implied in the role of the managers as facilitators and assessors; and the ID framework that serves as the administrative and managerial backbone for the ID model.

The third set of ID model activities centres on possible future revisions and updates that may be required to the learning contents, technical components and ID framework of the ID model that should be anticipated and planned for due to ongoing and volatile change in both the external and organisational environments, now and in future.

The fourth set of ID model activities, namely evaluation, serves the purpose of determining the value and effectiveness of the ID model for the organisation. Evaluation is approached from the perspective of the ID model itself, and from the perspective of an evaluation of learners. In this dissertation the evaluation of the ID model forms the basis of the empirical investigation. ID model evaluation is done on three levels, i.e. rating of the components and reaction to the ID model; degree of learning imparted by the ID model; and an evaluation of application, i.e. how well job-specific knowledge obtained through the learning in the ID model is applied in practice. The evaluation of learners is two-fold, one, to determine levels of job-specific knowledge improvement pre and post implementation of the ID model; and two, to evaluate the impact of the ID model on productive behaviour in core and situation-specific situations.

It is proposed that the ID model put forward in this chapter, both through the incorporation of inputs from multidisciplinary knowledge on and insights about learning and ID models, and the description of practical processes and activities to anticipate, plan for and with suggestions on how they are to be done, and provide an improved and extended new age ID model. The ID model put forward in this chapter not only broadens and deepens the proven principles contained in the ADDIE foundation of ID models, but also, it is suggested, adds art and science to the ID model and by doing so provides a flexible, arguably thorough and practical blueprint for the development of training interventions aimed at enhancing and improving job-specific knowledge and productive behaviour of benefit to organisations – as will be investigated empirically.

The methodology for the empirical research is described next, in Chapter 5, and the results, analysis and interpretation are presented in Chapter 6.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

“Research methodology refers to the procedural framework within which the research is conducted. It describes an approach to a problem that can be put into practice in a research programme or process” (Remenyi *et al.*, 2002:28).

The aim of this chapter is to describe the research methodology for the empirical investigation of this dissertation by presenting the procedural framework containing the research approach and how it is put into practice, i.e. operationalised, in the research programme. In this chapter, references to “this research” relate specifically to the empirical aspects of the research and the relevant literature. The research relating to SCA, business-level strategy, resources and training were discussed in Chapter 2; and the literature on training and ID in Chapter 3. Figure 5.1 represents the research methodology as contained in the procedural framework of this research.

The procedural framework of this research consists of a description of the research approach (par. 5.2), which includes the research aim and purpose, philosophical orientation and research tactic; and the research programme (par. 5.3), which includes the research methods, sampling frame and sampling procedure, data analysis, integrity measures and rigour, documenting and reporting protocols, research ethics and limitations of the research. Both the research approach and research programme are expanded on separately and summaries offered in par. 5.2 and par. 5.3.

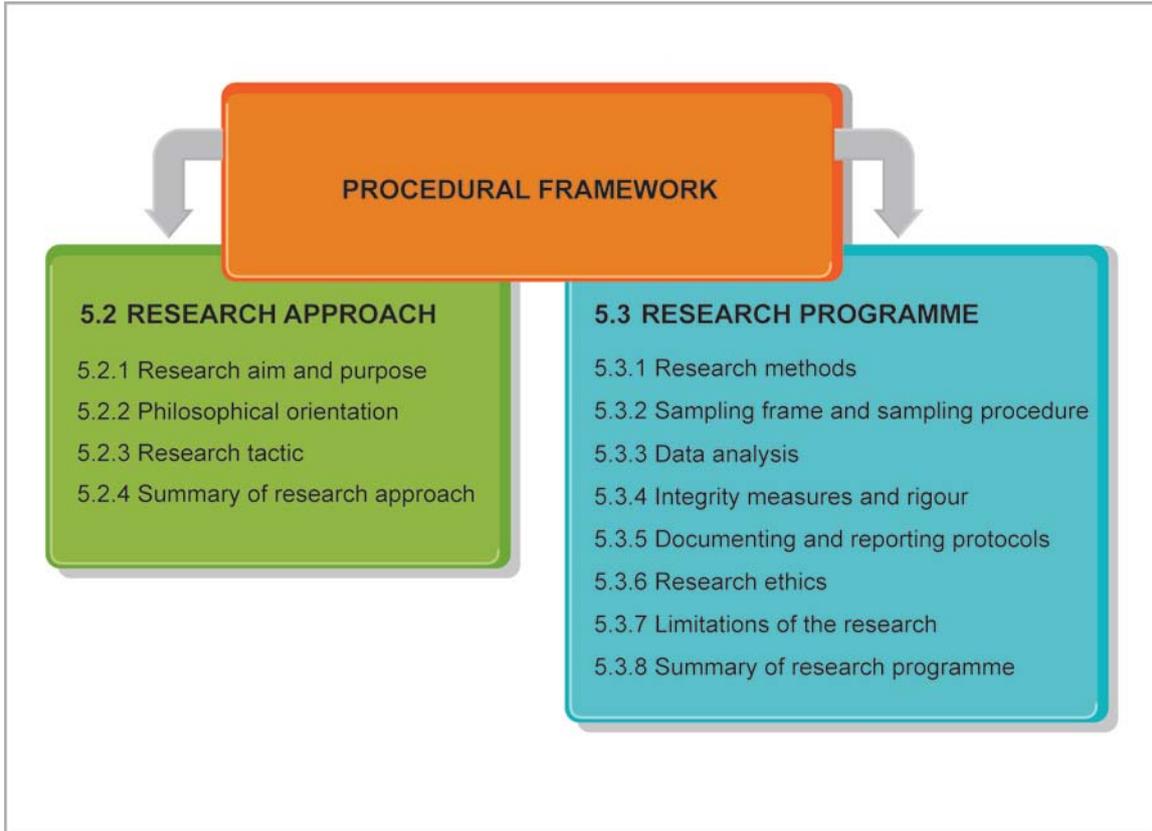


Figure 5.1: Research methodology

5.2 RESEARCH APPROACH

The research aim and purpose is presented below, followed by the philosophical orientation and chosen research tactic for this research. Figure 5.2 represents the research approach and its constituent sections and provides the framework within which the research approach is described. For the research approach the research aim and purpose (par. 5.2.1) provide the focus for the research, while the philosophical orientation (par. 5.2.2) describes the ontological and epistemological underpinnings for the research. From the research aim and purpose and the underpinning philosophical orientation, the chosen research tactic (par. 5.2.3) is presented, after which a summary of the research approach is offered (par. 5.2.4).

5.2.1 Research aim and purpose

The research aim and purpose inform both the research approach and the research programme. In this research, the research aim is aligned to the goals (or objectives) of the research, whilst the research purpose relates to the intention and motive.

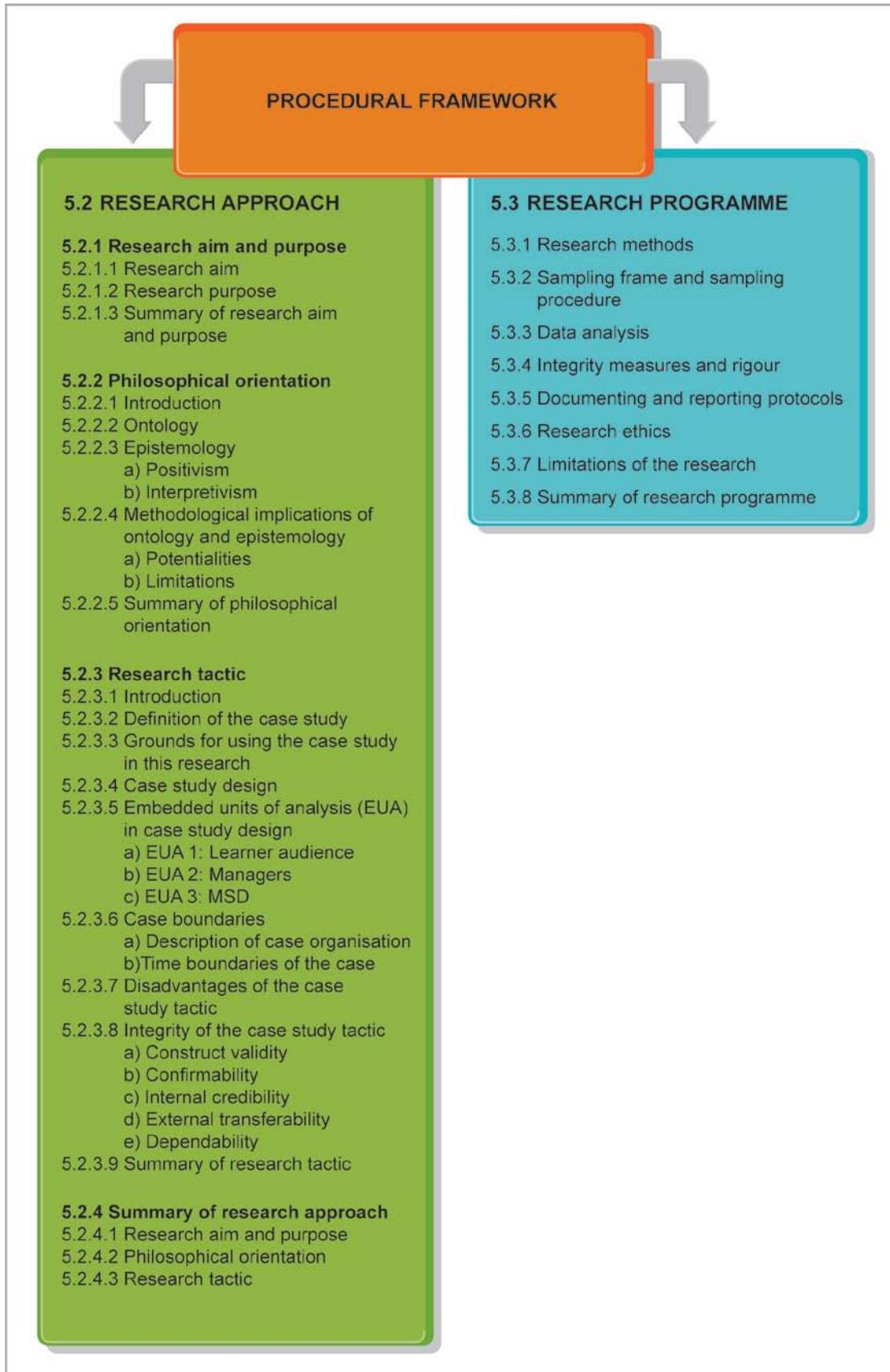


Figure 5.2: Research approach

5.2.1.1 Research aim

The main aim of the research is to evaluate the ID model in terms of its perceived impact on job-specific knowledge and productive behaviour; and to provide an explanation of the relationship between the influence of the ID model and job-specific knowledge and productive behaviour (see par. 1.4). Specifically, the Kirkpatrick (1994) model of evaluation (see par. 4.5.4 on evaluation) is applied to explain, understand and evaluate the ID model.

Underpinning the main aim of the research are the following specific objectives:

- To investigate reactions to the ID model.
- To determine levels of learning and job-specific knowledge improvement brought about by the ID model.
- To analyse the impact of the ID model on job-specific knowledge application.
- To evaluate the performance of the ID model from two perspectives. The first is to evaluate how the ID model *per se* is rated on its various components. The second is to evaluate the perceived influence of the ID model on improving job-specific knowledge and productive behaviour deemed to impact on the performance and effectiveness of individual learners and their role in the organisation (see par. 1.1).
- To understand how and why (if) the ID model is seen to work.

These research objectives are linked to the action standards of the research, specified as being:

- To obtain a positive reaction to the ID model. This action standard will be judged qualitatively and assessed through the reported likes and perceived benefits of the ID model.
- To obtain a measurable increase in job-specific knowledge and improvement in the application thereof. The increase in job-specific knowledge will be judged quantitatively and “a positive increase” is defined as being an increase in pre and post ID model implementation job-specific knowledge measures. Improvement in the application of the

job-specific knowledge will be judged qualitatively and assessed through comments from both managers and learners and observation.

- To obtain positive ratings for the components of the ID model. This action standard will be judged quantitatively through ratings and assessed qualitatively through explanations provided for the ratings.

From the main aim, underpinning objectives and action standards of the research can be inferred that the research purpose is exploratory and interpretive, as outlined in par. 5.2.1.2.

5.2.1.2 Research purpose

Exploratory and interpretive research has the purpose of gathering explanations, gaining insight and collecting information in a largely unstructured way, in order to gain a clear understanding of the research issue at hand (Denzin & Lincoln, 1994; Hesse-Biber & Leavy, 2004). Exploratory and interpretive research seeks to interview those who are knowledgeable and who might be able to provide insight into the phenomenon under study. Exploratory and interpretive research means that little is known about the phenomenon under study. In this research, little is known about the performance of and benefits facilitated by the ID model. Exploratory and interpretive research is required to provide insight into the user experience with the ID model and the impact of the ID model on job-specific knowledge and productive behaviour. It is difficult to determine at this stage of the application of a new ID model what is relevant. The purpose of the research is therefore to discover, identify, describe and explain what makes a complex social situation (i.e. the ID model) work or not.

5.2.1.3 Summary of research aim and purpose

The main aim of the research is to evaluate the ID model in terms of its perceived impact on job-specific knowledge and productive behaviour; and to provide an explanation of the relationship between the influence of the ID model and job-specific knowledge and productive behaviour. The purpose of the research is exploratory and interpretive in that it gathers explanations and gains insight into a phenomenon about which little is known, i.e. the ID model.

The research aim and purpose are embodied in a philosophical orientation towards the nature of knowledge and how the knowledge-gathering process may be conducted, discussed next in par. 5.2.2.

5.2.2 Philosophical orientation

5.2.2.1 Introduction

This section will describe the ontological and epistemological orientation implicit in this research. A definition and delineation of the ontology and epistemology underpinning the research, including the rationale and explanations from the literature are presented. The ontology and epistemology are important to the research approach and research programme as a whole, since there is an interrelationship between ontology, epistemology, methodology, tactics, methods and even sources (Grix, 2002:176). The philosophical orientation is a “basic set of beliefs that guides action” (Guba in Denzin & Lincoln, 2005:22), thus, research is “guided by the researcher’s set of beliefs and feelings about the world and how it should be understood and studied” (Denzin & Lincoln, 2005:22).

The philosophical orientation underpinning this research is discussed by stating the ontology (par. 5.2.2.2), epistemology (par. 5.2.2.3) and the epistemological positions of positivism (par. 5.2.2.3a) and interpretivism (par. 5.2.2.3b). The methodological implications of the ontology and epistemology (par. 5.2.2.4) are presented and par. 5.2.2.5 reflects a summary of the philosophical orientation.

5.2.2.2 Ontology

Ontology defines what’s out there to know, “in short, ontological assumptions are concerned with what we believe constitutes social reality” (Blaikie in Grix, 2002:177). Ontology states the researcher’s views on the nature of social reality, what it looks like and what social phenomena embody. On a basic level, the frame of reference for ontological positions may be delineated in objectivism and constructivism, where objectivism “asserts that social phenomena and their meanings have an existence that is independent of social actors” (Bryman in Grix, 2002:177). Constructivism rests on the philosophical assumption that social reality and its constituents are based on the outcomes of interaction between individuals and their context, thus individuals actively construct their social reality. Objectivism asserts that reality is a concrete, independent structure, with individuals as responders to external inputs, while constructivism asserts that reality is a social construction based on meaning-making by individuals who are the social symbol and meaning creators.

In this research the ontology is constructivism emanating from the belief that people interpret reality and attach meaning to it, therefore there is not a singular reality to be described and studied. Rather, multiple realities are constructed by individuals in specific situations and contexts, and it is these multiple realities as they pertain to the aim and purpose of the research that are to be understood, described and studied to capture the meaning of a social event, in this instance the ID model.

Thus, in this research an understanding of and insight into the reactions to and experiences with the ID model are deemed necessary to advance an evaluation of the ID model in the case organisation and on job-specific knowledge and productive behaviour. An understanding of the multiple realities constructed by users (both learners and their managers) of the ID model, within the context of the organisation is to be provided to capture the meaning of the social event, i.e. the ID model.

The ontology is further informed by defining what kind of knowledge the research produces, i.e. the epistemology underpinning the research, as described in par. 5.2.2.3.

5.2.2.3 Epistemology

Epistemology is concerned with “the theory of knowledge, especially in regard to its methods, validation and the possible ways of gaining knowledge of social reality whatever it is understood to be” (Grix, 2002:177). Epistemology defines what and how we can know about social reality. On a basic level, the frame of reference for epistemological positions may be delineated in positivism and interpretivism. In brief, positivism “advocates the application of the methods of the natural sciences to the study of social reality and beyond ...” whereas interpretivism “... requires the social scientist to grasp the subjective meaning of social action” (Bryman in Grix, 2002:178).

The main tenet of positivism is that the social world can be viewed as an external, objective reality and researchers attempt to give numerical and predictive values to social phenomena. Research methods suited to this paradigm are mostly quantitative in nature.

Conversely, the main tenet of interpretivism is that the world is constructed through the meanings individuals attach to it through their experience in and interaction with their world. It is subjective in nature and researchers attempt to describe and understand social phenomena. Research methods suited to this paradigm are mostly qualitative in nature.

A more comprehensive discussion on (a) positivism and (b) interpretivism is offered to delineate the epistemology underpinning this research.

a) Positivism

Positivism argues that a science of society comparable with natural science, is both possible and desirable. Positivism deems that natural and social sciences measure autonomous, objective facts about individual perceptions of reality (Gabriel, 1990). The researcher is objective, with values that are distinct from the values in the data; data collection is carried out with the researcher often being remote from the phenomena under study, and therefore it is possible to conduct the research objectively. Where possible, hypotheses are derived from scientific theories to be tested empirically, and only data which are observable and can be measured and/or counted deserve to be regarded as data (Money, 2005). In essence, positivism rests on three assertions: Firstly, that the methodological procedures of natural science may be directly applied to the study of human social actions and organisation. Secondly, the outcome of research in social sciences will take the form of predictable and causal laws. Thirdly, the results obtained through research conducted in this paradigm are value-free. The goal is to explain social regularities, associations, rules, outcomes and patterns through a formula of “regularity = mechanism + context” (Pawson & Tilley, 1997:71). Quantitatively-orientated research, e.g. experiments, surveys, longitudinal studies, meta-analysis, cross-sectional studies and case studies service this paradigm.

Positivism does not fit well with the research aim and purpose of this dissertation for three reasons. Firstly, the research aims to provide an insight into “how” and “why” questions, i.e. an understanding of the way the ID model does and does not work. Secondly, the ID model and the application thereof cannot be isolated from its organisational and social contexts, and perceptions about the user (i.e. learners’ and managers’) experiences of the ID model are integral to the organisational context. Thirdly, applying only a structured research methodology with pre-defined variables may overlook more subtle findings, which for the purposes of evaluating the ID model in an exploratory and interpretive way is of importance in this research.

This study is therefore approached from and positioned in interpretivism.

b) Interpretivism

Interpretivism seeks to produce descriptive and interpretive analyses that explain how individuals experience and interact with their world. It has the view that all knowledge is contingent upon human practices, meaning-making and experience, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context (Golafshani, 2003). Events are understood through mental processes of interpretation, which are influenced by and interact with social contexts. In essence, interpretivism holds that knowledge is derived from everyday concepts and meanings within context; the researcher enters this interpretation, which is influenced by and interacts with social contexts. The researcher acts as the human instrument of data collection, which occurs through direct encounters with individuals; and applies an informed interpretation to the meaning of individual responses when analysing data. The researcher thus enters this everyday world in order to grasp the socially constructed meanings, and then reconstructs these meanings in a social scientific language. Data analysis is inductive, and aimed at gaining a holistic understanding of social phenomena, rather than defining sets of variables. Qualitatively-orientated research, e.g. action research, ethnography, focus groups, case studies and narrative discourse service this paradigm.

Although there are debates within interpretivist circles about its base philosophy (see, for example, Berger & Luckman, 1966; Flinders & Mills, 1993; Denzin & Lincoln, 1994; Gephart, 1999; Hancock, 2002; Hesse-Biber & Leavy, 2004), for the purposes of this research, phenomenology is viewed as the philosophical home of interpretivism.

The definition of phenomenology is "... the study of 'phenomena': appearances of things, or things as they appear in our experience, or the ways we experience things, thus the meanings things have in our experience" (Stanford Encyclopaedia of Philosophy).

Phenomenology concerns itself with the structures of sense-making of social reality, as described and experienced from the first-person point-of-view, including relevant conditions of experience. The central structure of an experience is its intentionality, the way it is directed through its content or meaning toward a certain object in the world (Moran, 2000). This is relevant from the point of view of this research, since it aims to investigate the conscious experience of learners and managers (from a first person point-of-view) with the ID model. The meaning-making of experience by social actors is further informed by phenomenological sociology – a descriptive and interpretive theory of social

action that explores subjective experience and meaning-making within the everyday life of individuals. Phenomenological sociology is largely based on the works of Alfred Schütz who holds that “people are engaged in an ongoing process of making sense of the world, in interaction with their fellows and we, as scientists, are seeking to make sense of their sense-making” (Wilson, 2002b:3). In order for the social scientist to make sense of the sense-making of individuals, a set of relevances pertaining to the social situation under study is selected, by choosing those aspects of the situation that are appropriate for the aim and purpose of the research. This is relevant from the point of view of this research, since a set of relevances pertaining to the ID model and how it is experienced is selected (see par. 5.2.1: goals underpinning the research aim) to make sense of how the people engaged in a social situation attach meaning to and describe the experience – in this instance how the users of the ID model, both learners and their managers, describe their experience with the ID model.

Phenomenology and specifically phenomenological sociology is important for the research because its approach is rooted in the notion of the lived world. The research deals with human experiences (of the ID model) within a “lived world” in the case organisation. It does not deal with some external reality outside of both the learners and managers and their organisation. Phenomenological data interpretation demands a search for all possible meanings, whereby the researcher, through acknowledgement of own experiences and viewpoints, relies on intuition, understanding and universal structures to obtain a full picture of the phenomena under study (Cresswell, 1998). The researcher’s experiences and viewpoints do however also pose a threat and the researcher is mindful of the limitations (as discussed in par. 5.3.4 on integrity and rigour measures).

The constructivist ontology and interpretivist epistemology as the foundational philosophical orientation for this research are hence conducive to the aim and purpose of the research, which aim to evaluate the ID model by describing reactions to and experiences of it by its users. Despite the recognition that this philosophical orientation is deemed to lean towards qualitative research, a number of methodological implications of the ontology and epistemology apply, as specified in par. 5.2.2.4.

5.2.2.4 Methodological implications of ontology and epistemology

“Methodology is concerned with the logic of scientific enquiry; in particular with investigating the potentialities and limitations of particular techniques or procedures” (Grix, 2002:179).

As in the instance of this research, a constructivist ontology that holds individuals actively construct their social reality and an interpretivist epistemology that holds knowledge contingent upon the meaning-making and experiences of individuals, shape the questions asked and how one sets about getting to answer them. There is a clear interrelationship between ontology and epistemological positions and methodological implications, which are delineated through (a) potentialities and (b) limitations. These potentialities and limitations refine the research approach.

a) Potentialities

Although the ontological and epistemological stance may be associated largely with either quantitative or qualitative methods (see par. 5.2.2.3) there is not necessarily an inevitable, exclusive, deterministic link. In the current research it is argued that the use of both qualitative and quantitative methods is complementary and pragmatic in terms of obtaining a further understanding of the phenomenon under study. The purpose of the combination is to expand understanding and to confirm findings from different sources of data.

Thus, the methodological implication is that although this research is conducted from a constructivist-interpretivist philosophical orientation, the potentiality of combining the logic of inquiry from both a quantitative and qualitative perspective is deemed to provide the potential of increased understanding. A further potentiality in methodological implications is vested in dialectical thinking. Dialectical thinking refers to the ability to view issues from multiple perspectives and to arrive at the most economical and reasonable reconciliation of seemingly contradictory information and postures. Dialectical thinking is a form of analytical reasoning that pursues knowledge and truth as long as there are questions and conflicts (Manzo, 1992). Dialectical thinking, applied in research, refers to a combined use of methods and ability to consider all views.

From the point of view of this research therefore, the methodological implications of the ontological and epistemological orientation are, although the study is constructivist-interpretivist at heart, full understanding will be sought through the potentialities offered by a combination of research methods (see par. 5.3.1).

There are also methodological implications attached to the limitations inherent in the ontology and epistemology, as outlined in par. 5.2.2.4b below.

b) Limitations

The limitations in the ontological and epistemological orientation of constructivism-interpretivism largely stem from the positivist-versus-interpretivist debate. The first is the accusation by quantitatively inclined researchers that qualitative research is “soft science, only exploratory, or subjective” (Denzin & Lincoln, 1994:7) and therefore of little value. Also, the term “empirical” is equated with quantification rather than an acknowledgement of the contribution to knowledge of qualitative research. For the purposes of this research, it is maintained that “qualitative research is legitimate in its own right and does not need to be compared to achieve respectability” (Cresswell, 1998:75-76).

In addition, the presupposition that positivist/quantitative research and interpretivist/qualitative research are mutually exclusive is seen to be a fallacy, since it leads to the idea that qualitative and quantitative research methods cannot be combined. It is a tenet of this research that quantitative and qualitative methods can be applied within one procedural framework, provided integrity of the research is maintained through the implementation of integrity measures and rigour in the research (see par. 5.3.4).

A further limitation is seen to be that general, theoretical context-independent (read positivist/quantitative) knowledge is more valuable than concrete, practical, context-dependent (read interpretivist/qualitative) knowledge (Flyvberg, 2004:421). This too largely ties back to the positivist-versus-interpretivist debate and is deemed to be inoperative within the ontological and epistemological orientation for this research which maintains that “in the study of human affairs, there appears to exist only context-dependent knowledge” (Flyvberg, 2004:421) constructed through and by the experiences of individuals and the meanings they attach thereto.

5.2.2.5 Summary of philosophical orientation

The philosophical orientation of research is embodied in the ontology and epistemology the particular researcher subscribes to. Ontology represents our beliefs regarding reality, i.e. what it (reality) is and epistemology is our assumptions regarding how we come to know about our world, i.e. how we come by our knowledge. Ontological views simplified are represented by objectivism that sees reality as an independent construct and constructivism that sees reality as being constructed on an ongoing basis by individuals in various contexts and life experiences. Epistemological views simplified are represented by positivism, that advocates the application of the methods of the natural sciences to the study of reality, whilst interpretivism holds that the study of an independent reality is

necessarily subjective and vested in the experiences and meaning-making of individuals in their everyday life-world.

In this research the philosophical orientation is based on a worldview of reality as a social construction based on meaning-making by individuals who, in different situations and contexts make sense of the world from their own, unique set of choices and actions. There is thus not a singular reality to describe and understand, but rather multiple realities. Therefore, in evaluating the ID model multiple realities regarding user experience of the ID model need investigation and appraisal. In conjunction with the ontology of constructivism, this research views the nature of knowledge as being subjective, constructed through the meanings individuals attach to their experiences and interactions with social phenomena. This research thus seeks to produce descriptive and interpretive analyses that explain how individuals experience and interact with the ID model.

At the root of this epistemology lies phenomenology – a theory of knowledge that concerns itself with the structures of sense-making of social reality as experienced and described from the first-person-point-of-view. Within phenomenology, phenomenological sociology defines the role of the social scientist to select a set of relevances pertaining to the social situation studied that is aligned to the research aim and purpose. In this research, this set of relevances is contained in the evaluation of the ID model in an exploratory, descriptive and interpretive way by investigating the reactions to and experiences with the ID model by its users and other stakeholders in the organisation.

Although the constructivist ontology and interpretivist epistemology are often associated with qualitative research, a probe into potentialities and limitations inherent in the methodological assumptions of the ontology and epistemology this research indicates a less dogmatic view. It is maintained that having an open methodological approach combining both quantitative and qualitative methods may evoke fuller understanding. As such, dialectical thinking that allows the viewing of issues from multiple perspectives forms a further methodological assumption in an effort to increase insight and understanding.

Whilst the limitations inherent in the positivist-interpretivist debate are acknowledged, they are deemed to be negated by the believed and proven legitimacy of research conducted in a context-dependent, concrete, practical social situation (Flyvberg, 2004; Denzin & Lincoln, 2005).

The context-dependent, concrete, practical situation in which the research is conducted, as well as the exploratory and interpretive purpose of the research, delineates a specific research tactic, as described in par. 5.2.3.

5.2.3 Research tactic

5.2.3.1 Introduction

The literature is not clear on whether the case study is a research strategy, methodology, or tactic (see for example, Denzin & Lincoln, 1994; Remenyi *et al.*, 1998; Saunders, Lewis & Thornhill, 2003; Yin, 2003; Money, 2005) and these terms are often used interchangeably. In this research, the research tactic, i.e. the overall expedient to achieve the research aim, is the case study. The choice of the case study tactic is based on the decision to “focus an enquiry around a specific instance or event” (Remenyi *et al.*, 1998:50) - in this research the instance of the ID model in a specific organisation; “to provide a multi-dimensional picture of the situation” (Remenyi *et al.*, 1998:51) - in this research the multi-dimensional picture as described by the multiple experiences of the users and other stakeholders of the ID model when implemented in the case organisation.

The research tactic is described by providing a definition of case study research (par. 5.2.3.2); giving grounds for using the case study in this research (par. 5.2.3.3); describing case study design (par. 5.2.3.4); describing embedded units of analysis in case study design (par. 5.2.3.5); defining the case boundaries (par. 5.2.3.6); delineating some disadvantages of the case study tactic (par. 5.2.3.7); and giving an account of the integrity of the case study tactic (par. 5.2.3.8).

5.2.3.2 Definition of the case study

The case study focuses on understanding the dynamics present in a management or organisation situation (Eisenhardt, 1989). Yin (2003:13) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident”. For the purpose of this research, the definition is pertinent because contextual conditions (i.e. the application of the ID model within the organisation) need to be deliberately covered. Flyvberg (in Seale *et al.*, 2004:421) mentions in this regard “...in the study of human affairs, there appears to exist only context-dependent knowledge ...”. Furthermore, Yin (2003:7-9) stipulates that the “case study is preferred in examining

contemporary events, but when the relevant behaviour cannot be manipulated” and “a how or why question is being asked about a contemporary set of events, over which the investigator has little or no control”. For this research these definitions are relevant, since behaviour related to the ID model can not (and should not) be manipulated and the researcher has no control over the influence of the ID model when implemented.

Verschuren (2003:122-123) provides a definition of the case study as formulated by Creswell: “... case studies, in which the researcher explores a single entity or phenomenon (the case), bounded by time and activity (a programme, event, process, institution, or social group) and collects detailed information by using a variety of data-collecting procedures during a sustained period of time”. This definition too is pertinent for this research in that the ID model as an “event” is explored within a single entity, namely the organisation, using a variety of “data-collecting procedures” (see par. 5.3.1) during a sustained period of time, i.e. after the implementation of the ID model in the case organisation.

The decision to use the case study is based, by and large, on three main conditions (Yin, 2003:9). The first is the type of research question (i.e. why and how questions); the second is the researcher’s control over events (i.e. in this case, none); and the last is the degree of focus on contemporary (as against historical) events (i.e. in this case, contemporary). This is discussed in par. 5.2.3.3, as these conditions provide grounds for using the case study in this research.

5.2.3.3 Grounds for using the case study in this research

Yin (2003:5) points out that “how” and “why” research questions are likely to favour case studies, case histories and experiments. However, in order to choose, it is necessary to look at the researcher’s control over events, and the nature of the events themselves. Case studies are indicated when the focus is on contemporary events, but when relevant behaviour cannot be manipulated.

To elaborate, the case study should be used as a tactic when the social organisational settings are intricate (Orlikowski & Baroudi, 1991; Parkhe, 1993); the researcher seeks contextual meaning within a bounded system (Stake, 1978; Yin, 2003); there are particular events that are focused on a situation or context (Eisenhardt, 1989); and the investigation is about inductive theory building (Merriam, 1988; Gilmore & Carson, 1996).

For the purposes of this research the ID model is a bounded system which is focused and for which contextual meaning is sought (i.e. reveal a real-life context and meanings ascribed thereto); and the understanding to emerge from the data is inductive to provide a rich description of a management and/or organisational situation (Merriam, 1988). The case study is thus well suited for inductively building a rich, deep understanding of new phenomena. In addition, case studies provide holistic insight, permitting investigation of a phenomenon from a variety of viewpoints (Ghauri, 2004:1110), such as in this research, the viewpoints of managers and MSD are included, in addition to those of learners (see par. 5.2.3.5 on embedded units of analysis and 5.3.2 on sampling frame and sampling procedure).

Yin (2003:15) presented four applications of the case study which have relevance for this research and this dissertation. One, is to explain causal links in or relationships between aspects of real-life interventions. In this dissertation, the relationships between the ID model and job-specific knowledge and productive behaviour are to be explained. Two, is to describe the real-life context in which the intervention has occurred. In this dissertation, the application of the ID model within the selected case organisation is described (see Chapter 4). Three, is to describe the intervention itself. This has been done in Chapter 4 – the ID model is the intervention. Four, is to explore those situations in which the intervention being evaluated has no clear set of outcomes. For this research, the aim is to evaluate the ID model, and although the Kirkpatrick evaluation model (see par. 1.3.4 and par. 4.5.4) is used, no clear set of outcomes exists as the ID model is implemented in the case organisation for the first time. In addition, the case study is a relevant tactic when “an explanation, and not a single variable or factor, is what is being tested” (Yin, 1981:62). In this research, an explanation is sought about why and how the users of the ID model experience it and a large and diverse number of reactions and responses are expected.

Case study research may be designed in a number of ways, depending on the nature of the research and the case in question. Case study designs are discussed next in par. 5.2.3.4.

5.2.3.4 Case study designs

A primary distinction in designing case studies is between single and multiple-case designs. For the purposes of this research single-case design applies and is substantiated and discussed below.

Single-case study research is applicable when the case is critical or unique; where the researcher is able to access a phenomenon not previously available; when the case is critical since it meets all criteria for the phenomena to be investigated; and/or where it is an exploratory study, where the case is shown to be representative of a larger population (Patton, 1990; Stake, 1995; Yin, 2003). When no other cases are available for replication, the researcher is limited to single-case designs.

From the perspective of this research, the ID model as put forward in this dissertation is applied to a single organisation, and the ID model itself has not been applied previously. Single-case design is appropriate in this research for five reasons.

- i) *Critical or unique case:* The ID model as put forward in this dissertation has only been applied to the case (i.e. the case organisation wherein the ID model is being evaluated) and therefore the case is both critical and unique.
- ii) *Critical case meeting all criteria:* The criteria for the implementation of the ID model include support from organisation management to not only develop and implement, but evaluate the ID model in the organisation; a learner population to use the ID model; adequate time for the learner population to complete more than one of the courses; access to and willingness of both the organisation and its employees (in this instance the learner audience and their managers) to partake in the research. All of these were present which makes this case critical.
- iii) *Previously inaccessible phenomenon:* The ID model as put forward in this dissertation has not been implemented previously, therefore investigation of the ID model as such was previously inaccessible.
- iv) *Exploratory study:* This study is exploratory in the sense that it aims to evaluate the ID model on three levels (see par. 4.5.4). It does not seek to make predictions about the degrees of improvement brought about by the ID model in further implementations thereof (although there is a quantitative measure on degree of job-specific knowledge improvement). Rather it seeks to describe, understand and explain the various features of the ID model and user experience thereof, and the influence of the ID model on job-specific knowledge and strategic behaviour.

- v) *Case shown to be representative:* The case organisation used is an international, fast moving consumer goods organisation, with an organisation structure of representatives reporting to area and regional managers; dealing with trade and retail customers and a local employee complement of 3 200 at the time of the research. The learner population consists of males and females, all age groups, all population groups and representative of all areas in South Africa (see par. 5.3.2). This may be seen as typical of many other similar organisations and therefore the case is not only representative, but capturing an everyday or commonplace case – a further criterium for applying single-case design (Yin, 2003:41). Also see par. 5.2.3.6.

What is important from the perspective of the single-case design as applied in this research is that the case consists of various embedded units of analysis (EUA). That is, within the single-case, i.e. the organisation, attention is given to sub units, i.e. learner audience, managers and MSD. This is elaborated on in par. 5.2.3.5.

5.2.3.5 Embedded units of analysis (EUA) in case study design

Within case study design, two variants are found, i.e. the unitary unit of case study which consists of one case only, e.g. using Nelson Mandela as “the case” for a study on leadership. The other variant in case study design uses multiple units of analysis, which in single-case instances consists of multiple “sub-samples” within the bounds of one case (Yin, 2003:40), referred to as embedded units of analysis (EUA). Using multiple sources of evidence is one of the principles for good research practice (Remenyi *et al.*, 2003:177).

For the purpose of this research, multiple embedded units of analysis from within the single case will be employed, as reflected in Figure 5.3.

- a) EUA 1: Learner audience

This EUA consists of the field force representatives. Their demographic profile covers males and females, aged between 25 and 55, representative of the four major population groups in South Africa (i.e. White, Black, Coloured, Asian) and in all the regions in South Africa (see par. 5.3.2). Qualitative, quantitative and observation methods will be applied to this EUA.

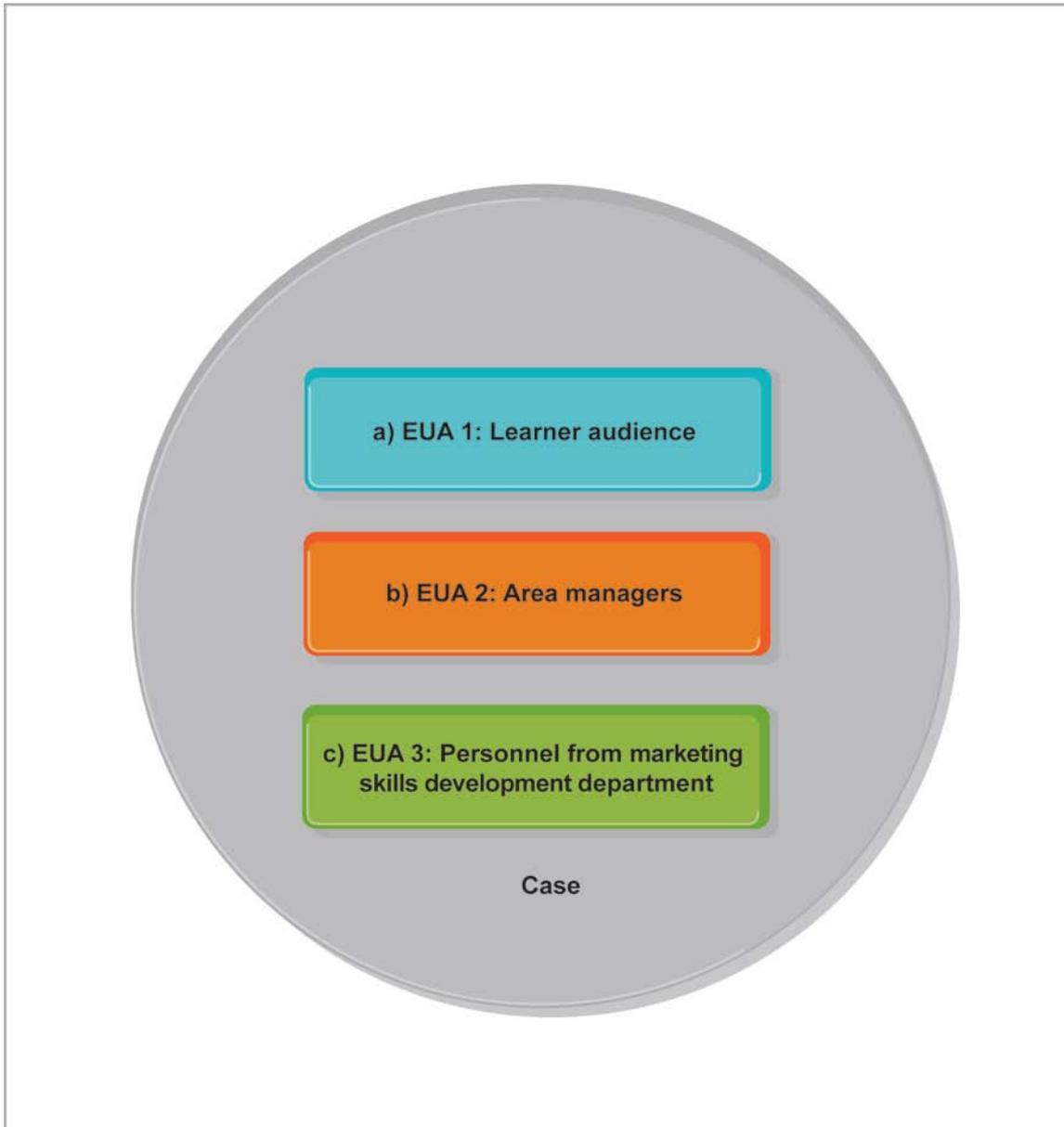


Figure 5.3: Embedded units of analysis for this case study

Source: Adapted from Yin, 2003:40

b) EUA 2: Managers

This EUA consists of the area managers responsible for overseeing, facilitating and moderating the implementation of the ID model. Their demographic profile corresponds to the learner audience. Similarly, both qualitative, quantitative and observation methods will be applied to this group.

c) EUA 3: Personnel from Marketing Skills Development department

This EUA consists of personnel from the skills development department (MSD), who are responsible for managing the overall strategy, contents development inputs, training of

area managers and administration of the ID model. Qualitative methods will be applied to EUA 3. Data is obtained from a series of meetings over a period of time, with four individuals in this department. From time to time other stakeholders in the case organisation, e.g. the field force director, HR training manager, were also present in meetings. Discussions during the meetings are treated as a data input and will form part of the triangulation of data (see par. 5.3.4.3).

An important aspect of the case study tactic is the establishment of the case boundaries in terms of description and time, as presented in par. 5.2.3.6.

5.2.3.6 Case boundaries

A delineation of the case boundaries provides the (a) description of the case organisation and (b) the time boundaries of the case.

a) Description of case organisation

The case organisation in which the ID model is implemented and where the empirical research is conducted is British American Tobacco South Africa (BATSA). BATSA's share of the legitimate cigarette market in South Africa is 70 percent, i.e. it excludes the share of counterfeit and smuggled products, that are estimated by tobacco industry observers to vary from five percent to as high as 27 percent of total cigarette sales. BATSA is part of the BAT Group that has a business presence in over 180 countries and is the largest stock market listed tobacco group by market share outside the United States of America. BATSA manufacture and distribute 24 brands in South Africa (see [://batsouthafrica](http://batsouthafrica)).

Today, with universal awareness of the health risks, the tobacco industry operates under greater scrutiny and regulation than ever before, yet a billion adults worldwide make the choice to smoke. Governments globally earn some 10 times more revenue from tobacco than shareholders. In South Africa, the government raises more than R7.5 billion in excise and Value Added Tax (VAT) annually and in addition BATSA spends R30 million on community development and social responsibility projects. The tobacco industry is seen to be controversial and, in South Africa, stringent legislation limit advertising and marketing activities.

BATSA believes that its success can be attributed to its people and more than six percent of its payroll is spent annually on development and training. Its human resources culture encourages ongoing development and training. Given the controversial nature of the

tobacco industry, this ongoing development and training is key to preparing the workforce for continuous changes in legislation, being able to manage those changes and preparing them for changes in operating procedures and new business initiatives and principles.

BATSA employs at the time of this writing (i.e. February 2008) 2 500 people in South Africa, across all the organisational functions of a big international organisation. It may be seen to be representative of other, similar organisations in that it exhibits the following global organisational characteristics:

- An international fast moving consumer goods (FMCG) organisation.
- A local organisation with field force representatives in sales and distribution, a structure of managers, to whom the representatives report.
- An organisation dealing with the retail and wholesale trade.
- An organisation with various supporting functions, e.g. human resources, skills development, technical support, finances.
- An organisation with a staff complement of 2 500, in all the nine regions of South Africa.

These characteristics may be found in other international FMCG organisations, operating in other industries, for example Adcock Ingram in the pharmaceutical industry; Parmalat in the dairy products industry; Heinz in the canned food industry. The relevance of these similarities is that single-case design is appropriate should the case selected be shown to be representative (see par. 5.2.3.4v), as is the instance in this research. Also, where the case selected is shown to be similar to and representative of other organisations, “inductive generalisation” may be inferred (Mouton, 1996:80) and the exportability of the ID model to other organisations enhanced. Also see par. 1.6.2 and par. 5.2.3.7.

Within the case boundaries, organisational requirements and practical issues surrounding the development, implementation and evaluation of the ID model occurred within specific time boundaries, as discussed next.

b) Time boundaries of the case

Figure 5.4 shows the time boundaries of the case. The time boundaries delineate the periods of, for example development or implementation endeavours; and also pinpoint the periods in which the evaluation of the ID model (i.e. the empirical research timings) occurred.

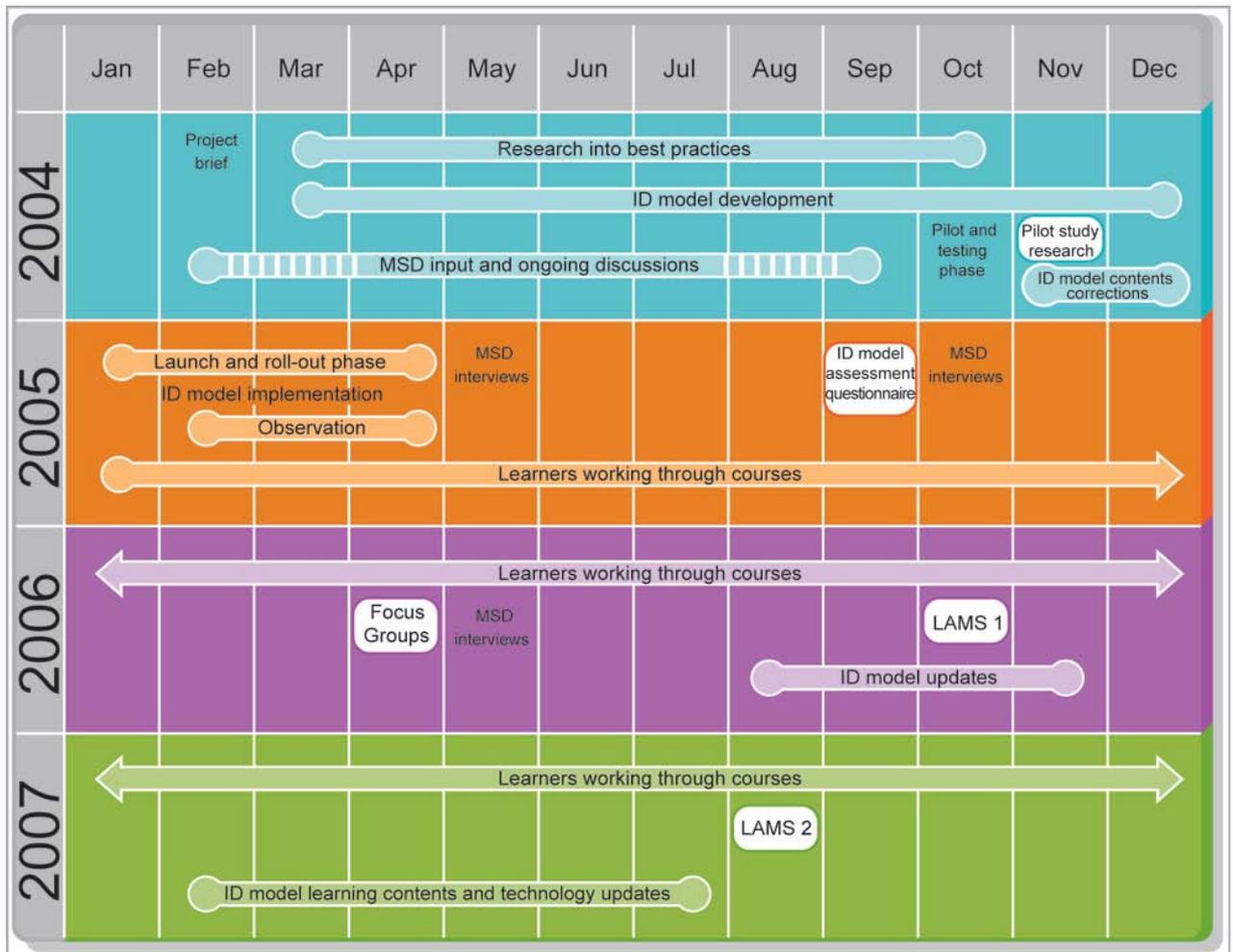


Figure 5.4: Time boundaries of the case.

During February 2004 the development of the ID model was initiated, based on the need of the case organisation to provide their field force representatives with a training intervention aimed at improving job-specific knowledge and productive behaviour. Ongoing input from and discussions with MSD supplied the insight and understanding of the organisational context (see par. 4.2) and the decisions pertaining to the learning requirements and business requirements (see par. 4.4.1) of the case organisation.

From March to October 2004 ongoing research on ID model best practices was conducted by the ID developer/researcher, whilst the ID model was developed simultaneously from March to December 2004.

October – November 2004 saw the pilot and testing phase for the ID model (see par. 4.3.5.3a) and the pilot study research was conducted, after which some ID model contents corrections were implemented.

The launch and roll-out phase for the ID model (see par. 4.4.5.3b) occurred during January to April 2005, during which the researcher observed use of the ID model by learners and managers in practice. Interviews with MSD to obtain feedback from an organisational perspective on experiences with the ID model were conducted in May 2005 and the ID model assessment questionnaire (see par. 4.4.4.2) was distributed and completed during September 2005. This questionnaire (also see Appendix 6) was administered and coordinated by MSD and additional interviews with this department were conducted in October 2005.

From January 2005, ongoing through 2006 and 2007, learners worked their way through the courses in the ID model. In order to obtain input from learners after they had completed at least two of the courses, the qualitative research through the focus groups (see par. 5.3.1) was conducted in April 2006, again followed up by interviews with and feedback from MSD. Learning contents' updates (prompted by changes in organisational operational procedures) were incorporated during August to November 2006. The first pre-post measurement on LAMS (measuring improvement levels on job-specific knowledge) was read in October 2006, bearing in mind that pre-measurements were taken before learners embark on a course. This timing was dictated by the organisation, which specified all learners had to complete the compulsory courses by that time.

During February to July 2007 updates to ID model learning contents and technology were developed and implemented. This was largely prompted and determined by a change in the technological device of the field force representatives – namely from a NetBook to a Dell laptop computer (see par. 4.5.3.3). In August 2007 a further LAMS post measurement was taken for those learners having completed all the courses contained in the ID model.

These time boundaries were informed by availability of the field force representatives to partake in the research, which could only happen once the ID model was launched

nationally and learners had already completed at least two courses (see par. 4.5.1.3). Furthermore, budgetary issues impacted on the time lapse between the initial implementation of the ID model (January – April 2005) and subsequent updates (August – November 2006). The researcher was obliged to adapt to organisational timing issues and as such there were no other options but to operate within these defined time boundaries, which may be viewed as a disadvantage due to the time lapse between the actual empirical fieldwork and the completion of this research. Both this and other disadvantages of the case study tactic are discussed in par. 5.2.3.7.

5.2.3.7 Disadvantages of the case study tactic

One of the disadvantages of the case study tactic may be seen to be the time lapse between data collection and final reporting, as mentioned in par. 5.2.3.6b. However, this may be seen to be negated by the amount of time it afforded the researcher to spend in the organisation, whereby additional insights were gleaned since the researcher became highly familiar with the accepted within the organisation.

The latter may conversely also be viewed as a disadvantage, in that familiarity and acceptance may bring with it bias, both from the point of view of researcher bias and bias in information and feedback provided. However, due to the various occasions of observation, and the feedback from other stakeholders on the ID model, information bias was minimised. However, possible researcher bias is addressed in this research through integrity measures and rigour (see par. 5.3.4) implemented in the research.

On a broader level, there are a number of reasons why the case study tactic is viewed with scepticism, see for example, Feagin *et al.*, 1991; Stake, 1995; Yin, 2003. Case studies rely on analytical generalisations, whereas survey research relies on statistical generalisations (Yin, 2003:37). This has the potential of raising a whole number of biases, subjective and selective preconceptions, problems regarding the viewpoint of “minority voices” and bias surrounding the background, agenda and interests of the researcher. Par. 5.3.4 and 5.3.6 address how these issues are dealt with in this research. It is also argued that case studies provide a poor basis for scientific generalisation.

For this research it is important that case studies, when backed by the literature, are generalisable to theoretical propositions and not to populations or universes (Yin, 2003). The literature reviews (Chapters 2 and 3) provide the theoretical framework of the ID model. The empirical research is conducted to evaluate the ID model and validate it

against the literature. When and where case studies can be shown to have inductive support in the literature and theoretical propositions can be confirmed through deductive reasoning, case study research may be seen to be transferable. Mouton (1996:74, 80, 86) refers to this as inductive generalisation.

Further disadvantages include the fact that case studies take too long and result in massive, “dense” documents which may be viewed as being “messy” to the uninitiated, and case studies can be expensive to conduct. However, these dense documents and data provide richness of understanding and insight.

A common criticism of the case study tactic is the trade-off of external for internal validity. Case studies are hard, if not impossible to precisely replicate and even if a case is shown to be representative of other, like cases out there, the question of universal representativeness and generalisability remain unknown. However, in this research the case selected is shown to be a critical case with an exploratory and interpretive research focus (par. 5.2.3.4i-v). This involves choosing a representative case organisation that is most likely to represent the phenomenon under exploration. The main argument here is that what is valid for these participants is more likely to be valid for others too (Flyvberg, 2004:425-426).

The issue is not that the disadvantages should lead to the rejection of the case study as a tactic, but that the research is to be aware of them and mitigate the disadvantages as far as is possible. How these disadvantages are addressed in this research is discussed in par. 5.3.4 (integrity measures and rigour) and par. 5.3.6 (research ethics). The overriding criteria for the justification of the case study tactic relate to integrity and its appropriateness for the research aim and purpose, as discussed in par. 5.2.3.8.

5.2.3.8 Integrity of the case study tactic

The integrity of research and the tactics it uses are mainly judged on reliability and validity tests (see Remenyi *et al.*, 2003:179; Saunders *et al.*, 2003:100-101). However, since reliability and validity are rooted in the positivist (quantitative) epistemology, they should be re-defined for their use in an interpretivist (qualitative) epistemology (Golafshani, 2003:597) as is the instance in this research. Demonstrating that case study data analysis is reliable and valid and that it was conducted in a rigorous manner, is especially important given a common criticism that especially qualitative results are anecdotal

(Hancock, 2002:22). Strauss and Corbin (1990:250) suggest that the “usual canons of ‘good science’ ... require redefinition in order to fit the realities of qualitative research”.

Lincoln and Guba (1985:300) use “dependability” as a term more appropriate to describe “reliability” in qualitative methods research. To ensure and demonstrate reliability, trustworthiness of the data and interpretation thereof is relevant, and it relates to being able to demonstrate that the methods used are reproducible and consistent (Hancock, 2002).

Golafshani (2003:602) proposes that “validity” in interpretivism is “more appropriately described in terms of rigour, quality and trustworthiness”. Maxwell (1996:89) states that rigorous research provides valid descriptions, interpretations or explanations for the phenomena under study. This leads to three main procedures to ensure the achievement of rigour, namely one, descriptive validity, two, interpretive validity and three, theoretical validity.

One, descriptive validity refers to the clarity of the reported descriptive information, from the conceptual framework, through the statement of research objectives, research methodology and reporting. It may also be attained by having two interviewers present during fieldwork to ensure accuracy. However, this was too expensive and impractical for this research, so instead discussion transcripts form the basis for descriptive validity.

Two, interpretive validity is associated with meaning and how well all viewpoints are reflected in the data, including observations made by the researcher and the researcher’s view of the world. For this research, the researcher’s field notes and observations were also transcribed and considered in data analysis and interpretation (see Appendix 6). The view of the researcher is elaborated on in par. 5.3.4.6 on researcher assumptions and critical self reflection.

Three, theoretical validity relates to how well the findings explain the phenomenon under study (Maxwell, 1996) and requires the researcher to seek and consider disconfirming evidence and alternative explanations. “Alternative explanations always exist” (Marshall & Rossman, 1995:116). In this research, particular attention is paid to “dissenting views”, see par. 5.3.4.4 on member checking and par. 5.3.4.5 on negative case analysis.

In addition, case study research can increase rigour and attain integrity through five approaches (Miles & Huberman, 1994; Maxwell, 1996; Stake, 1995; Yin, 2003), i.e. (a)

construct validity, (b) confirmability, (c) internal credibility, (d) external transferability, and (e) dependability, which are discussed below.

a) Construct validity

Construct validity ensures adequate operational measures for the constructs under investigation, and is especially problematic in case study research (Yin, 2003:35). The researcher can ensure construct validity is achieved by firstly, selecting specific types of change that are to be studied and relating them to the original goals of the study. For the purposes of this research, these include the type of reactions to the ID model; the ability of the ID model to increase job-specific knowledge, and the influence of the ID model on performance through productive behaviour.

Also, the researcher can use multiple sources of evidence, which, in this research includes the various embedded units of analysis (i.e. learner audience, their managers, MSD). In addition, quantitative, qualitative and observation methods are used for data collection. A further method whereby construct validity is increased is by the researcher establishing a chain of events, which in this research is included in the research programme (par. 5.3) and the researcher's field notes (Appendix 6). Lastly, the researcher can have key informants review a draft of the case study report, which in this research is exercised (see par. 5.3.4.4 on member checking).

b) Confirmability

Confirmability as an approach to increase rigour and attain integrity is the ability of others to satisfy themselves that the research was carried out in the way it is described. The technique to ensure this is a record of the data collected (recordings and transcripts, field notes, secondary sources) in a clear audit trail – all of which are included in this research (see all Appendices).

c) Internal credibility

Quantitative research defines internal validity as the identification of causal relationships whereby certain variables may influence other variables (Emory & Cooper, 1991; Miles & Huberman, 1994). In contrast, qualitative research does not deal with dependent and independent variables, but rather seeks to describe and understand phenomena in a plausible manner (Miles & Huberman, 1994; Yin, 2003). In case study research this is done by case analysis, pattern-matching, expert peer review, the development of diagrammes, illustration and data matrices to reflect the internal consistency of the

information collected. These are included in the research results, analysis and interpretation to follow in Chapter 6 of this dissertation. A further technique to confirm internal credibility includes triangulation (see par. 5.3.4.3). From the perspective of interpretivism (and qualitative research) it is also important for the researcher to be aware of, and clearly state in the research, those subjective, personal issues which may have a bearing on the research and consequent interpretation. This is included in par. 5.3.4.6 on researcher assumptions and critical self reflection.

d) External transferability

External transferability as an approach to increase rigour and attain integrity refers to the extent to which the research findings can be transferred and replicated beyond the case study (Miles & Huberman, 1994; Yin, 2003). Positivist (or quantitative) research carries out statistical generalisation, whereas interpretivist (or qualitative) research such as implemented in this case study carries out analytical transferability in which findings are transferable to a broader theory or theories found in the literature. Techniques to ensure and expand external transferability include “thick descriptions” of the case and findings and the rigour and quality (R + Q) measures implemented (See Table 5.2; par. 5.3.4.7).

e) Dependability

Dependability relates to the ability of other researchers to carry out the same study and achieve similar results. This is facilitated through a detailed documentation trail (see Appendices), access to the transcripts (see Appendix 7) and the R + Q measures implemented (see Table 5.2; par. 5.3.4.7).

An important and final rationale for the case study tactic is its appropriateness for the aim and purpose of the research. The descriptive data of exploratory and interpretive case studies are used to illustrate, explain, describe, support and/or challenge the theoretical assumptions held prior to data collection, and as such, fit well with the exploratory and interpretive purpose of this research.

A summary of the research tactic is presented in par. 5.2.3.9.

5.2.3.9 Summary of research tactic

The research tactic for this research is the case study, defined as an empirical enquiry investigating a contemporary phenomenon (the ID model) within its real life context (the case organisation). Case studies explore contemporary phenomena bounded by time (the

duration of the development and implementation of the ID model in the case organisation); and using a variety of data-collecting methods.

The case study is appropriate as a tactic for this research as “how” and “why” explanations are sought in the evaluation of the ID model and the ID model as a bound “system” cannot be extricated from its context, i.e. the case organisation. Single-case study design is used in this research as the case can be shown to be critical or unique; meeting all criteria; being about a previously inaccessible phenomenon; is exploratory; and use a case shown to be representative. Within the single-case design, multiple EUAs are employed.

The case organisation, being BATSA, may be seen to be representative of other, similar FMCG organisations and it may be argued that, provided theoretical propositions back up the research, and organisation-specific components are developed where the ID model is applied in other organisations, general results of this research may be seen to be transferable. The time boundaries of the case stretch from 2005 to 2007 and were determined by organisational requirements.

Disadvantages of the case study as tactic for this research include the time lapse between data collection and final reporting (however, this was outside the researcher’s control) and possible researcher bias brought about by the time lapse (however this is addressed in the research). The disadvantage of case studies being a poor basis for generalisation is seen to be refuted where case studies, when backed by the literature, are seen to be generalised to theoretical propositions. This inductive support and deductive reasoning to link the research to the literature and a case shown to be representative, further increase transferability of case study research.

The integrity of the case study tactic is defined through its dependability (being able to ensure and demonstrate trustworthiness) and the rigour demonstrated through descriptive, interpretive and theoretical validity, all of which are presented for this research. In addition, case study research can increase rigour and attain integrity by demonstrating construct validity, conformability, internal credibility, external transferability and dependability, all of which have been outlined in this section.

Although summaries have been provided for the philosophical orientation (par. 5.2.2) and the research tactic (par. 5.2.3.9), an overall abbreviated summary of the research approach is presented in par. 5.2.4.

5.2.4 Summary of research approach

In this section a summary of the research approach is provided.

5.2.4.1 Research aim and purpose

The research aim is to evaluate the ID model in terms of its perceived impact on job-specific knowledge and productive behaviour and it is underpinned by research goals to investigate the reactions to the ID model; determine levels of job-specific knowledge improvement and observed improvement in productive behaviour; to analyse the impact of the ID model on the application of knowledge and to evaluate the ID model itself; and its impact on productive behaviour for the organisation. In essence, the research endeavours to understand how and why (if) the ID model is seen to work, through an exploratory on interpretive research purpose.

5.2.4.2 Philosophical orientation

“How” and “why” questions largely indicate an exploratory, descriptive and interpretive approach for the research and as such this research is positioned in the constructivist ontology and interpretivist epistemology. Constructivism holds that social reality is a social construction based on the meaning-making by individuals. Because the world is constructed by individuals in their life-worlds, the meanings attached to experiences and social phenomena are important if one wants to gain insight and understanding. This is the promise of interpretivism, which requires the social scientist to grasp the subjective meanings that individuals attach to social action, experiences and activities.

Phenomenology as concerning itself with the structures of sense-making of social reality, and phenomenological sociology being a descriptive and interpretive theory of social action, are rooted in the notion of the lived world and real-life experiences and contexts. As such, the research tactic chosen for this research is context-dependent, concrete and practical and relating to a real-life situation – in this instance the implementation of the ID model in a specific case organisation.

5.2.4.3 Research tactic

The chosen research tactic for this research is the case study, where the case selected is shown to be similar to other organisations, is critical in that the ID model may only be found in this organisation and providing a previously inaccessible phenomenon, i.e. the ID model. The case study is seen to be a relevant tactic for this research as “how” and “why” questions are explored and an explanation rather than variables is sought.

The case study design for this research is a single case design with multiple EUAs, as it is shown that multiple sources of evidence is one of the principles for good research practice. A delineation of the case boundaries provides a description of the case organisation, i.e. an international fast moving consumer goods organisation with a South African staff complement of 2 500 at the time of this writing. The time boundaries relevant to the research are based on organisational requirements and practicalities.

Although a number of disadvantages of the case study tactic is presented (e.g. time boundaries, researcher bias, lack of external validity, dense and “messy” data), it is argued that these are not sufficient to dismiss the case study as tactic, provided the disadvantages are addressed. It is important that case studies, when backed by the literature, and if the case may be demonstrated as critical or unique, meeting all criteria and is shown to be representative; may be transferable to theoretical propositions and exportable to other similar cases, as was demonstrated for this research. Disadvantages of case study research may be addressed through the demonstration of rigour and integrity approaches, as done for this research.

Although this section lists the integrity of this case study further integrity measures and rigour of the research will be described in the next section (par. 5.3.4), where the research programme, i.e. how the research approach is put into practice, is presented.

The research methodology consists of the procedural framework describing the research approach (par. 5.2) and the research programme (par. 5.3), which is presented next.

5.3 RESEARCH PROGRAMME

Figure 5.5 represents the research programme and its constituent sections and provides the framework within which the research programme is described. It presents the research

programme which is the operational plan for the research. The research methods (par. 5.3.1) used in this research include both quantitative and qualitative methods and these are described; as are the sampling frame and sampling procedure (par. 5.3.2). Data analysis (par. 5.3.3) is conducted by using specific analyses for the quantitative and qualitative data, which are described. The integrity measures and rigour (par. 5.3.4) implemented to increase the integrity of the research are described; documenting and reporting protocols (par. 5.3.5) established; research ethics (par. 5.3.6) mentioned; and the limitations of the research (par. 5.3.7) outlined. A summary of the research programme is provided in par. 5.3.8.

5.3.1 Research methods

5.3.1.1 Introduction

The literature presents a confusing picture about the research methods to be used in a case study (Verschuren, 2003:125) and often qualitative methods are touted as being most apt. Yin (2003:9) is clear that either qualitative or quantitative methods are appropriate and the choice of methods will depend on the research aim and purpose. Qualitative methods provide descriptive, rich, deep data; whilst quantitative methods yield insight into the extent (i.e. “how much” or “the degree of”) of an insight.

In this research, both quantitative and qualitative research methods are applied within the case study. Mixed method research is seen to provide the answer to today’s increasingly interdisciplinary, complex and dynamic research world (Johnson & Onwueghuzi, 2004:15). Therefore researchers need to consider the value of mixing methods in order to create valuable research. Proponents of mixed methods research (see for example Hammersley, 2000; Bryman, 2001; Tashakkori & Teddlie, 2003) hold that quantitative and qualitative methods are compatible and in real-world situations the methods (quantitative, qualitative or mixed methods) that work best should be used. What is important, is that no difference is made between the relative value of the methods, as the researcher looks as much as possible at the findings as a whole, informed by the data obtained. The tendency is this to look at “compound phenomena instead of a compartmentalization of variables, as in survey research” (Verschuren, 2003:130).

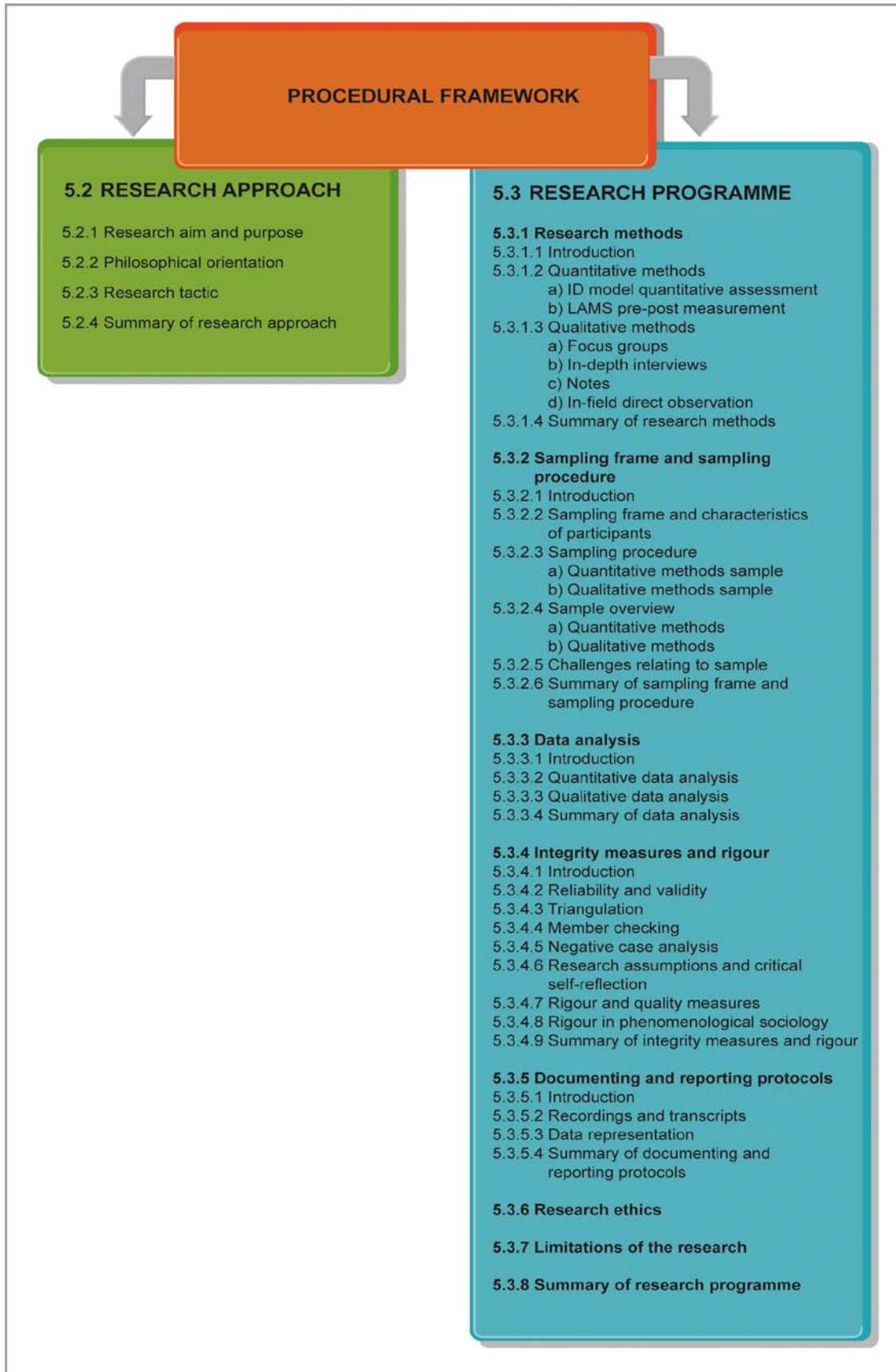


Figure 5.5: Research programme

The use of mixed methods in a single study "... adds rigor, breadth, complexity, richness and depth to any inquiry" (Denzin & Lincoln, 2005:5).

A description of the methods used in this research is provided in par. 5.3.1.2 (quantitative methods) and par. 5.3.1.3 (qualitative methods).

5.3.1.2 Quantitative methods

There are two quantitative inputs to this research. One, in order to obtain a quantitative measure on how the ID model is seen to rate on its various components, an ID model assessment questionnaire is applied (see Appendix 5). Two, to determine the levels of improvement in job-specific knowledge, a pre-post measurement is extracted from LAMS. The rationale for the two quantitative inputs is to provide an individual evaluation and assessment by both the target audience and managers on the various components of the ID model and to serve as a further data source to enable triangulation (see par. 5.3.4.3) with the qualitative data. The quantitative inputs are elaborated on in the (a) ID model quantitative assessment and (b) LAMS pre-post measurement.

a) ID model quantitative assessment

In order to obtain insight into how the ID model and its various components are viewed by both learners and their managers, an ID model assessment questionnaire (see Appendix 5) was applied. In developing the questionnaire used in the research, a review panel of five personnel at the case organisation provide a critique of the initial versions of the questionnaire, after completing it. Following three iterations of review and revision, the questionnaire was completed by a group of ten learners to check for readability, usability and understanding. This questionnaire was developed to cover those components of the ID model that are visible to users (see par. 4.6). A four-point rating scale* was used where 4 represented "excellent" and 1 represented "needs improvement".

Participants rated the main components (each with a number of specific descriptors) of the ID model, viz. its contents, text/written content, visual imagery; usability, process, system on electronic device; tasks, assessments. For the managers, a similar version was

* Note: It is an organisational HR practice to use this four-point rating scale with these definitions. This is to avoid responses in the middle, or neutral position. Since both learners and their managers are *au fait* with this rating scale in the organisation, it was also adopted for this research.

used, but additional ratings on the FGs and the way they facilitate assessments were included.

Table 5.1 reflects the ID model main components and their underlying descriptors on which ratings are obtained. The terminology as used in this table is as per the ID model assessment questionnaire, thus “contents” are used in the questionnaire whereas “learning contents” is the term used in the dissertation.

Table 5.1: ID model main components and underlying descriptors

Main component	Underlying descriptors
Contents	<ul style="list-style-type: none"> • Ease of understanding • Relevancy to my job • Interesting
Text on visuals/ written contents	<ul style="list-style-type: none"> • Ease of understanding • Enhances learning • Gives clear information
Visual contents/ imagery/ pictures	<ul style="list-style-type: none"> • Explains contents further • Enhances information given and learning • Interesting • Relevant
Usability	<ul style="list-style-type: none"> • Ease of using the programme • Ease of finding the information/want/need to get to • Ease of finding Tasks relevant to contents sections • Ease of finding my way around the learning material • Instructions on how to use the programme
Process (Accessing contents, doing Tasks and Assessments, submitting Tasks)	<ul style="list-style-type: none"> • Clarity of 6-step process to be followed • Ease of understanding how the overall programme works • Ease of getting contents installed on my electronic device • Ease of getting access to eLAT (i.e. LAMS) to do my Assessments • Ease of submitting Tasks and getting manager sign-off
Tasks	<ul style="list-style-type: none"> • Ease of completing Tasks • Ease of submitting Tasks • Ease of obtaining sign-off on Tasks • Ease of obtaining coaching inputs
Assessments (Learners)	<ul style="list-style-type: none"> • Ease of arranging to do my Assessments via my manager’s PC • Ease of getting access to the Assessments • Format and ease of understanding Assessments • Obtaining score for Assessments
Assessments (Managers)	<ul style="list-style-type: none"> • Process of gaining access to eLAT (LAMS) for the Assessments • Availability of time to give representatives access to my PC for doing Assessments • Time for log-on to and loading of eLAT (LAMS) • Ease of drawing reports on my team and their performances on the Assessments
Facilitator’s guides (FGs) (Managers)	<ul style="list-style-type: none"> • Ease of using and understanding the FGs • Guidelines provided in the FG for feedback on and assessment of Tasks • Completeness of the FG to provide me with all the information I need to manage and provide input to the programme

Overall then, contents’ underlying descriptors relate to ease of understanding and relevancy; written contents to ease of understanding and facilitating learning; visual contents to explaining contents and enhancing learning; usability to the ease of getting around and using the programme (or ID model); process to clarity and ease of getting to

all components; tasks to ease of completing and submitting the in-field tasks; assessments (for learners) to the ease of the process and understanding of the contents of the assessments; for managers, assessments are described by how they experience the process and reporting related thereto; and the FGs (for managers) to the clarity, completeness and usability of the FGs in their roles as facilitators and assessors.

Both learners and managers were asked to rate each of the underlying descriptors of the ID model components out of four, whereby “4” means “excellent” and “1” means “needs improvement”, and the “most common measure of location ...” (Remenyi *et al.*, 1998:210), namely the mean was calculated. The mean is the most common form of central tendency and refers to the average – in this case, the average rating by learners and managers for each underlying descriptor for the main components of the ID model. The mean is simply the total sum of all the numbers in the data set, divided by the total number of data points. For the purposes of this research, the mean calculation is useful to provide the typical rating on the components of the ID model. These ratings were then investigated in more depth during the focus groups, to ensure “why” and “how” questions relating to the ratings were answered. The reason for only using the mean for this data was because the numerical data were without extremes and the main purpose of the empirical research is exploratory and interpretive, which suggests that the rating of the ID model is to be explained, described and understood by using the qualitative methods, as described in par. 5.3.1.3. Open-ended questions (i.e. explanations of underlying descriptors rating one out of four; and why/how/explain your answer questions) were coded and included in the results pertaining to the rating of the ID model. Data capture and means calculation and tabulation were done by Citizen Surveys, an independent marketing research company in South Africa. Computer print-outs of the analyses are available.

Questionnaires were distributed to all regions via email, with a request to return completed questionnaires to the MSD within a specified time frame. A total of 167 (out of 377, i.e. 44%) completed questionnaires were returned by learners, and a total of 31 (out of 60, i.e. 59%) completed questionnaires were returned by managers (see Figure 5.6) at the end of the cut-off period, i.e. September 2005 (see Figure 5.4).

b) LAMS pre-post measurement

A second quantitative input to this research is obtained from LAMS, (see par. 4.4.2.5) that measures levels of job-specific knowledge before implementation of the ID model, and then again after implementation. In reporting on this, average scores obtained by learners

on the various courses within the ID on a pre and a post implementation level will be reflected. Managers do not participate in LAMS.

In the practical view of the ID model (see par. 4.6), LAMS (see par. 4.5.2.5) is accessed by learners before starting a course and on completion of a course (see Figure 4.7, steps 1 and 5). These pre- and post assessments are reflected in terms of a percentage performance out of 100. For example, on pre assessment a learner may obtain a 56 score. He/she undertakes the relevant course, completes the practical in-field tasks and on sign-off of the task does the post assessment and obtains a 60 score. It is concluded that the job-specific knowledge for that course is improved by 4. The LAMS measurement is extracted by one of the technical personnel at the case organisation from the central server where LAMS is resident and scores/results are double-checked and confirmed by MSD personnel prior to supplying it to the researcher.

Two LAMS measurements were taken. The first was in October 2006 and was specified by the case organisation; while the second measurement was taken in August 2007 when more learners had completed the various skills ranges.

As mentioned in par. 5.3.1.1, qualitative methods are also employed in this research as discussed next in par. 5.3.1.3.

5.3.1.3 Qualitative methods

Qualitative methods are ideally suited to explore attitudes, opinions, thoughts, reactions and feelings. For the purpose of this research, (a) focus groups, (b) in-depth interviews, (c) notes and (d) in-field direct observation are used, as presented below.

a) Focus groups

Focus groups are defined as “a research technique that collects data through group interaction on a topic determined by the researcher” (Morgan in Hesse-Biber & Leavy, 2004:263). There are three important elements contained in this definition, namely focus groups are a research method devoted to data collection; the interaction and narrative in the group discussion is the data source; the researcher has an active role in creating the group discussion for data collection purposes, i.e. the researcher’s interest directs the discussion.

There are a number of reasons why focus groups are relevant for the purposes of this research. Focus groups serve to explore ideas, motivations and a range of opinions from a particular group of people. When group interaction has the potential for greater insights to be developed, focus groups are appropriate and the research aims to understand reaction to and experience of the ID model by users.

The weaknesses of focus groups also have to be noted. These are listed below with an indication of how they are addressed in this research.

- i) The analysis of the results of focus groups is difficult and often cumbersome. In this research coding is conducted in a specific and specified manner (see par. 5.3.3.4).
- ii) There is the possibility of researcher bias which may distort the results. For this research this is addressed in par. 5.3.4 on integrity measures and rigour.
- iii) Since the results obtained from focus groups often have a “ring of truth”, there is the temptation to generalise results. In this research results will be reported on qualitatively, with thick description and overview of all opinions and reactions.
- iv) Group members may influence each other to distort a true reflection of their own feelings and attitudes. In this research projective techniques, e.g. a self-completion exercise to capture upfront, spontaneous reactions is used to circumvent this problem (see Appendix 8).
- v) The force of strong personalities in a group may be disruptive and counter-productive if not handled by the moderator; group discussions require to be moderated by an experienced, trained moderator who is skilled in group facilitation, listening, observation and an on-going interpretation and analysis of what is going on. The behaviour of the moderator and how she handles the group may have consequences on the outcome. In the instance of this research the researcher is the moderator, with 20 years experience in conducting and moderating focus groups.

For this study, a total of 10 focus groups was conducted, i.e. five with members of EUA 1 (i.e. learners) and five with members of EUA 2 (i.e. managers) between 18 - 25 April 2006. (See Figure 5.6: Sample overview). Although the order may have varied within discussions, the format of the focus groups is described next.

Groups commenced with a welcome and explanation of the purpose of the study. Participants were told that the research aims to investigate their feelings about and experience, whether positive or negative, with the ID model. It was highlighted that the research was to be used for academic purposes, and also, to use the research inputs to improve the ID model within the case organisation. It was reiterated that participation was voluntary, and that participants could withdraw at any stage. Permission was obtained to tape-record the sessions and for use of the transcripts. Participants were ensured of anonymity and that results would not be attributed to specific individuals.

The sessions started with a sentence-completion exercise, whereby participants wrote down their immediate thoughts about “the thing I like most about the ID model is ...” and “the thing I like least about the ID model is ...” These responses were collected and participants discussed their reactions. The responses of all these self-completion exercises were collated (see Appendix 8) and were included in the data analysis.

A discussion guide (see Appendix 9) was used to ensure all relevant topic areas were covered. However, this discussion guide merely served as a reminder to the researcher of main points to be covered. The discussion guide was deemed to be open-ended and unstructured to the extent whereby bias could not be introduced by it. Also, a point was made during the discussions to always investigate counter-opinions, e.g. for likes, dislikes were also asked about; for problems, things that were seen to work were also asked about. The use of a discussion guide indicates that there was some structure to the discussions, even though they were treated as open-ended and unstructured conversations during which the researcher extracted detailed information and comments from the participants. Topics, reactions and feelings were explored as they arose during the course of the discussions.

During the focus groups, the researcher made additional notes and wrote down observations (see Appendix 6). Participants were told that this did not denote more important comments, but rather served as a memory prompt for the researcher to follow up on issues if they did not emerge during the natural flow of the discussions.

The focus groups consisted of between 5 – 13 participants and they were held at the offices of the case organisation in the various regions. Participants did not receive any incentives for their contribution, although the researcher did send thank you notes via email after completion of the focus groups. All group sessions were transcribed and the

transcripts form the raw data input. These transcripts are contained in Appendix 7. For EUA 3 (MSD), a series of meetings was held and the qualitative in-depth interview discussion method was used, as described below.

b) In-depth interviews

In-depth interviews are used when individual in-depth reactions to the topic under study are required. Also, individual in-depth interviews are used when the participants are unlikely to attend, or do not have the time to participate in focus groups (e.g. managing directors of companies, doctors, other specialists like scientists).

The individual in-depth interview may be unstructured or semi-structured (Hancock, 2002), and in this research the unstructured format is used. Although the researcher has a number of topics for investigation, comprising of various themes, allowance is also made for exploring detail and unexpected responses around these themes. Open-ended questions on the topic and its themes are asked and the interviewer uses prompts and cues to “further the question”. In addition, the interviewer uses probes to get the interviewee to elaborate on responses or the interviewer will follow a line of enquiry once a further topic or theme is introduced by the interviewee.

Depth interviews have a number of specific weaknesses, amongst others that they are generally more time-consuming and slower to complete than focus groups; depth interviews are expensive; and there is the temptation to quantify results. It requires a skilled interviewer, who is able to establish a rapport on a one-to-one basis with the interviewee, and who is able to interpret responses and investigate avenues of enquiry not anticipated in the planning phase.

However, for the purposes of this research it is felt that these weaknesses do not apply, since the interviews occurred at ongoing meetings with members of MSD. Meetings notes (see Appendix 10) recorded the responses and evaluation pertaining to the discussions on the ID model occurring at these meetings. (Note that discussions regarding the learning contents and organisation-specific issues are not included in the notes, due to organisational confidentiality and the learning contents being pertinent to the case organisation only).

c) Notes

Supplementary to the data obtained from the focus groups and meetings, field notes (Appendix 6) made by the researcher both during and after the discussions, as well as transcripts and notes from meetings (Appendix 10) with MSD and other key stakeholders at the case organisation are used in the data analysis. In addition, the information obtained from the self-completion exercise is used (see Appendix 8).

d) In-field direct observation

Notes relating to hunches and observations made by the researcher in-field are included in the data set (see Appendix 6), and form part of the ongoing and final analysis and interpretation of the data. In addition, during the focus groups managers were asked about what they observed in practice, when learners were doing their in-field tasks. Their responses are contained in full in the focus group transcripts (Appendix 7). The ongoing interpretation and notes relating to hunches and observations are kept in original format (and not “neatened up”) to maintain integrity of the data trail and of interpretation.

In summary, the qualitative methods used in this research consisted of five focus groups with EUA 1 (learner audience), five focus groups with EUA 2 (managers) and various ongoing meetings using the in-depth interviewing method with EUA 3 (MSD). The data obtained from the focus groups and depth interviews were supplemented by the field notes of the researcher, which were made both during the course of the focus groups, in-depth interviews and during in-field observation.

5.3.1.4 Summary of research methods

In this research, both quantitative and qualitative methods are applied within the case study, since it is proposed that mixed methods research provides clear insights in today’s interdisciplinary complex and dynamic environment. Both the quantitative and qualitative methods inform the results and no value of importance is attached to either. In fact, based on the exploratory and descriptive purpose of the research, both methods are used to inform, explain, illuminate and provide a comprehensive insight into and understanding of the phenomenon under study, i.e. the ID model.

Quantitative methods, in this research the rating of the ID model components and pre-post job-specific knowledge levels; and qualitative methods, in this research focus groups, in-depth interviews and in-field observation used to explore attitudes, opinions and reactions are used for obtaining the data inputs for the evaluation of the ID model.

As it is impractical to obtain research evidence through the qualitative and quantitative methods from all members of the population in the case organisation, but more importantly as the ID model is specifically applied to a pre-defined group of learners and their managers, it is pertinent to outline the sampling frame and sampling procedure for this research, which is discussed next in par. 5.3.2.

5.3.2 Sampling frame and sampling procedure

5.3.2.1 Introduction

Sampling techniques fall in two main categories, namely probability and non-probability samples. In probability samples, each individual in the research population has a known, not necessary equal, probability of being selected (Remenyi *et al.*, 2003:193). These samples are selected using random procedures. In non-probability sampling the selection of a random sample is not relevant, and often not appropriate. For example, this research can only be conducted amongst those members of the workforce in the case organisation who have experience with the ID model. A probability sample drawn from the case organisation is not relevant or appropriate.

Non-probability samples are particularly pertinent for exploratory research (Saunders *et al.*, 2003:170), where the research needs to select participants based on pre-defined criteria. This is known as purposive sampling, whereby the participants selected are in a position to contribute to the research, for example, in this research, through experience with the ID model. Purposive sampling is used for this research, and the broader sampling frame and sampling procedure are presented, through a description of the sampling frame and characteristics of participants (par. 5.3.2.2), the sampling procedure (par. 5.3.2.3), sample overview (par. 5.3.2.4), challenges relating to sample (par. 5.3.2.5), and a summary of sampling frame and procedure (par. 5.3.2.6).

5.3.2.2 Sampling frame

The sampling frame for this research consisted of field force representatives (i.e. the learner audience) and their managers (i.e. the implementers, facilitators and assessors in the ID model) and MSD (i.e. as the department responsible for the ID model strategy and implementation). The case organisation had a field force representative complement of 377, with an area manager complement of 61 at the time of the ID model assessment research (September 2005). It is important to note that the workforce complement in the case organisation fluctuates, therefore a different total complement of field force

representatives was in employ when LAMS knowledge scores were extracted (see Figure 5.6) in October 2006 for LAMS 1 and August 2007 for LAMS 2. Members of this sampling frame are resident in all areas of South Africa, and consist of males and females, aged 25 – 55, and representing the four major population group classifications in South Africa, i.e. Black, White, Coloured and Asian. Computer literacy levels for the learner audience ranges from low to fairly proficient, whilst managers are deemed to be computer literate and proficient. MSD consisted of four personnel for the duration of the research and they were all included in the sample and all of them were present at all meetings. The samples for both the qualitative and quantitative methods were obtained from this sampling frame.

Par. 5.3.2.3 describes the sampling procedure followed in this research. The sample overview is presented in Figure 5.6.

5.3.2.3 Sampling procedure

Purposive sampling was employed in the sense that participants in the study were recruited only if they had experience with the ID model. Since the ID model was applied to the field force representatives and their managers only, the sample comes from the field force representatives and the managers who oversee the implementation of the ID model. All MSD personnel were included in the sample. The sampling procedure used for the sample for the (a) quantitative methods and (b) qualitative methods used in this research is described next.

a) Quantitative methods sample

ID model assessment questionnaires were emailed at the beginning of September 2005 to the full representative field force and manager complement, from MSD, with the request for them to be completed and returned by that month-end. ID model assessment questionnaires were also distributed by MSD at their regional visits, with a deadline set for the return thereof. This was done to ensure all members of the representative field force and their managers received copies of the ID model assessment questionnaire, as some participants claimed to “have not received the emailed questionnaires”. No control was exercised over whom was told to complete the ID model assessment questionnaires and the sample was considered complete once the cut-off date (end September 2005) was reached. For the purposes of LAMS, the samples were extracted by a technical person at the case organisation and the scores of all learners who had completed both pre- and post assessments on the specific courses or skills ranges were provided.

b) Qualitative methods sample

At the time of the qualitative research (April 2006) the case organisation was extracting representatives and managers (in separate groups) from the field to provide training on and testing of a new computer administration system. Participants for this training and test were selected randomly by MSD and chosen qualitatively, based on their knowledge of the individuals to represent all levels of skills and competency, both in computer aptitude and job performance. An additional criterion, and one incorporated for the purposes of this research, is that these participants had to have completed at least three of the five courses contained in the ID model. Participants were instructed to attend sessions at regional offices, and sessions were run concurrently – i.e. whilst training and testing were done with managers, focus groups for the research were conducted by the researcher with representatives; and vice versa. The training/testing session and focus groups happened in separate meeting rooms at the offices of the case organisation.

An overview of the sample and characteristics of participants for this research is presented next.

5.3.2.4 Sample overview

Figure 5.6 presents a sample overview for this research, by providing the breakdowns within the (a) quantitative and (b) qualitative methods.

a) Quantitative methods

Two samples apply to the quantitative methods, i.e. the sub-sample relating to the ID model assessment (see Appendix 5) and the sub-sample relating to LAMS (see par. 4.5.2.5). For the ID model assessment questionnaire a return of 44 percent was obtained from the learner audience, and a 59 percent return from the managers.

For the LAMS sample average pre-post measures were provided for the learners who completed the specific courses, i.e. skills ranges. Note that in October 2006 the field force representative complement was at a total of 347, as against 377 during 2005; and in August 2007 the field force representative complement was 379. As can be seen from Figure 5.4, relating to LAMS 1 the majority of learners had completed at least three of five courses in the ID model, i.e. 87.6 percent had completed the introductory skills range, 82.9 percent the job-specific skills range and 72.0 percent skills range 1.

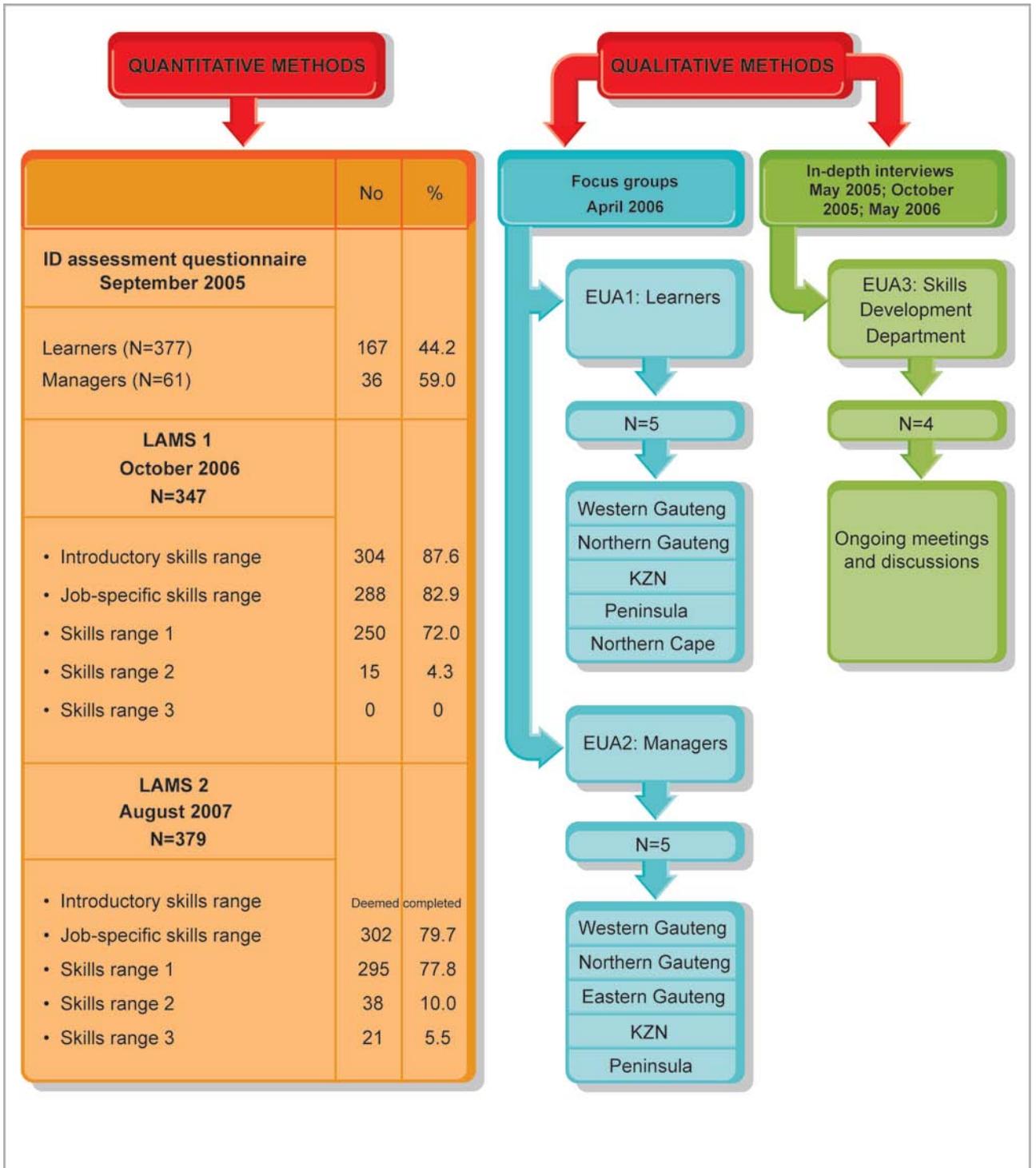


Figure 5.6: Sample overview

For the LAMS 2 measurement, the introductory skills range was considered to be completed, 79.7 percent had completed the job-specific skills range, 79.6 percent skills range 1, 10 percent skills range 2, and 5.5 percent skills range 3. The LAMS scores extracted to determine pre and post ID model implementation knowledge performances are thus based on these sample sizes. The varying sub-samples on LAMS for the different

skills ranges are due to the fact that learners work their way through the ID model at their own pace and therefore not all learners complete courses at the same time.

b) Qualitative methods

The qualitative methods consisted of a total sample of 10 focus groups, of which five were conducted amongst EUA 1 (learner audience) and five amongst EUA 2 (managers). The regions selected were purposive, based on those regions considered key by the case organisation. The pre-defined criteria for inclusion in the purposive sample were simply that one, participants had to have completed at least three of the courses in the ID model; and two, participants had to be available for the duration of the focus group sessions.

In addition, ongoing meetings were held with four members of the MSD during May and October 2005 and May 2006, during which in-depth interviews and discussions were conducted. During the entire period of ID model development, ongoing input from and discussions with MSD and other stakeholders in the case organisation provided observational and information inputs to the researcher.

The varying field force complement brings about a number of challenges relating to the sampling frame and sampling procedure, which are discussed in par. 5.3.2.5.

5.3.2.5 Challenges relating to sample

In any large, multi-national organisation there are always personnel leaving and new personnel joining the organisation. This brings a number of challenges when a “snapshot in time” is taken through research and sample sizes are to be defined.

Firstly, when the research occurs at specific points in time, on a phenomenon that is rolled out over a period of years, it is not possible to reflect sample size relating to total population. In this research, sample sizes were calculated based on the number of field force representatives and their managers at the points in time when the research were conducted, as depicted in Figure 5.4.

Secondly, in the recruitment of participants for the focus groups, the research was purposely latched on to an organisational training and testing initiative on the new computer administration system to ensure arrival of participants. “Recruiting” is thus handled independently of the researcher by MSD to avoid up-front explanations that may have prompted participants to “prepare” answers and reactions.

Thirdly, as new personnel join the organisation as field force representatives or field force managers, they participate in the ID model and complete courses. For the purpose of this research new personnel were not included in the research. However, pre-post measures in LAMS, where aggregate measures were extracted and reflected, the scores obtained by new personnel were included in the calculations.

A summary of the sampling frame and procedure is provided in par. 5.3.2.6.

5.3.2.6 Summary of sampling frame and procedure

In summary, purposive sampling was applied in this research since it was necessary to include those members of the workforce who had experience of the ID model – in the instance of this research field force representatives (or learners) and their managers (or facilitators and assessors in the ID model). MSD, as the specialist training department was included as a separate sample.

For the sample relating to the quantitative methods, two sampling procedures were followed. One, the ID model assessment questionnaires were emailed to all learners and their managers. This was followed up by MSD by physical delivery of questionnaires to regions and individuals claiming to not have received the email. On the cut-off date (end September 2005) a 44 percent return rate from learners and a 59 percent return rate from managers were achieved. The second sampling procedure was the extraction of LAMS scores from the central server of the case organisation, where the records pertaining to pre- and post job-specific knowledge levels are resident. Two LAMS scores were extracted, one in October 2006 and one in August 2007.

For the sample relating to the qualitative methods, a total of 10 focus groups were conducted, five with learners and five with managers; in-depth interviews were conducted with MSD personnel at various points in time; and in-field observation was conducted during the launch phase of the ID model. In addition, ongoing meetings with various stakeholders at the case organisation provided further input and insights.

The complexity of the large amount of data generated in this research requires a specific approach to data analysis, as explained in par. 5.3.3.

5.3.3 Data analysis

5.3.3.1 Introduction

The data analysis for this research consisted of two sets of analyses, namely for the quantitative data analysis (par. 5.3.3.2) and the qualitative data analysis (par. 5.3.3.3). A summary on data analysis will be presented in par. 5.3.3.4.

5.3.3.2 Quantitative data analysis

The quantitative data consist of the data obtained from the ID model assessment questionnaire which consisted of the rating of the components of the ID model by learners and managers and also the LAMS pre-post measurements.

The purpose of the rating of all components (see Table 5.1) of the ID model was to obtain an understanding of how the components of the ID model were judged quantitatively. For this purpose a four-point rating scale was used and the average ratings determined. Data was tabulated and means were calculated by Citizen Surveys, an independent research organisation (see par. 5.3.1.3b). Frequencies and cross tabulations (by region and by specific job function) were also provided, although the results hereof pertain specifically to the case organisation and are not germane to this research. The quantitative data (mean, frequencies, cross tabulations) were supplied in a tabular format, a hard copy of which is available.

A further quantitative data input was obtained from LAMS, whereby pre- and post job-specific knowledge levels were measured and retained in the LAMS database (par. 5.3.1.3b). For this research, an employee in the IT department of the case organisation extracted a report from LAMS, which contained the total number of learners who had completed pre- and post LAMS assessments. The report reflected the total number of learners who had completed each course at the points in time, when the readings were taken (i.e. October 2006 and August 2007); the average total score obtained by these learners for the pre-measurement; the average total score obtained for the post-measurement; and the average increase or decrease in score between these two measurements.

A further data set was obtained from the qualitative methods and the qualitative data analysis is discussed in par. 5.3.3.3.

5.3.3.3 Qualitative data analysis

One of the biggest complexities in qualitative data analysis is data reduction. Faced with huge amounts of transcribed data, field notes, observations and documents, the researcher has to start making sense of the data. Qualitative data analysis is defined as “working with the data, organising it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others” (Bogdan & Biklen, 1982:145).

The qualitative data in this research consist of the inputs obtained from the focus groups and inputs from the self-completion questionnaires prior to the start of the focus groups; the researcher’s field notes during in-field observation; the researcher’s notes from meetings; and an extract from the case organisation’s post implementation review. The tape recordings of the focus groups were transcribed and all notes made by the researcher were extracted from the field notes notebook. See Appendix 6 for the researcher’s field notes; Appendix 7 for transcripts of the focus groups; Appendix 8 for self-completion questionnaires input prior to the focus groups; Appendix 10 for meetings notes; Appendix 11 for the pilot study field notes; and Appendix 12 for the extract from the case organisation’s post implementation review.

All these inputs form the “raw data” input from the qualitative methods. Transcripts are decontextualised conversations that serve as interpretive constructions of the original, which includes an ongoing interpretation by the researcher. Thus, the transcripts alone are not enough for interpretation in isolation. Ongoing field and observation notes chronicle the ongoing and unfolding interpretation throughout the entire research programme. As such, the field and observation notes are included in their original handwritten format to ensure ongoing interpretative integrity and specificity of the data inputs.

Although the process of data analysis and interpretation is ongoing throughout the research, when faced with the raw data on completion of the fieldwork, the researcher looks for central themes and categories in the data. This process of assigning central themes and categories to the raw data to start making sense of it is the coding of the data.

Coding is “the process of describing themes and ideas in chunks or segments of text in the data, and assigning labels to them” (Hesse-Biber & Leavy, 2004:411). Although it is a

time consuming and labour intensive process, close, critical coding is fundamental to good qualitative research.

As a starting point, the researcher needs to devise logical, meaningful categories; examine them in a holistic fashion; and then decide how best to communicate this. Qualitative data analysis is dialectic, not linear – throughout the process of data collection, the researcher is interpreting the data, and confirming or discarding interpretations in light of new and additional data obtained. It is useful to have some initial structure into which this ongoing process of data collection and interpretation may be placed to provide the researcher with a framework for interpretation and analysis.

Although there are various computer assisted software analysis packages (e.g. ATLAS.ti, NUDIST*, NVivo) available for use in qualitative research of this nature, coding and data analysis in this research were done manually, since funding was not available for the purchase of software. Most of the marketing research organisations in South Africa all still use manual qualitative data capture and analysis, so this research is in line with the local status quo.

Although there are many coding strategies to follow, they largely fit into two broad strategies, namely deductive coding and inductive coding.

Deductive coding entails going from abstract ideas to the empirical data through the testing of hypotheses. The process is briefly, to start with a pre-defined coding scheme; specific hypotheses are then tested against this scheme; and as patterns emerge the researcher develops meanings about and of them. The researcher thus jumps back and forth between the roles of coder, analyser and interpreter (Hesse-Biber & Leavy, 2004:411).

Inductive coding entails going from the empirical data details to a generalised theory or principles. This is a more open and holistic procedure with its goal being to gain insight and understanding. The analytic procedure is inductive in that the researcher immerses himself/herself in the raw data and text until themes, patterns, concepts and dimensions of concepts emerge.

In this research, the first step was to go through all the raw data inputs to get an overall impression about emerging themes and meaningful categories that group together, i.e. the

data were considered holistically and then themes and topics were assigned inductively. A broad inductive coding frame was assigned (see Appendix 13), that contains an analysis of all responses and opinions in an open-ended framework. Although open-ended, this framework started to group “like” or similar data together. From this broad inductive coding frame, deductive coding was applied whereby the data were allocated to the topics contained in themes found to represent main thoughts and reactions in a focused coding scheme (see Appendix 14).

In the absence of computer assisted software due to a lack of funds for the purchase thereof, the analysis of the data, themes and topics were identified through the application of multi-coloured symbols, each of which represented specific data topics or themes, as may be seen in Appendices 13 and 14.

Both the broad inductive coding frame and the focused coding scheme were used to extract the elements of the Kirkpatrick (1994) evaluation model, i.e. reaction to the ID model, perceptions about the impact of the ID model on job-specific knowledge and the application thereof in productive behaviour (see par. 1.5).

Thus, in this research the qualitative data were coded as follows:

- An inductive assignment of themes and topics reflected in a broad inductive coding frame was generated.
- Deductive coding was applied whereby topics contained in themes were grouped together in a focused coding scheme.
- Topics relating to the Kirkpatrick (1994) model were extracted.
- All unallocated portions of sentences, conversations, field notes and observation notes were considered and interpreted.

The quantitative data, together with the coded qualitative data form the combined data set for the analysis of the research inputs. A summary of the data analysis is presented in par. 5.3.3.4.

5.3.3.4 Summary of data analysis

In this research, the data sets from both the quantitative and qualitative methods provide the data input for analysis. The quantitative data set consists of the rating (mean) of all components of the ID model and the measurement of job-specific knowledge levels pre- and post implementation of the ID model through LAMS. The qualitative data (transcripts from focus groups, meetings notes, field notes, organisational documents) were coded and grouped together from both an inductive (moving from the data to themes) and deductive (moving from themes to the data) perspective. Data were hand-analysed since no funding was available for the purchase of computer assisted software for qualitative data analysis; hand analysis also being the *status quo* in the South African marketing research industry. The coding for the qualitative data is reflected in a broad inductive coding frame (Appendix 13) and a focused coding scheme (Appendix 14), both of which are used to extract the elements of the Kirkpatrick evaluation model, viz. reaction, learning and job-specific knowledge improvement and application thereof in productive behaviour.

Of further relevance in the research methodology for the empirical investigation are the integrity measures and rigour applied in the research, to minimise possible criticisms of both the research tactic used and the research methods and data analysis applied. The integrity measures and rigour applied in this research are put forward in par. 5.3.4.

5.3.4 Integrity measures and rigour

5.3.4.1 Introduction

Integrity measures and rigour apply in all research, but more particularly so in research conducted in an interpretivist philosophical orientation. Integrity measures and rigour are fundamental to demonstrate the trustworthiness and reputability of the research. Demonstrating that the research has integrity and is conducted with rigour is especially important in interpretivist research given the common criticism that research of this nature is merely anecdotal (Hancock, 2002:22) and therefore not scientific. The integrity measures and rigour applied in this research are presented in this section, by considering reliability and validity (par. 5.3.4.2); triangulation (par. 5.3.4.3), member checking (par. 5.3.4.4); negative case analysis (par. 5.3.4.5); researcher assumptions and critical self-reflection (par. 5.3.4.6); rigour and quality measures (par. 5.3.4.7); and rigour in phenomenological sociology (par. 5.3.4.8). A summary of the integrity measures and rigour is provided in par. 5.3.4.9.

5.3.4.2 Reliability and validity

Reliability and validity are important issues in all research. However, since reliability and validity are rooted in the positivist (quantitative) philosophical orientation, they should be re-defined for their use in interpretivist (qualitative) research (Golafshani, 2003:597). Demonstrating that interpretive research is reliable and valid and that it is conducted in a rigorous manner, is especially important given a common criticism that qualitative results are anecdotal (Hancock, 2002:22). Strauss and Corbin (1990:250) suggest that the “usual canons of ‘good science’ ... require redefinition in order to fit the realities of qualitative research”.

Reliability in interpretivist research relates to being able to demonstrate that the methods used are reproducible and consistent (Hancock, 2002). This is done by:

- Describing the approach to, and procedures for, data analysis.
- Justifying why this approach is appropriate in the context of the study.
- Clearly documenting the process of generating the themes, concepts, categories of concepts and theories emerging from the data audit trail.
- Referring to external evidence from relevant literature.

Lincoln and Guba (1985:300) use “dependability” as a term more appropriate to describe “reliability” in interpretivism qualitative research. To ensure reliability, dependability and examination of trustworthiness are crucial.

Validity in interpretivism refers to the extent in which an account seems to fairly and accurately represent the data collected (Hancock, 2002). Validity therefore is the plausibility of the relationship between data and concepts, and implies that the collective agreement of the intended audiences indicates that interpretations of the data are not only compelling, but convincing. This is determined by, amongst others, an adequate and systematic use of original data in the presentation of the analysis, so that readers of the research can be convinced that the interpretations relate to the data.

Golafshani (2003) proposes that validity in qualitative research is “more appropriately described in terms of rigour, quality and trustworthiness”.

Some of the ways in which the dependability and trustworthiness of interpretivist research can be increased include triangulation (par. 5.3.4.3), member checking (par. 5.3.4.4) and negative case analysis (par. 5.3.4.5), all of which are applied in this research as described below.

5.3.4.3 Triangulation

In the case study and during focus groups, bias represents a danger to the integrity of the data. This may be based on the selection of the case, or the way in which questions are asked. One of the ways to minimise, although not totally eliminate bias, is through triangulation (Remenyi *et al.*, 2003:126). There are five basic types of triangulation:

- i) Data triangulation, involving time, sources and persons.
- ii) Researcher triangulation, which consists of the use of multiple, rather than single observers and/or researchers.
- iii) Theory triangulation, which consists of using more than one theoretical basis in the interpretation of the phenomenon.
- iv) Methodological triangulation, which involves using more than one method.
- v) Multiple triangulation, when the researcher combines in one investigation multiple observers, theoretical bases, sources of data, and methodologies.

In this research, methodological triangulation is applied through the use of both quantitative and qualitative methods. In addition, multiple sources of data are used, i.e. learners, managers and MSD as well as organisational documentation and insights gleaned from in-field observation. The multiple natures of evidence collection and data sources in this research is one of the integrity measures applied to increase dependability and trustworthiness.

5.3.4.4 Member checking

Member checking involves sending drafts of the data analysis and interpretation to members of the participant audience for verification. In the case of this research, member checking was done with MSD, two managers and three learners. Although they responded with semantic changes to the documents, no changes to overall themes, analysis and interpretation were deemed necessary, thus dependability, trustworthiness and integrity may be inferred.

5.3.4.5 Negative case analysis

Negative case analysis means that the researcher needs to be particularly cognisant to and aware of “the voices in the wilderness”, i.e. the data that do not fit into the overall patterns, themes, topics and results. This is of particular importance in the analysis and interpretation of transcripts and field notes, to ensure negative cases that fall outside main topics, themes and results are carefully considered and analysed. In this research, dissenting views and results that fall outside main themes will be highlighted. This is particularly relevant for this research, to alleviate and minimise expectations which may be held by the researcher.

5.3.4.6 Researcher assumptions and critical self reflection

Bias, whether cultural, academic or personal, is always present in the researcher (Remenyi *et al.*, 2003; Denzin & Lincoln, 2005). In interpretivism and within qualitative methods, an important way in which bias may be minimised is for the researcher to, through a critical self reflection, outline and list those assumptions relating to the research which may impact on how data is handled, interpreted and presented. For this research, the researcher is aware of the following assumptions and personal belief system which may have an impact on the research:

- The belief that the ID model works and positively contributes to job-specific knowledge and productive behaviour, since the case organisation is intending to implement and roll it out to all their international offices.
- The belief that classroom-based training only offers very little benefits to adult learners.
- The belief that “learning by doing” is better than other methods.
- An inherent interpretivist approach to the world, whereby feelings, attitudes and opinions are seen to provide the basis for understanding and knowledge of the world.

Through critical self reflection on these assumptions and a particular and specific focus on the contrary and negative cases, the researcher will attempt to minimise the impact of these assumptions and world view. It is believed that, in conjunction with triangulation, member checking, negative case analysis and rigour and quality measures (discussed next in par. 5.3.4.7), researcher bias in this research is minimised.

5.3.4.7 Rigour and quality measures

Table 5.2 reflects additional rigour and quality (R+Q) measures implemented in this research to ensure and enhance the research dependability and trustworthiness. These measures have been defined by a number of authors (for example Lincoln & Guba, 1985; Denzin & Lincoln, 1994; Hesse-Biber & Leavy, 2000 and Yin, 2003). Table 5.2 provides a summary of the writing of these authors and defines the measures to be undertaken (and applied in this research) to further increase dependability and trustworthiness of the research.

The discussion below provides references to where and how these R+Q measures are dealt with in this research.

- Descriptive R+Q refer to the clarity with which all constructs, concepts, methods and findings are presented and the degree to which the “voice of participants” emerges in the findings. The availability of the transcripts is believed to aid descriptive R+Q, whilst data triangulation is also applied.
- Interpretive R+Q refer to the availability of the researcher’s field notes and transcripts; and a clearly specified coding strategy and frame. Appendix 6 contains the researcher’s field notes, Appendix 7 contains the transcripts of the focus groups and Appendices 13 and 14 reflect the coding frame for this research.
- Theoretical R+Q refer to the use of multiple sources in the consideration of theories and contextual positioning for the research (see Chapters 1, 2 and 3; “List of sources” and “Sources not listed in the text”). Peer reviews on five occasions at colloquia at the University of Stellenbosch Business School (USB) and the consideration of negative case scenarios in the data analysis support the theoretical R+Q. In addition, an international peer review was obtained during July 2006, whereby a presentation on the theoretical and methodological approach for the research was delivered at EDAMBA* (Le Roux, 2006).

* EDAMBA: European Doctoral Association for Management and Business Administration.

Table 5.2: Rigour and quality measures implemented

Type	Measures
<i>Descriptive R+Q</i>	<ul style="list-style-type: none"> • Thick use of participant voices • Data triangulation by using different data sources • Availability of transcripts
<i>Interpretative R+Q</i>	<ul style="list-style-type: none"> • Availability of transcripts and field notes • Specified and described coding strategy
<i>Theoretical R+Q</i>	<ul style="list-style-type: none"> • Using multiple literature sources to ensure a valid rationale for theories used • Peer reviews at colloquia • Negative case scenarios consideration in data analysis
<i>Internal R+Q</i>	<ul style="list-style-type: none"> • Choose participants with experience (of ID model) so as to provide useful and relevant information to illuminate cause and effect analysis if appropriate • Presentation of rationale for sample selection, including descriptions
<i>Criterion R+Q</i>	<ul style="list-style-type: none"> • Clarity of coding • Description and contextualisation in reporting phase
<i>Construct R+Q</i>	<ul style="list-style-type: none"> • Theory building stage draws on variety of academic literature (multiple sources including print/electronic), ensuring consistency in theoretical framework • 'Negative case scenarios' included to ensure all options are considered • Interviewer flexibility to change direction of interview when required
<i>External R+Q</i>	<ul style="list-style-type: none"> • Choose sample consisting of different people and locations • Analytic transferability
<i>R+Q of design</i>	<ul style="list-style-type: none"> • Supervision from colleagues, superiors • Independent research inputs • Information recording, transcription, and analysis conducted on pre-defined strategies

Source: Compiled from Lincoln and Guba, 1985; Denzin and Lincoln, 1994; Hesse-Biber and Leavy, 2000; Yin, 2003.

- Internal R+Q refer to a clear exposition of why and how the sample was chosen (see par. 5.3.2 on sampling frame and sampling procedure) so as to illustrate and explain how and why the sample for this research was chosen.
- Criterion R+Q refer to the clarity of themes and results and in this research it is attained by a full record of the broad, inductive coding frame (see Appendix 13) and the focused coding scheme (see Appendix 14).
- Construct R+Q refer to the consultation of a variety of sources (see “List of sources” and “Sources not listed in the text”) used for the context and theoretical frame of reference. Negative case scenarios are considered (see par. 5.3.4.5 and Chapter 6) and incorporated into the analysis and interpretation of the data.

- External R+Q refer to the sample having been selected from different groups and locations (see Figure 5.6) and the possibility of analytic transferability based on the case being similar to many other case organisations (also see par. 5.2.3.2; par. 5.2.3.3; par.5.2.3.6a and par. 5.2.3.7).
- R+Q of design refer to input obtained from various sources (colleagues, supervisors, independent sources) and a defined research approach (see par. 5.2) and research programme (see par. 5.3). In this research input is obtained from both local and international colleagues/peers as described in theoretical R+Q above, a supervisor and academic staff at the USB and experts at the case organisation.

In addition to these R+Q measures, phenomenological sociology defines how rigour is to be demonstrated. This too is incorporated in this research as presented in par. 5.3.4.8.

5.3.4.8 Rigour in phenomenological sociology

Within the interpretivist epistemology (see par. 5.2.2.5) of this research, phenomenological sociology is presented as a descriptive and interpretive theory of social action that explores subjective experience and meaning-making within the everyday life of individuals. For the social scientist or researcher to enter this world and develop understanding about human action, three postulates are to be followed during the research process (Wilson, 2002b).

The first is the postulate of logical consistency, whereby the researcher must establish the highest possible degree of clarity of the conceptual framework and research methodology applied to distinguish between that which the researcher is interested in from the everyday lives of individuals. In this research Figure 1.1 reflects the conceptual framework and Chapter 5 describes the research methodology and defines the research aim and purpose (par. 5.2.1) and the methods used (par. 5.3.1) to distinguish the research from everyday life.

Logical consistency is similar to “rigour” in qualitative research, which involves “in-depth planning, careful attention to the phenomenon under study, and productive, useful results” (Fereday & Muir-Cochrane, 2006:3).

The second is the postulate of subjective interpretation, whereby the researcher anchors her understanding of human action in the subjective meanings held by “actors”. In this

research the voices of participants are included in the research results (Chapter 6) to reflect the subjective meanings of the “actors” in the human action of experience with the ID model.

Subjective interpretation “is in line with preserving the participant’s subjective point of view and acknowledging the context within which the phenomenon was studied” (Fereday & Muir-Cochrane, 2006:3).

The third is the postulate adequacy, whereby the researcher demonstrates consistency between the constructs in the research and those found in common-sense experience, thus, the researcher’s description of the human action must be recognisable and understood by the “actors” in everyday life.

Adequacy “resonates with the process of member checks, a method sometimes used to validate participants’ responses to a researcher’s conclusions about them” (Fereday & Muir-Cochrane, 2006:3). Also, Fereday and Muir-Cochrane (2006:3) hold that the postulate of adequacy is illustrated in the “construct of direct application, in which the credibility of the research is measured by the way in which practitioners use in their practice the knowledge generated by the research”.

5.3.4.9 Summary of integrity measures and rigour

The integrity measures and rigour applied in this research were described in this section. Demonstrating integrity measures and rigour increase the dependability and trustworthiness of research. In this research triangulation of multiple sources and methodological triangulation is applied; member checking with participants provides verification of the interpretation of the data and validates the researcher’s interpretation, conclusions and reflections regarding the phenomenon under study. In this research particular attention will be paid to negative case analysis, as this is one of the ways in which researcher assumptions and bias may be overcome. Also, as one of the cornerstones of good qualitative research, the assumptions of the researcher need to be defined (Strauss & Corbin, 1990; Hancock, 2002; Hesse-Biber & Leavy, 2004) and in this research the beliefs of the researcher are outlined, so that awareness therefore informs the interpretation of results and the conclusions of the research. Specific rigour and quality measures also incorporated in the research include the use of participants’ voices (descriptive R+Q); availability of all transcripts and field notes (interpretive R+Q); using multiple theories and sources to provide the theoretical R+Q; providing a clear description

of the sample and how it is achieved (internal R+Q); explaining coding frames and schemes clearly (criterion R+Q); achieving construct R+Q by drawing on extended literature sources; choosing the sample in different locations and analytic transferability of the selected case organisation (external R+Q) and obtaining input from colleagues, academic staff and a supervisor at the USB and other experts (R+Q of design). In light of the above, integrity measures and rigour for this research are demonstrated.

In this research, specific protocols for documenting and reporting are followed. This is outlined in par. 5.3.5.

5.3.5 Documenting and reporting protocols

5.3.5.1 Introduction

The documenting and recording protocols are outlined as they pertain to recordings and transcripts (par. 5.3.5.2) and data representation (par. 5.3.5.3), after which a summary of documenting and reporting protocols (par. 5.3.5.4) is reflected.

5.3.5.2 Recordings and transcripts

All the focus groups are recorded and transcripts (see Appendix 7) thereof form the raw data input. In addition, all field notes (Appendices 6, 11) and notes from relevant meetings (Appendix 10) are available. Both the field notes and notes from meetings are included in this document in “raw format” – i.e. they are not typed up as they include elements and symbols of interpretation, which occurred at the time of the research and contain aspects of the ongoing and evolving interpretation of the data. It is suggested that if these were “typed up” and “neatened”, the interpretive perspective will be lost, and some methodological integrity sacrificed.

5.3.5.3 Data representation

The data will be represented in Chapter 6 and this chapter will be compiled in a manner to reflect the results from broad overall results, to specific detailed results. Verbatim comments from research participants will be included in the research results, analysis and interpretation. Comments will be from different participants and only where pertinent to the interpretation of the findings, will comments be attributed specifically to managers where this is so.

The rating of the ID model will be reflected through the mean, presented in table format for all components of the ID model and the LAMS job-specific knowledge pre and post measures will be presented in aggregated format, calculated as the average scores obtained by all participants who had completed the various skills ranges at the point in time where the two measurements are taken.

5.3.5.4 Summary of documenting and reporting protocols

The documenting protocols refer to the recordings and transcripts of the focus groups and the researcher's field notes and minutes from meetings, all of which are included in Appendices in this research. The documents are incorporated as they were noted and written by the researcher, since ongoing interpretive analysis is reflected and needs to be retained for methodological integrity. The data will be represented in Chapter 6 and are compiled to reflect results from broad, overall findings to specific, detailed findings.

In addition to the integrity measures and rigour and the documenting and reporting protocols, this research is conducted by adhering to a number of ethical principles as outlined in par. 5.3.6 on research ethics.

5.3.6 Research ethics

Research ethics refer to the standards of conduct in research practice relating to methods, procedures, interaction with research participants and the use and application of the findings (Resnik, 2007). Ethics are important not only to promote the aims of research, but also to protect participants and to hold researchers accountable.

In this research the following research ethics are adhered to:

- Participation in the research was entirely voluntary and participants may withdraw at any stage.
- Participants are aware, from the beginning, that the research would be used for both academic purposes and to refine the ID model if required. Permission was obtained to publish the work, as well as to communicate aggregated findings to top management at the case organisation.

- Management at the case organisation are aware of and gave permission to the researcher to use the organisation as the case, and access to both participants and additional information was readily given.
- Anonymity of participants was ensured.
- The specific contents of the ID model are not revealed, since it contains organisation-specific contents relevant in the provision and development of organisation-specific capabilities and core competencies for SCA in the particular organisational environment.

Notwithstanding integrity measures, rigour and research ethics, a number of limitations of the research (par. 5.3.7) is defined.

5.3.7 Limitations of the research

In the use of the case study tactic for this research, the most common and most telling limitation may be seen to be the perceived problem of generalising the findings of case studies. In terms of generalisability Flyvberg (2004:425) argues that formal generalisation through quantitative measures is just one way in which knowledge can be accumulated. He maintains that even if knowledge cannot be formally generalised “a purely descriptive, phenomenological case study without any attempt to generalize can certainly be of value in this process (...of gaining knowledge...) and has often helped cut a path towards scientific innovation” (Flyvberg, 2004:424).

The case itself, the EUAs and the orientation of the researcher bring with them specific limitations to this research. The case (organisation) operates in a strict legislative environment and confidential internal processes and procedures preclude the testing of the ID model learning contents specifically in any other industry or organisation. Although the components of the ID model are the main areas of investigation, bias relating to specific learning contents and skills sections may apply. From the EUA perspective, it is important to consider that EUA 1+2 (i.e. learners and managers) come from a schooling background where classroom training is the only method they have been exposed to in the past. Although a programme of change management (relating to the “new way” of training) has been operationalised, this is still in progress as this research is concluded and reactions to the ID model may be biased due to entrenched habits and perceptions. In addition, the case organisation is constantly implementing new initiatives and directives,

which put both managers and the field force representatives under extreme pressure. This similarly may introduce a negative bias to the ID model due to time pressures on these employees to simultaneously implement new initiatives and undergo the training contained in the ID model.

The researcher, with organisation-specific input from MSD, was responsible for the development of the ID model. Care has to be taken so that an inherent desire for the ID model to work does not override data analysis. Specific care in the analysis will be given to the “negative voices”, and key participants of EUA 1, EUA 2 and MSD will be asked to assess interpretation of results. It is also important to note that the researcher comes from an interpretivist orientation, whereby experience of the ID model by participants is seen to be important in its evaluation of success.

The unstructured format of the qualitative data is a limitation that may cause misinterpretation of results due to selective observation and selection of data presented. However, the researcher, being fully aware of this, will pay particular attention to the “negative voices” and triangulation, member checking and critical self reflection of own assumptions are undertaken (as discussed in par. 5.3.4). While it would be unrealistic to suggest that this process will result in a complete suspension of personal expectations and judgement, it is felt that the controls and integrity measures implemented are adequate to minimise, as far as possible, researcher bias. Flyvberg (2004:428-429) presents the argument that the case study contains no greater partiality in terms of a researcher’s bias toward verification of pre-established ideas than other methods of inquiry. The difference is that the researcher’s ideas are directly engaged as subjective views are tested in-depth as they unfold during the course of the case study.

Regarding the ID model itself, the following limitations are noted:

- Since the ID model as put forward has only been applied in one organisation, comparisons cannot be made, therefore external transferability is not possible.
- Due to the qualitative, exploratory and interpretive nature of the research, the *degrees* of impact on behaviour and skills improvement are not measured. Also, ROI in terms of Level IV of the Kirkpatrick evaluation model is not evaluated as it falls outside the scope of this evaluative research.

- In order to test the ID model in other organisations, the ID model will have to be populated with learning contents specific to that (other) organisation.
- Further research, designed to measure the quantitative values of skills and knowledge improvement, is anticipated in future.

The limitations therefore relate to the research tactic and strategy; the researcher as human instrument of data collection; the ID model learning contents that are proprietary and confidential to the case organisation; and the evaluation of the ID model, which, due to the exploratory and interpretive nature of the research, does not extend to ROI measures and measures of the quantitative degrees of impact of the ID model.

Although summaries have been provided for each of the paragraphs in this section, a summary of the research programme is provided in par. 5.4.

5.3.8 Summary of research programme

In this section the research programme, i.e. the operationalisation of the research was described.

In this research, both quantitative methods (ID model assessment questionnaire for rating of the ID model components and a pre-post job-specific knowledge levels measurement) and qualitative methods (focus groups, in-depth interviews, observation and case organisation documentation) were applied within the case study tactic. The results from these methods are used to look at the case as a whole, and not as compartmentalised variables.

Quantitative methods consist of ID model assessment questionnaires that were emailed to participants in all regions, followed up by the physical delivery of questionnaires where required. For the ID model assessment questionnaire a sample of 44 percent of learners and 59 percent of managers is achieved. The LAMS pre-post job-specific knowledge levels measurement is taken at two points in time, to optimise this sample size by capitalising on organisational time-frames during which courses needed to be completed.

A total of 10 focus groups (five with EUA 1 and five with EUA 2) that was conducted and an open-ended format was followed wherein the researcher probed feelings and attitudes towards and opinions about the ID model and its impact on job-specific knowledge and

productive behaviour. Ongoing meetings with EUA 3 were held in which in-depth interviews were conducted. These ongoing meetings with EUA 3 (and other stakeholders in the organisation) also provided observational and organisational insights.

Purposive sampling was applied in this research to ensure that participants in the research were in fact familiar with the ID model in that they are either learners (on whom the ID model is applied) or managers (who administer and facilitate the ID model).

The data analysis for this research is approached from a quantitative and qualitative perspective. Quantitative data analysis included calculating the mean on all components of the ID model and extracting total pre and post measurements scores from LAMS. The qualitative data analysis was done by hand; since computer assisted software for qualitative data analysis was not available to the researcher. This qualitative analysis produced a broad inductive coding frame as a starting point that groups together themes and categories of data. From this broad inductive coding frame a focused coding scheme was produced to extract salient and descriptive themes.

Integrity measures and rigour of the research were demonstrated through triangulation, member checking, negative case analysis and an exposition of the researcher's assumptions and bias that may affect the research. It is believed that through the rigour and quality measures implemented in this research the limitations of the generalisability of case study research, the case itself and orientation of the researcher are minimised. These rigour and quality measures relate to, amongst others, use of participants' voices and availability of transcripts; a specified and described coding strategy; using multiple sources from the literature as rationale for the theories used; peer reviews; and by obtaining supervisory and expert input throughout the research. Documenting and reporting protocols were described and contained in transcripts of focus groups, notes from meetings and observation in "raw" format to illustrate and reflect the ongoing and evolving interpretation of the data. Data presentation will be contained in Chapter 6. The postulates of rigour in phenomenological sociology were incorporated into this research, namely through the postulate of logical consistency (establishment of a clear frame of reference and research methodology); the postulate of subjective interpretation (that allows the voice of participants to be heard); and the postulate of adequacy (in that the human action described through the research makes common sense and is recognised by social "actors").

Apart from the integrity measures, rigour and quality measures and specified documenting and reporting protocols, the research ethics for this research were described that illustrate the protection and agreement of participants and hold the researcher accountable for standards of conduct and the use of the data. Notwithstanding this, limitations inherent in the research were highlighted, relating to the generalisability of case study research; the case itself; the EUAs, the orientation of the researcher; and the ID model itself. It is however argued that knowledge is gained in a variety of ways, not only through generalisation; the case may be seen to be representative of other similar case organisations and thus transferability may be a more pertinent description.

The EUAs' limitation was seen to be contained in historical schooling methods that may impact on learners' and managers' reaction to "new" training practices such as evident in the ID model. Regarding researcher bias it is argued that case study research contains no greater partiality in the verification of ideas than other research tactics and methods.

The limitations regarding the ID model itself centre on the learning contents that determine the implementation of the ID model in the case organisation only, so that further implementation of the ID model in other organisations will have to be preceded by the development of organisation-specific learning contents. The exploratory and interpretive purpose of the research excludes ROI measures and measures of the quantitative degrees of impact of the ID model. Notwithstanding the limitations, it is argued that through the choice of research methods, the sampling frame and sampling procedure; description of the data analysis; documenting and reporting protocols; research ethics and the integrity measures applied and rigour demonstrated, this research provides rich, idiographic data providing comprehensive insight and understanding of a real-life context in line with the exploratory and interpretive purpose of the research.

In this chapter, the research methodology as contained in the procedural framework within which the research was conducted was described. The procedural framework was defined as consisting of the research approach that outlined the research aim, purpose and philosophical orientation; and the research programme that described the operationalisation of the research.

Chapter 6 presents the research results, analysis and interpretation.

CHAPTER 6

RESEARCH RESULTS, ANALYSIS AND INTERPRETATION

6.1 INTRODUCTION

This chapter contains the results, analysis and interpretation of the research, the contents of which are reflected in Figure 6.1. The research results are presented by reflecting the results obtained from the pilot study and in-field observation (par. 6.2.1); the results obtained from the quantitative methods (par. 6.2.2) and the results from the qualitative methods (par. 6.2.3). Analysis and interpretation of the results are offered in par. 6.3 and a summary of research results, analysis and interpretation is presented in par. 6.4.

6.2 RESEARCH RESULTS

6.2.1 Pilot study and observation during testing

6.2.1.1 Introduction to pilot study and observation during testing

A pilot study consisting of eight field force representatives (learners) and four managers was conducted in November 2004 to obtain preliminary topline feedback on the ID model. The main purpose of the pilot study was to ascertain if the ID model may be implemented organisation-wide, or if problems existed to prevent the roll-out. As such, the pilot study was not deemed to be part of the formal and planned empirical investigation of this research. However, initial insights were gleaned and as such, results of the pilot study are presented in this section.

Also, during a testing phase of the ID model at the offices of the researcher observations were made about the reaction of learners to the ID model, which was subsequently discussed with participants (see Appendix 11).

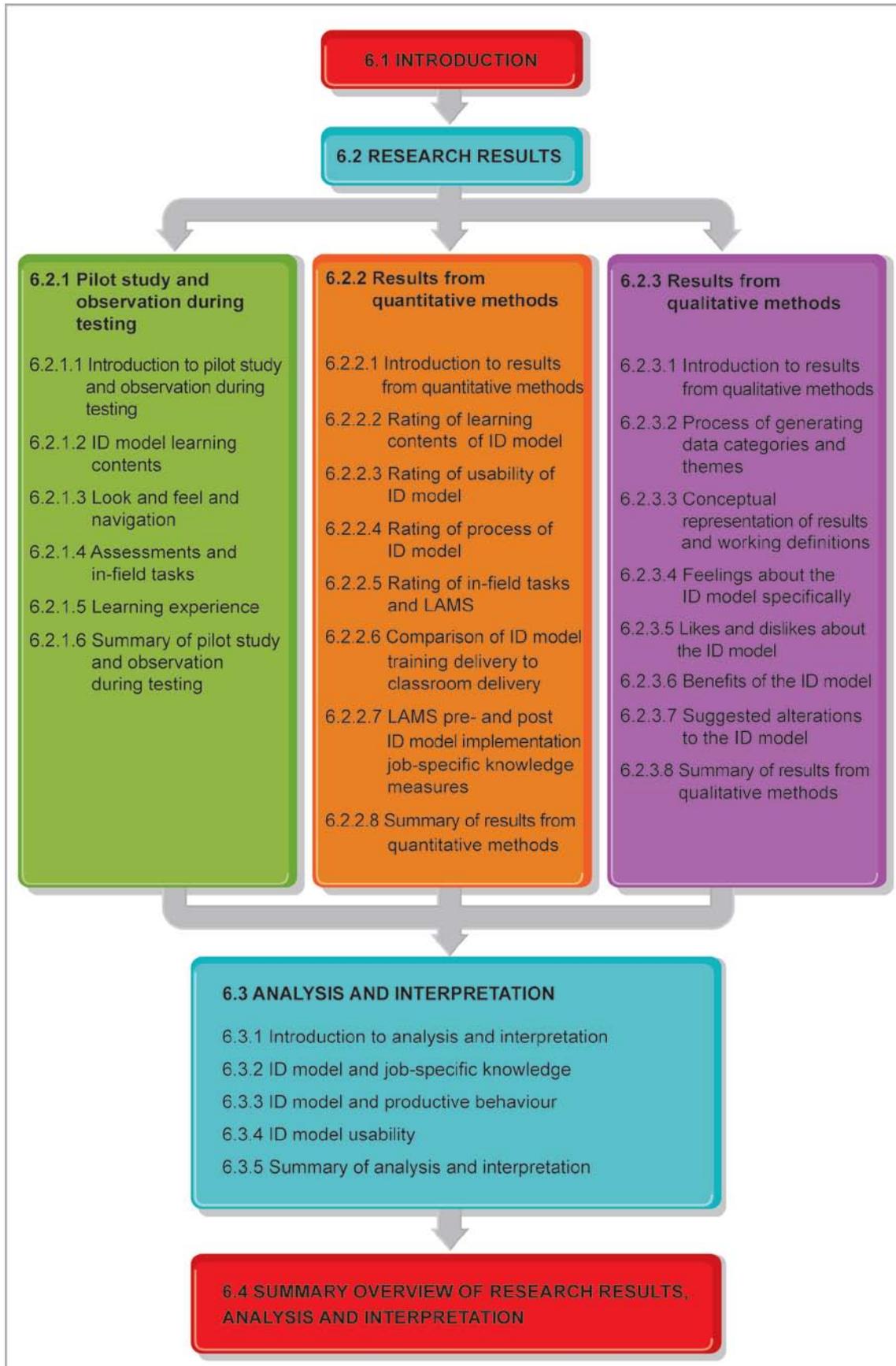


Figure 6.1: Contents of Chapter 6

For the pilot study, participants were asked to rate the ID model on a number of components, using a 3-point scale, whereby A = some major improvements needed; B = some minor improvements needed; and C = no improvements needed (see Appendix 2). The preliminary feedback as obtained from the questionnaire was treated as exploratory and investigative and participants were asked to provide explanatory comments, describing or justifying the ratings provided.

The main results of the pilot study and observation during testing are presented below as they pertain to the ID model learning contents (par. 6.2.1.2); look and feel and navigation (par. 6.2.1.3); assessments and in-field tasks (par. 6.2.1.4); and learning experience (par. 6.2.1.5). A summary of the pilot study and observation during testing is offered in par. 6.2.1.6.

6.2.1.2 ID model learning contents

Participants felt the contents structure and flow of the learning contents were logical and understandable, with enough information to ensure understanding of the job-specific knowledge topic areas. The use of a combination of visuals and text was seen to enhance understanding. Participants liked the learning contents as it was felt to be fresh and difficult. Participants were positive about the contribution of the ID model to increase job-specific knowledge that helped them perform better in their jobs. General comments indicated an overall positive response to the ID model, viz. *"... very professional approach, significant and comprehensive,"* with a positive spin-off on strategic insight and behaviour *"... it is made clearer as to how the theory section correlates to the work we perform on a daily basis"*, and *"comprehensive explanations were given in order for me to understand the significance of our vision, mission"*.

6.2.1.3 Look and feel and navigation

The look and feel (i.e. design component) of the way in which the learning contents were presented on the electronic devices were seen to need no improvement, and the navigation through the various modules was seen to be quick and simple. Participants liked to be able to use the navigation to move both forwards and backwards through the learning contents. The look and feel and navigation were seen to be innovative and easy-to-use, although some mention was made that additional PC literacy training would be useful.

6.2.1.4 Assessments and in-field tasks

Assessments (on LAMS) were judged to test the knowledge of learners and no improvement was deemed necessary. In-field tasks were felt to be appropriate and to improve learning, instructions for the in-field tasks were considered to be clear.

Initial comments from the pilot study indicated that the contents of the in-field tasks, made a contribution to productive behaviour – an objective for the ID model as specified by the organisation (see Figure 4.3i), as illustrated by the following comment.

“By completing the tasks successfully, it made me more confident about my work, the organisation and our industry.”

6.2.1.5 Learning experience

Participants rated the learning experience as positive and felt progress of learning was assisted by knowing their individual learning styles. The various modules were seen to be appropriate and reaction to self-paced learning positive. Participants also felt that using various ways to learn, e.g. in-field tasks, with manager inputs, helped them to learn better.

“The best way to become more knowledgeable is through self pace (sic) learning because you are not under pressure to keep up with the rest of the group. There is no doubt about it, knowledge retention is far greater”.

6.2.1.6 Summary of pilot study and observation during testing

The pilot study and observation indicated a positive reaction to the ID model and its contribution to job-specific knowledge and application thereof in productive behaviour. Feedback regarding the learning contents indicated ease-of-use and relevance regarding job-specific knowledge. The look and feel and navigation were seen to enhance learning and instructions regarding the in-field tasks were clear. Reaction to the learning experience indicated that the ID model offered effective learning and learning was judged to be appropriate.

However, the pilot study was based on a small sample and its main purpose was to get a feel for initial reactions and responses to the ID model to determine if the ID model may be implemented throughout the case organisation. Due to the positive feedback about the ID model from the pilot study and observation during testing, the ID model was implemented in the case organisation as a whole and learners started to work their way

through the courses. A formal assessment of the ID model was conducted in September 2005, by applying the ID model assessment questionnaire (see Appendix 5), the results of which form part of the results from the quantitative methods as discussed in par. 6.2.2.

6.2.2 Results from quantitative methods

6.2.2.1 Introduction to results from quantitative methods

The purpose of applying the ID model assessment questionnaire in the research was to obtain a measurement on the way the individual components of the ID model were rated by both learners and managers. The methods employed are discussed in par. 5.3.1.2 on quantitative methods and examples of the ID model assessment questionnaires are available in Appendix 6.

A number of protocols were followed in calculation of the data contained in this section. Firstly, the mean was based on the total sample of 203 (i.e. learners and managers who completed the questionnaire) at the time of applying the ID model assessment questionnaire i.e. September 2005. Where a particular component of the ID model received a significantly different rating from managers and learners, this will be highlighted as such. Secondly, non-responses on the rating of a component were not calculated as a zero (0) rating out of 4, rather, calculations were done on the decreased sample size. Thirdly, there were a number of questions on the questionnaire (see Appendix 5: the section relating to Manager Review G, H, and I) pertinent to managers and not learners. These manager-specific results will be discussed separately and responses were calculated on the total manager sample i.e. 36 out of 61, 59 percent of the manager population at the time of applying the ID model assessment questionnaire. The mean reflected for the main components of the ID model were calculated as the average of the means for the underlying descriptors of each main component.

Although the mean reflected an average rating (i.e. a quantitative measure) on all components and underlying descriptors of the ID model, the results were interpreted from an exploratory, interpretive perspective to gain a holistic insight into reactions, which would be further enlightened by the results from the qualitative methods (par. 6.2.3).

This section reports on the ratings that were given to the learning contents of the ID model (par. 6.2.2.2); usability of the ID model (par. 6.2.2.3); process of the ID model (par. 6.2.2.4); in-field tasks and LAMS (par. 6.2.2.5); a comparison of ID model training delivery

to classroom delivery (6.2.2.6); LAMS pre and post ID model implementation job-specific knowledge measures (par. 6.2.2.7); and a summary of the results from quantitative methods (par. 6.2.2.8).

6.2.2.2 Rating of learning contents of ID model

Table 6.1 reflects the ratings obtained on the learning contents of the ID model. The contents overall rated 3.36; text on visuals/written contents rated 3.31 and visual contents/imagery/pictures rated 3.23. When considering underlying descriptors for each main component, it was evident that the contents overall rated positively on being relevant to the job at hand (mean = 3.51), whilst also being easy to understand (mean = 3.31). “Interesting” achieved a 3.26 rating out of 4.

Table 6.1: Rating of learning contents of ID model

Main contents components	Component mean	Underlying descriptors	Mean (out of 4)
Contents overall	3.36	Ease of understanding	3.31
		Relevancy to my job	3.51
		Interesting	3.26
Text on visuals/written contents	3.31	Ease of understanding	3.28
		Enhances learning	3.33
		Gives clear information	3.33
Visual contents/imagery/pictures	3.23	Explains contents further	3.16
		Enhances information given and learning	3.24
		Interesting	3.20
		Relevant	3.30

When considering the ratings for text on visuals/written contents, the underlying descriptors generally indicated effectiveness as “ease of understanding” obtained 3.28; and “enhances information given and learning” each obtained a 3.33 rating.

When considering the visual contents/imagery/pictures, “explains contents further” rated at 3.16; “enhances information given on learning” at 3.24; and “interesting and relevant” at 3.20 and 3.30 respectively.

Relative to the other learning contents components measured, the underlying descriptor of “explains content further” was relatively low at 3.16 and “interesting” at 3.20. This may indicate that users were still largely depending on the text and not interpreting or using the visual learning tools as well.

The learning contents of the ID model were rated positively overall, and, if anything, it may be concluded that participants may still have had to get used to the visual learning language. However, the ratings showed that the learning contents were easy to understand, had a relevancy to the learners’ jobs and were interesting. From the point of view of this research, the high rating on “relevancy to my job” is important, since that relates to job-specific behaviour which feeds into organisational capabilities and core competencies.

In addition, the positive ratings on “enhances learning” for the written component of the ID model and “enhances information given and learning” for the visual component are significant for this study, since they relate to the ability of the ID model to impact on knowledge creation – a level II measurement in Kirkpatrick’s (1996) evaluation model.

6.2.2.3 Rating of usability of ID model

This section relates to the ease of use and instructions on how to use the various components that have to do with usability of the ID model. Table 6.2 reflects these results.

Table 6.2: Rating of usability of ID model

Main component	Component mean	Underlying descriptors	Mean (out of 4)
Usability	2.98	Ease of finding the information I want or need	2.87
		Ease of finding relevant tasks to contents sections	2.95
		Instructions on how to use the programme	2.98
		Ease of using the programme	3.07
		Ease of finding way around the learning material	3.03

From these results it is evident that users still had to come to grips with the usability of the programme. “Ease of finding the information I want or need” was rated relatively low at 2.87; “ease of finding relevant tasks to contents sections” at 2.95; “instructions on how to use the programme” at 2.98. Although the ratings were not negative, they were

comparatively low, with respondents indicating they had a degree of problems with finding the information they wanted, finding the in-field tasks relevant to contents sections and the instructions on how to use the programme. Usability of the ID model will be investigated in more depth in the qualitative methods to allow for an insight into and understanding of this comparatively lower rating.

These results should also be seen against the background of the computer literacy levels of the learner audience (see Table 4.1). Learners were not particularly computer literate at the time of the research to enable them comfortably find their way through a new programme. Although “ease of using the programme” (mean = 3.07) and “ease of finding my way around the learning material” (mean = 3.03) obtained positive ratings, the main component of usability nevertheless rated at a comparatively lower level when compared to the learning contents components.

6.2.2.4 Rating of process of ID model

Table 6.3 reflects the results of ratings on the process followed in the ID model – from the six steps to be followed (see Figure 4.7) throughout the process of pre-assessment, accessing contents to completing in-field tasks, to completion of LAMS assessments and sign-off on courses.

Table 6.3: Rating of process of ID model

Main component	Component mean	Underlying descriptors	Mean (out of 4)
Process	3.09	Clarity of six steps to be followed	3.05
		Ease to understand how overall model works	3.10
		Ease of getting contents installed	3.05
		Ease of accessing LAMS for assessments	2.94
		Ease of submitting in-field tasks and getting sign-off	3.31

Process overall attained a rating of 3.09, informed by “clarity of six steps to be followed” (mean = 3.05); “ease to understand how overall model works” (mean = 3.10); “ease of getting contents installed” (mean = 3.05); “ease of accessing LAMS for assessments” (mean = 2.94) and “ease of submitting in-field tasks and getting sign-off (mean = 3.31).

Overall, it seemed evident that the process was easy to follow and use, with perhaps a slight exception in the perceived ease of accessing the LAMS for completion of assessments. This is understandable since the LAMS assessments needed to be completed through the manager's PC and the time and availability may be an issue or problematic.

When considering the process of the ID model, there are a number of components that pertain specifically to the managers and their role in the facilitation of the ID model. These components concern the process surrounding in-field tasks and how the managers experienced it; the process surrounding assessments and LAMS and how the managers experienced it; and, although not a direct process, the FGs and how the managers experienced it. Table 6.4 reflects these ratings.

Table 6.4: Rating of manager-specific components on process of ID model

Main component	Component mean	Underlying descriptors	Mean (out of 4)
In-field tasks process	3.45	Ease of receiving in-field tasks submitted	3.64
		Ease of providing feedback on in-field tasks	3.61
		Process of providing sign-off	3.94
		Opportunities for facilitation inputs to my team	2.61
Assessments and LAMS process	3.26	Process of gaining access to LAMS	3.58
		Availability of time on my PC for my team	2.83
		Time for log-on to and loading of LAMS	3.31
		Ease of drawing reports on my team	3.33
FGs	3.61	Ease of using/understanding FGs	3.61
		Guidelines provided for feedback	3.62
		Completeness of FGs to provide me with all information required	3.61

Overall, the managers rated the in-field tasks process positively at 3.45. From the ratings on the in-field tasks process, managers indicated that it was easy to receive the tasks submitted by the learners (mean = 3.94), and providing feedback was also seen to be easy (mean = 3.61). The process of signing off on tasks was rated very positively (mean = 3.94). However, from the results, managers indicated that the opportunities for facilitation inputs may be lacking (mean = 2.61). This aspect will be explored during the focus groups with the managers to try and understand the lower rating.

Overall, the assessments and LAMS process rated 3.26. The managers rated the process of gaining access to LAMS positively (mean = 3.58) in contrast with the relatively low rating given by learners (mean = 2.94 see Table 6.3).

This may be understood in light of the fact that the time when LAMS was made available for learners to do their assessments was dictated by the managers, and learners could exercise no control over times convenient for them. Managers rated “time for log-on to and loading of LAMS” at 3.31 and “ease of drawing reports on my team” at 3.33 which may indicate that “gaining access” was seen to be less problematic by managers than by the learners.

Overall managers rate the FGs positively at 3.61, also in terms of using it (mean = 3.61), the “guidelines provided for feedback” (mean = 3.62) and its completeness to provide all the information required for giving feedback and doing assessment of learner performance (mean = 3.61).

From the ratings of the manager-specific components of the ID model, it seemed that managers experienced the ID model and their roles in it positively.

6.2.2.5 Rating of in-field tasks and LAMS

Table 6.5 reflects the rating by learners on the submission and completion of in-field tasks and the process of gaining access to and completion of assessments on LAMS.

Table 6.5: Rating of in-field tasks and LAMS assessment

Main component	Component mean	Underlying descriptors	Mean (out of 4)
In-field tasks	3.20	Ease of completing in-field tasks	3.15
		Ease of submitting in-field tasks	3.19
		Ease of obtaining sign-off	3.25
		Ease of obtaining coaching inputs	3.20
LAMS	3.15	Ease of arranging via manager's PC	3.14
		Ease of getting access	2.99
		Format of assessments	3.13
		Obtaining scores	3.32

On average, in-field tasks were rated at 3.20, with LAMS at 3.15. With regards to the underlying descriptors of in-field tasks, “ease of completing in-field tasks” rated 3.15; “ease of submitting in-field tasks” rated 3.19; “ease of obtaining sign-off” rated 3.25; and “ease of obtaining coaching inputs” obtained 3.20. Overall, the process involved in completing, submitting, obtaining sign-off and obtaining manager inputs on in-field tasks was rated positively.

For LAMS, “ease of arranging time via manager’s PC” rated 3.14; “ease of getting access” rated 2.99; “format of assessments” rated 3.13 and “obtaining scores” rated 3.32. There seemed to be a discrepancy in the ratings when LAMS was considered as part of the process of the ID model (see Table 6.3) and when LAMS specifically and its constituent underlying descriptors were analysed. In the “process” LAMS rated at a relatively low 2.94, whilst when looking at its constituent underlying descriptors’ and the average rating it emerged at 3.15. However, the explanation is possibly to be found in the corresponding lower rating in the constituent underlying descriptor rating of 2.99 for “ease of getting access”. It seems evident that the process of getting access to LAMS may be seen to be problematic. Again, this needed further probing in the focus groups to provide insight and understanding.

6.2.2.6 Comparison of ID model training delivery to classroom delivery

Participants were asked to rate the ID model compared to classroom delivery as being 1 = worse, 2 = the same, 3 = somewhat better, 4 = a great improvement, and substantiation had to be provided for the rating. The mean score obtained was 3.48 (out of 4), which indicated that participants saw the ID model as a great improvement over classroom delivery of training material. Reasons supplied (through an open-ended question) mainly focused on ease of use; being able to do the learning in own time and at own pace which enhanced learning and increased job-specific knowledge; constant access to learning material was seen to be conducive to ongoing learning; on-the-job application (through the in-field tasks) of learning contents increased both functional and skills-based performance; the modular approach was seen to be good for building a thorough understanding; and less time was taken out of the working day.

The rating of the components of the ID model provided one of the quantitative data inputs for the research, to gain insight into the various components and where there may be opportunities to improve the ID model. A further quantitative data input is the pre-post job-specific knowledge measurement levels from LAMS, intended to show the impact of the

ID model on job-specific knowledge. LAMS pre- and post ID model job-specific knowledge measures are presented in par. 6.2.2.7.

6.2.2.7 LAMS pre and post ID model implementation job-specific knowledge measures

Table 6.6 reflects the levels of job-specific knowledge levels as measured before completing courses in the ID model (i.e. pre-measure) and again upon completion (i.e. post-measure). These measures were taken at two points in time (i.e. October 2006 and August 2007) as dictated by organisational requirements.

Table 6.6: LAMS pre and post ID model implementation job-specific knowledge measures

Measure 1 (October 2006)				
Courses	N (Total = 318)	Pre-measure Average score %	Post-measure Average score %	Increase or decrease
Introductory skills range	304	85	91	+6
Job-specific skills range	288	87.5	94.5	+7
Skills range 1	250	81	91.5	+10.5
Skills range 2	15	71	90	+18
Skills range 3	Not completed by any learners			
Measure 2 (August 2007)				
Courses	N	Pre-measure Average score %	Post-measure Average score %	Increase or decrease
Introductory skills range		Considered complete		
Job-specific skills range	302	86.3	95.1	+8.8
Skills range 1	295	86	93.8	+7.8
Skills range 2	38	80	94.0	+14
Skills range 3	21	73	92.5	+19.5

A number of explanatory comments apply to Table 6.6. One, the measures were taken at specific points in time, which meant that not all learners had been through all the courses. Two, completion of up to skills range 1 only was compulsory, which meant that the number of learners who completed skills ranges 2 and 3 would drop off considerably as

not all learners were motivated to complete these skills ranges to, for example, get promotion. Three, the pre-measure was the levels of job-specific knowledge learners had before embarking on the learning contained in the ID model. The post-measure was the levels of job-specific knowledge of the learners on completion of the specific skills range or course in the ID model. These measures are significant for this research in that they provide the impact of the ID model on increasing or decreasing job-specific knowledge – one of the key indicators of success for the ID model (see par. 1.1).

At measure 1, there was a +6 increase in job-specific knowledge pre and post ID model implementation for the introductory skills range; a +7 increase for the job-specific skills range; and a +10.5 increase for skills range 1. At the time of this measure only 15 learners had completed skills range 2 and a +18 increase in job-specific knowledge was shown.

At measure 2, with more learners having completed the various courses, there was a +8.8 increase in the job-specific knowledge in the specific skills range, a +7.8 percent in skills range 1, a +14 in skills range 2 and a +19.5 in skills range 3, albeit that the number of learners who had completed skills ranges 2 and 3 was still low, due to the compulsory skills range completion being skills range 1.

These increases were deemed as being satisfactory by stakeholders at the case organisation, as it showed that the ID model did bring about measurable increases in job-specific knowledge, thus addressing one of its main aims.

6.2.2.8 Summary of results from quantitative methods

The overall results from the quantitative methods indicated that the ID model obtained highly positive ratings on most of its components.

The learning contents of the ID model were rated positively in terms of its ease of understanding, relevancy to the job at hand and being interesting. The text or written contents were rated positively on ease of understanding, enhancing learning and giving clear information. Similarly, the visual contents or imagery were rated positively on explaining the learning contents further, enhancing both the information given and learning and being interesting and relevant.

At slightly lower levels, usability of the ID model was also rated positively. When considering that learners' computer literacy levels were, at the time of the research, low to adequate, it became understandable that learners rated the ease of finding information

and ease of finding in-field tasks relevant to a particular section at a relatively lower level than the other underlying descriptors of usability. Although not a negative rating, “instructions on how to use the programme” was also at a lower level.

The process of the ID model and its underlying descriptors relating to the clarity of the six steps to be followed, the ease of understanding how the ID model works, the ease of getting the contents installed and the ease of submitting in-field tasks and getting sign-off all rated positively. A slightly lower rating was obtained for “ease of accessing LAMS for assessments” which may be explained by the fact that access to LAMS for the learners was via the managers’ PCs and learners were thus dependent on time availability from the managers.

When considering the components of the ID model that relate to the managers specifically, positive ratings were obtained for how the process of in-field tasks and its underlying descriptors was rated, when referring to the “ease of receiving in-field tasks”, “providing feedback thereon” and “signing off the in-field tasks”. “Opportunities for facilitation inputs to my team” rated at a relatively lower level and may be understood in light of timing pressures on managers. The process relating to assessments and LAMS and its underlying descriptors was rated positively, with the exception of “availability of time on my PC for my team”, which tied back to learners’ relatively lower rating on this component. The FGs and underlying descriptors all rated positively by managers - so the FGs were rated as easy to understand, providing good guidelines for feedback and being complete to provide managers with all the information managers needed.

The in-field tasks and LAMS and their underlying descriptors were rated positively, with the exception, again, of “ease of getting access” relating to LAMS. For the in-field tasks ease of completing, submitting and obtaining sign-off was rated positively, as was the ease of obtaining facilitation (coaching) inputs. For LAMS the format of assessments and obtaining scores was positive, as was “ease of arranging via manager’s PC”. This seems at odds with other results, however, “ease of getting access” was rated at a relatively lower level. It may therefore be surmised that while it might be easy to arranging the LAMS access, it might not always be easy for learners to actually get the time to get the access via the manager’s PC.

Overall, participants (both learners and managers) saw the ID model training delivery as an improvement over classroom delivery of training material.

When considering the LAMS pre and post ID model implementation job-specific knowledge measures, increases in levels of job-specific knowledge levels were seen for all courses in the ID model, at both points in time where the measures had been taken.

The measured increases in job-specific knowledge pre and post ID model implementation are noteworthy for this research, since job-specific knowledge is seen as one of the proxies for improving productive behaviour that ultimately influences organisational capabilities and core competencies for SCA. The impact of the ID model on productive behaviour was not directly measured in the rating of the components of the ID model, as it was seen to be a qualitative property to be assessed through observation and an interpretation of attitudes, feelings and opinions relating to reactions to the ID model, as explored in the qualitative methods. The results from the qualitative methods are discussed next in par. 6.2.3.

6.2.3 Results from qualitative methods

6.2.3.1 Introduction to results from qualitative methods

This section contains the qualitative results of the research. It uses all the data inputs obtained from the researcher's field notes (Appendix 6); the transcripts of the focus groups (Appendix 7); self-completion questionnaires used prior to commencement of discussion in the focus groups (Appendix 8); meetings notes; (Appendix 10); extract from organisation post implementation review (Appendix 12); and ongoing interpretation and observation during the course of the fieldwork as is the nature of qualitative research.

A number of important protocols are followed in the presentation, analysis and interpretation of the qualitative results. Firstly, quotes are largely verbatim and selected because they represented either an overall, generally held feeling; or an illustrative view of an "outlier" opinion or reaction that needed to be considered. This was to ensure that all voices were heard in consideration of the results. Secondly, only where differences of opinions were found in the views of managers and learners will these be pointed out. Thus, the results and ongoing in-field interpretation are reported on as a whole, except for where differences between managers and learners are pertinent to either the ID model itself, or the ramifications thereof on the impact on job-specific knowledge and productive behaviour. Thirdly, no differentiation was made between the comments as they pertained to demographic criteria of participants, since these were not pertinent to the results. The demographics reflected in Table 4.1 were included in the research to illustrate that

participants were representative of a bigger and whole of the workforce in both the case organisation and in South African organisational context. However, in instances where a demographic criterium might play a role in the results, this will be pointed out specifically. Fourthly, where more than one quote was used pertaining to a particular point, these quotes were from separate participants, not the same person. Fifth, full quotes were reflected as such, whereas part quotes were interwoven into the presentation and discussion of results, but will always be in inverted commas, e.g. although time is an issue “*you have to grin and bear it*”. The latter part is from the words of participants, while the former is part of the presentation of results. Lastly, interpretation of the data was interwoven in the presentation of the results, as this is the hallmark of dealing with qualitative data where the roles of the researcher as coder, analyser and interpreter cannot be separated. The results from the qualitative methods are presented through a description of the process of generating data categories and themes (par. 6.2.3.2); a conceptual representation of results and working definitions (par. 6.2.3.3); describing feelings about the ID model specifically (par. 6.2.3.4); likes about the ID model (par. 6.2.3.5); perceived benefits of the ID model (par. 6.2.3.6); dislikes about the ID model and suggested alterations to the ID model (par. 6.2.3.8). A summary of results from the qualitative methods are presented in par. 6.2.3.9.

6.2.3.2 Process of generating data categories and themes

This description of the process of generating data categories and themes could only be offered once the focus groups and transcripts were completed.

The starting point for generating data categories and themes was an immersion in the data, which involves listening to the tape recordings again, and then going through all the data inputs (see par. 6.2.3.1). The data were, at this point, considered in a contextual (i.e. what was said and in what way) and thematic (i.e. what does it relate to) sense. Following this a “picture” of the data was compiled as a broad, inductive coding frame (see Appendix 13) by using the transcripts as the basis.

In this broad, inductive coding frame data were grouped together under various themes that were seen to tell the story of how participants described the ID model and their reactions to and feelings about it. In essence, the main categories of responses were arranged under groups such as likes and dislikes about the ID model, feelings about and insights into the ID model, perceived benefits of the ID model and suggested alterations to

the ID model. The broad, inductive coding frame included all comments from participants as grouped together under main, overarching themes.

The second step involved scrutinising the data in a more specific and focused manner (see Appendix 14), by identifying sub-themes within the broad, overall data categories and themes that related specifically to the ID model *per se*, for example a sub-theme relating to “classroom vs new way of training”, or a sub-theme relating to “self development/upskilling”. Each of these sub-themes was then allocated a specific symbol, in a specific colour.

The third step involved generating data categories and themes comprised of going through the transcripts and other data inputs and allocating a symbol to each individual comment. Comments and data inputs that could not fit under a specific data category, or get allocated a specific symbol were marked as such for separate consideration.

The fourth step involved consideration of causal and explanatory events, comments and issues and understanding the interrelationship and interdependency of categories of data, to be reflected in an overall conceptual representation of results.

Final steps involved getting clear working definitions of each data category and theme and compiling a conceptual representation of results to start making interpretive sense of the data. The conceptual representation of results and working definitions are presented in par. 6.2.3.3.

6.2.3.3 Conceptual representation of results and working definitions

Figure 6.2 represents the conceptual representation of the qualitative results and provides the high-level overall grouping of data categories and themes, to enable working definitions to be put to each data category and theme.

To make sense of the data as reflected in the conceptual representation, working definitions were compiled to describe each main data category and theme.

- a) *ID model specifically* included all comments pertaining to the ID model *per se*, whether it was learning contents-related; related to the ID philosophy of self-learning in own time; related to elements within the ID model such as LAMS, or the VARK learning styles inventory; or related to any of the specific ID model components rated

quantitatively (see par. 6.2.2). In addition, all components of the ID model which were not a specific - for example how the ID model was seen to perform, what problems there were with it - were included in this coding definition.

- b) *Likes and dislikes* related to feelings about the ID model; reactions to it; and how participants described their experience of the ID model. Likes included all thoughts, reactions and comments specifically mentioned in context of “*I like*” or “*it is good that ...*”. Dislikes included all thoughts, reactions and comments mentioned in context of “*I do not like ...*” or “*we have trouble with ...*”.

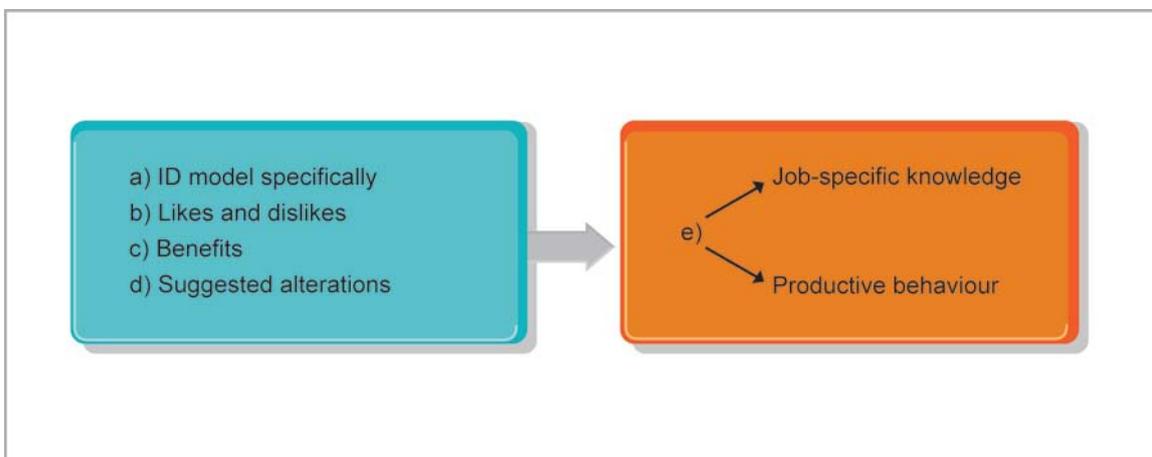


Figure 6.2: Conceptual presentation of qualitative results

Source: Researcher’s representation based on data categories and themes

- c) *Benefits* were all thoughts, comments and observations which described how and why the ID model provided a benefit to either the individual learner, or the organisation at large.

The “likes” and “benefits” data categories included comments describing the perceived advantages of the ID model which may be seen to be of strategic benefit in that it provided learners with skills, insight and/or the improved ability to apply job-specific knowledge.

- d) *Suggested alterations* included all results related to suggestions on how the ID model could be improved and altered. This data category included themes relating to operational issues and change management and acceptance.

- e) *Job-specific knowledge and productive behaviour* included all results that have a bearing on the impact of the ID model on job-specific knowledge and insight, and

productive behaviour, i.e. broadly described as “working better”. Since this data category involves analysis and interpretation, it is presented in par. 6.3, specifically par. 6.3.2 (ID model and job-specific knowledge), and par. 6.3.3 (ID model and productive behaviour).

The conceptual presentation reflecting the data categories and themes was used as the framework for the presentation of the qualitative results, as discussed in par. 6.2.3.4 to par. 6.2.3.7 following.

6.2.3.4 Feelings about the ID model specifically

Participants were clear on their feelings about the ID model. They saw the contents as relevant and applicable to their daily tasks, comprehensive in that it covers all aspects of their jobs and it is presented in an easy-to-use and easy-to-understand format.

“The contents is cool. It is easy to work your way through and you improve your practical on-the-job skills”.

From the perspective of the visual element of the contents, most participants liked the visuals, and those who had a visual learning style used the visuals to further enhance their understanding of the contents.

“The pictures explain to you. If you look at them you know the story and remember it”. Although not all the participants used the visuals in their learning, they saw it as being fresh and innovative. Only one participant felt *“... the pictures are child-like and I don’t like that”.*

Participants particularly liked the fact that the ID model enabled them to learn at their own pace, in their own time. The self-learning aspect of the ID model was positive, however, it emerged in other aspects of the discussions that this was also seen to be problematic.

“We have too much to do. Our jobs are pressurised. I don’t always have the time to learn, even though I know I must. I use my private time but don’t get paid for it”.

The issue about availability of time was a recurring theme and will be elaborated on dislikes (par. 6.2.3.7) and suggested improvements to the ID model (par. 6.2.3.8).

With regard to specific components of the ID model, both the VARK learning styles inventory and LAMS were discussed and participants felt that, although the application of the VARK learning styles inventory was initially beneficial, more guidance was needed. Managers felt that they required extra material to enable them to tailor-make their facilitation sessions with learners according to each learner's style, but again time was seen to be an issue.

"I'd like to [...facilitate according to learning styles] but where do I get the time to look at and use extra information".

Learners felt more attention should be given to their individual styles, both from a facilitation input perspective and the way LAMS assessments were done. Some participants were unsure of *"why VARK was done"*.

As a possible explanation of this lack of understanding, it was evident from the discussions, that although there was communication about the development and implementation of the ID model and the reasons for the change in training practices within the organisation, this was not permeating in the desired levels of detail to all the employees involved. A greater degree of change management in the change-over from traditional, classroom-based, to ID model driven training was seen to be required.

With regards to LAMS, three salient points emerged. Firstly, learners felt that, since LAMS only measured knowledge in one way, i.e. through multiple choice questions, not everyone was able to fully demonstrate their understanding of the learning contents. However, both managers and learners (those who did not agree with the above-held view) felt that *"... knowledge testing through the tests is questionable, but what you do is apply that knowledge unconsciously. You do it when you do your tasks, and you do it in future, so you have learnt more"*.

Secondly, since LAMS in its application at the time of the qualitative research consisted of a fixed battery of questions, some participants indicated a preference for a bigger battery of questions which could be randomised for each assessment.

"It would be better to rotate more questions. Sometimes the guys can remember, or give you the answers".

This may be relevant to the levels of pre-post knowledge scores obtained (see Table 6.6), whereby knowledge improvement pre and post ID model application showed improvement. However, generally LAMS was seen to serve its purpose for most participants and it was felt that LAMS adequately “...tests what you must know”.

Thirdly, it was felt that some of the questions contained in the LAMS were ambiguous and could be answered (correctly) in a number of ways. This was disputed by other participants. However, this finding needed consideration when looking at suggestions on how to improve the ID model.

In respect of perceptions about the performance of the ID model, participants were unanimous in their preference of “*this way*” of learning and training above classroom delivery. It was felt that “*this is the way to go*”, it is “*the new way*”, despite some participants (older, white, male) hankering after “*the old days when we used to go away on training*”. It was clear that participants understood and were comfortable with the changed strategy for training and believed the ID model to offer more benefits than disadvantages for learning.

“This is a practical way of getting theoretical and on-the-job knowledge, then go and do it. It empowers you to do your daily tasks”.

“The learning culture in the organisation is stimulated, it gives us an edge in the market”.

“For new people and the future, this is the way to go so they (... the field force representatives) are market-ready quickly”. (Manager comment).

Participants mentioned the on-the-job application of job-specific tasks (through the in-field tasks in the ID model) as being particularly important, as it increased “*correct ways of doing things*” and “*being able to do my job better*” i.e. productive behaviour.

“You know what to do, you apply it, you keep doing it”.

Overall in the discussions, participants described the ID model as “*very user-friendly*” with a “*simple and easy to understand design*”. In the quantitative results the rating of the usability of the ID model (Table 6.2) was relatively low, so these comments may seem

contradictory. This may be explained by the time between the quantitative and qualitative phases of the research. By the time the qualitative phase was conducted, participants not only had more time to go through the learning (and therefore navigation and usability) of the ID model, but in addition some computer-literacy training had also been implemented in the organisation. This may explain the difference between the results of the quantitative phase (relative low ratings on some usability underlying descriptors) and the positive reactions recorded through the qualitative methods.

The above comments adequately illustrate that the ID model was seen to work, and was preferred above classroom delivery.

Closely related to results on the ID model specifically, were the likes and dislikes (about the ID model) reported by participants. This is discussed in the next section, par. 6.2.3.5.

6.2.3.5 Likes and dislikes about the ID model

Generally, the likes of participants centred around four themes, discussed hereunder.

First theme: participants liked the practical, on-the-job skills and job-specific knowledge imparted through the ID model, as this was seen to improve how daily tasks on-the-job were completed. In addition, since a bigger understanding was obtained on the “*why*” of doing certain things, participants felt more inclined to “*do it that way*”. Also, applying the theory in practice through the in-field tasks was experienced positively, judged to “*show you how to apply your knowledge*” and seen to enhance the entrenching of “*best practices*”. This was important in the evaluation of the ID model, as it showed a perceived improvement in performance impacting on productive behaviour.

Second theme: participants liked the learning contents and innovative nature of presentation of the contents, i.e. both relevant visuals and text which each enhanced and complemented the other. The positive experience of the visual learning language was important in consideration of one of the aims of the ID model, namely to create an organisational visual learning language.

Third theme: participants liked the way they were empowered through the “*self-learning which creates a learning culture*”.

“It is for self development and helping my career”.

Fourth theme: participants felt the ID model and the job-specific, organisation and industry knowledge and learning imparted through it provided them with an edge in the market, as it enhanced practical knowledge based on relevant information. This too, was significant for the evaluation of the ID model, as it referred to positive increases in job-specific, organisation and industry knowledge and the application thereof, which was of consequence for determining the success of the ID model as a strategic enabler.

These four themes can be combined into two main areas of impact, namely learning contents and behaviour. In learning contents terms, it was evident that the tailor-made, job-specific learning contents within the ID model were key to the ID model being experienced positively. As was evident, in this ID model the job-specific learning contents were seen as contributing to the perceived success of the ID model. In terms of behaviour, the themes pointed to the perceived benefits of the ID model imparting job-specific knowledge and direction on how to do a better job, which in turn impacted on what was done in the market. Therefore, through the practical application of knowledge, a positive impact on productive behaviour was seen to have been facilitated.

The dislikes mentioned by participants largely centred on five main themes. These themes did not relate directly to the ID model, its design or components thereof, but rather to practicalities and operational procedures within the organisation.

First theme, time related: an often-reported dislike was the feedback that there was not enough time available for learners to apply the ID model, i.e. go through the learning contents, do the in-field tasks, get manager input and often have to repeat an in-field task, complete all in-field tasks in a module and do the assessments. All participants felt that there were too many “*other organisation initiatives which we have to do, so this gets put on the back burner*”. Although the rationale for the intensity of activities contained in the ID model was understood, participants indicated a dislike for the additional responsibility brought about by the self-learning aspect of the ID model, especially the impact thereof on their time. In light of results about likes and positive perceptions regarding this aspect of the ID model it may seem contradictory. However, it is important to contextualise these results, as outlined next.

The dislike about “*not enough time to do ID model learning*” related to other organisational imperatives which were perceived to take priority (both in terms of application and delivery of results), while the learning “*must just somehow happen before your time is up*” (i.e. the

allocated period for completion of modules and courses). Participants felt that if other organisational imperatives were prioritised, the implementation of the ID model and learning activities related to it should be afforded the same treatment, and formal organisational time allocated for completion thereof. Especially amongst managers, the issue of a lack of time was seen to be one of the disadvantages of the ID model. Managers felt that the responsibilities of facilitation and sometimes needing to accompany learners in-field for task completion placed too great a demand on their time. This linked to the communication-related theme.

Second theme, communication-related: participants indicated that the lack of communication about the ID model, its benefits and why it was mandatory for everyone to complete as something they disliked. Although they claimed to remember “*some communication about the new way of learning*”, they felt more had to be done and wanted information about why the “*change-over to a new system of learning*” was deemed necessary by the organisation.

Third theme, mandatory completion-related: the mandatory completion of up to skills range 1 was mentioned as another dislike, despite participants understanding “*we all had to get on the same page with the learning*”. Learners and managers alike understood that the mandatory completion directives when the ID model was first implemented ensured everyone in the organisation had the same learning frame of reference. Two main issues relating to the dislike of mandatory completion, namely long-tenure employees and older, White male employees emerged.

Firstly, managers indicated that it was very difficult to convince learners who had been field-force representatives for 20 years and more why they had to go through the learning.

“Some of these guys are retiring in a year or two. Why should they have to do it? They are not interested and won’t benefit”.

This was corroborated by some participants (mostly the older, White males), who hankered after “*the way things were*”.

“It was better when we all went away for training, when someone gave you lectures and demonstrated things ... the people preferred that”.

Secondly, the hankering “*after the way things were*” was observed to be most prevalent in older, White males. These participants had inevitably been with the case organisation for very long; in their positions for very long; and doing their jobs for very long. That afforded them not only a degree of respect amongst peers, but a strong vocality backed by strongly entrenched opinions from them, and managers who by and large felt not to interfere with them. When some of the younger (mostly Black, some White) participants disagreed, they responded in a dismissive manner.

“... you don’t know, you weren’t there. Everyone did better, you learn when people show you”.

Mostly, the dissenting participants did not then pursue the issue, not because they did not feel strongly enough, but due to the length of tenure of the older participants and the strength and voracity of their statements and opinions.

Fourth theme, manager-related: a strong theme under dislikes emerged from learner participants relating to managers. It was felt – although it is reiterated that this did not apply to all managers – that upskilling of managers to competently fulfil their roles as trainers and facilitators was urgently required.

“The people element in training is important. Some managers haven’t even looked at [... the ID model]. They don’t know the contents, how can they help with tasks”.

“Managers’ standards are different. This one knows what to do and gives you good feedback. That one has no idea and just signs off”.

“Area managers lack commitment. They only do it because it’s in their job objectives. They must be trained first”.

Although not as evident amongst managers, some did mention their perception that “*different managers have different standards*” and “*maybe the train-the-trainers needs to be more intensive*”.

Fifth theme, recognition-related: a further dislike theme centred on recognition. This was highlighted by learner participants, who felt they would like to receive some form of recognition for completing courses, as this would contribute positively to motivation.

“Now you just have to do it. There is no certificate or even money”.

The issue of recognition went beyond recognition within the organisation only. Some participants required this *“to help me if I go and work outside”*. However, as and when the organisation received its NQF accreditation for the courses contained in the ID model, this dislike would be addressed. As things were at the time of the research, the NQF accreditation was a long way off, although in progress.

When considering the dislikes, it became evident that the themes concerned operational and organisational issues, rather than the ID model *per se*. However, operational and organisational issues did impact on the performance of the ID model and will be considered in the summary, critical reflection, conclusions and recommendations of Chapter 7.

Interwoven in the discussion on the likes and dislikes about the ID model were comments on the benefits of the ID model, presented next in par. 6.2.3.6.

6.2.3.6 Benefits of the ID model

When asked about their perceptions of the benefits of the ID model, two observations emerged. The first was that although participants mentioned a large number of benefits they saw the ID model as contributing, but this was negated by internal organisational issues. Thus – although benefits of the ID model were recognised and supported on intellectual level, practical issues interfered, as the following quotes illustrated:

“This gives them all they need to know, but there is no ownership or management buy-in for it [... the ID model]”. (Manager comment).

“It [...the ID model] must be pushed more. It must be explained why we are doing it. It must be supported by everyone”.

“It is practical and geared to show us how to do things in the correct way, but there is never time to do it properly and managers don’t have the time to explain”.

“Our people need this knowledge and the skills set, but some have to be dragged”. (Manager comment).

The second observation regarding perceived benefits of the ID model was linked to demographics, and probably relevant and applicable in a South African context, namely that young, Black participants were seen to be keener to use and support the implementation of the ID model:

“This helps me, it shows the organisation is committed to uplift its people. I can use this to improve myself, to learn more”.

These participants indicated that despite organisational issues and dislikes (see par. 6.2.3.5), they were nevertheless in favour of a *“learning tool”* of this nature, since it was empowering them to take responsibility for their own development, which they liked. In conjunction with this group, younger participants (of all population groups) generally were more open-minded and receptive to the *“changed way of training”*, and overall listed benefits in terms of *“what’s in it for me”*, i.e. they felt there were more benefits to them than disadvantages.

This benefit to them (*“what’s in it for me”*) was largely explained by the stated perception that the ID model enabled learners to apply their (new) knowledge practically and on-the-job. The benefit of this was seen to be *“learning by doing”*, which participants felt *“make the knowledge and ‘right way’ to do things stick”*. This was meaningful for the ID model as a strategic enabler, because it was seen to contribute to and enhance job-specific knowledge, the application thereof in practice and improved on-the-job performance (productive behaviour).

The benefit of job-specific knowledge brought about by the ID model tied in with the perception that the trade *“prefers to deal with our reps, because they are more professional”* (manager comment), since the ID model imparted both trade and organisational knowledge to learners which was not generally available in the market. Some managers also reported that they were *“seeing better reports”* and other improved productive behaviour since the ID model had been implemented.

“This one retailer gave my guy such a bollocking I cringed. But my guy listened and followed the steps in the listening skills module. I was amazed. But it worked!”

Another major benefit was seen to be the broader insight obtained in the organisation as a whole.

“I have the frame of reference of my job. It gives a line of sight of what we have to do, not only what, but how”.

“To know about the vision and mission and more marketing helps me understand ...”

These benefits were seen to give the organisation an *“edge in the market”*, which for the purpose of this research underpins the view that the ID model serves as an enabler to support and develop strategic and productive behaviour, as defined in the learning goals for the ID model (see Figure 4.3).

Participants also mentioned the 24/7 availability of learning contents, the fact that learning is self-paced and learning in one’s own time contained in the ID model as being a major benefit.

“No out-of-field time, it’s always accessible and job principles are applied constantly”.

On the perceived benefits of the ID model, an important sub-theme centred on the insights of participants around the whole process of the implementation of the ID model. These insights consisted of two main elements, i.e. culture change and change management.

In terms of culture change, participants understood that the ID model needed to be seen as separate from the process of its implementation.

“We need a mindset change from the old to the new. The new way through [... the ID model] is the right way, get used to it. But the culture change is slow, people are slow to change”. (Manager comment).

“This is about past pain for future gain”. (Manager comment, said in relation to all learners having had to complete all compulsory modules in the ID model).

For a small minority of participants the only benefit of the ID model was that it was believed to enable one to get promoted. (Note: the organisation stipulated that an employee may not be promoted unless at least all compulsory skills ranges were completed and signed off). However, most participants disagreed with this view.

“You don’t only learn to get promoted. It’s for self-actualisation. It’s a culture change happening”. (Manager comment).

“We are in an evolution, changing to a culture of learning. But it’s slow”.

“For new people and the future, they won’t know anything different, there won’t be complaints, but now it was difficult because of our time. And we don’t understand why ... everything must be done”.

In terms of change management, it was felt that, despite noble efforts from some managers and MSD, not enough communication regarding the change was supplied from an organisational perspective.

“If they can tell us why some [... in-field] tasks I will be happy”.

“How do I motivate the older guys, who have been in the job for 30 years? Now they’ve got to do this stuff they’ve done for 30 years? Nobody says why, so I just tell them to get on with it and finish!” (Manager comment).

This turned out to be noteworthy, i.e. managers mentioning the culture change and lack of communication, since some learners felt the responsibility (unfulfilled) was that of the manager:

“Managers must understand the link between on-the-job and [...the ID model]. To make the link for the team. To let them see the change”.

There was strong argument from most participants, that the culture change would be enhanced and supported, and the change management forthcoming when *“the business arguments [for the ID model and change of training practice] are provided, they must be”*. This placed an onus on the organisation to not only communicate the benefits of changed training practices through a new ID model, but also by supplying the business reasons, imperatives and benefits underpinning such a change.

A further benefit of the ID model was defined through the perceived commitment of the organisation to develop its employees. This contributed positively to learners’ commitment

to and motivation for learning and participation in the ID model and the change inherent in it.

“This shows me the organisation is committed to developing us. So I must do my bit”.

In support of the above results, the organisational post implementation review (Appendix 12) listed the following benefits of the implementation of the ID model:

- Increased efficiency as field force representatives were training on-the-job, with little out-of-field time, i.e. optimisation of resources.
- Improved employee retention as learning methodology upskilled fast (i.e. no “dead time” in “away training”).
- It (the ID model) offered contents customisation, 24/7 accessibility, convenience and learner-centric learning, with centralised management of knowledge, i.e. a full record of all activities, necessary for NQF compliance.
- Learners accessed learning material at their own pace and in their own time. Mastery of course material was achieved at the speed suitable for each individual.
- An integrated approach to cross-functional skills and job-specific learning was facilitated.
- Instilled a culture of learning.

Benefits, both as defined by the organisation and the participants in the research, thus related to improved strategic behaviour (i.e. practical and relevant job-specific knowledge applied in the marketplace), optimisation of resources (i.e. improved job-specific knowledge and application of how things were done, no time out-of-field) and a tool for self-learning and personal upskilling, which would ultimately benefit the organisation.

During the course of the discussions, participants commented on what they believed could be altered in the ID model to improve the way it is used and experienced. These suggested alterations to the ID model are presented in par. 6.2.3.7.

6.2.3.7 Suggested alterations to the ID model

The results on suggested alterations to the ID model were inter-related to three themes.

First theme, problems and issues: problems and issues were identified as the main impact areas which interfered negatively with the implementation and performance of the ID model within the organisation. Although also communicated as dislikes, these issues were presented with a different hue and context within this theme and related to time, line management and recognition.

The problem with a lack of time for the “proper implementation” of the ID model was seen to be due to an overall lack of organisational support in light of the pressing industry issues under which the organisation operated. It was felt that imperatives relating to distribution and sales rightly took priority, but that the importance of the learning imparted by the ID model aided those functions, and therefore it required more organisational support.

“If everyone applied what they learn here, the jobs will be done better. We must have time to do this. It can help us with targets if we do a better job”.

The problem with line management was seen as a function of different individual personalities and an unequal level of skill, interest and aptitude to apply the ID model.

“Different managers have different interests. Some are very good, some don’t care ... disinterested. Also they lack the knowledge”.

“We all get different inputs to the training. There’s no consistency. They [... managers] need training to get to a standard”.

The problem about recognition was felt to be a very important one. Participants (both managers and learners) were adamant that this may be seen as one of the biggest negatives about the ID model. Although many of the participants were keen for the ID model to impart a qualification recognised by the training authorities in South Africa (i.e. an NQF/SETA-accredited qualification), it was agreed that, at the lowest level even something *“like being published in the organisation magazine when you have passed a course”* would suffice. It was clear that recognition in the form of a certificate would enhance feelings about the ID model.

Although not related to the actual ID model itself, these results contributed to how the ID model was perceived and are thus considered relevant.

A further suggested improvement to the ID model emanated from certain operational issues in the case organisation.

Second theme, operational issues: from an operational issues perspective, participants highlighted three main operational issues that impacted on the ID model.

The first operational issue related to time. Time, in this context, related to the day-to-day planning of what needed to be achieved. It was felt that if the organisation was to make organisation-specific time available for the learning, it would enhance the benefits to be had through the implementation of the ID model greatly.

“... maybe put aside an afternoon every two weeks specifically to do [... the ID model]. Then there’s time to learn, do group tasks or help your colleagues and the manager knows he is now training”.

“We must do this in organisation hours. People will take it more seriously, it will show the company is serious about it”.

“All the things are important to know, people learn how to do their jobs, but we need the time”.

Also, from an operational issues perspective, organisational support was considered important when looking at suggested improvements to the ID model.

The second operational issue related to organisational support. Participants felt that apart from the need to see the organisation’s commitment through dedicated time proffered for involvement in the learning, communication about the change and about the benefits would again aid and enhance perceptions and support of the learning through the ID model.

“We want to know more about the change. This is new for us, this self-learning. People must be explained to”.

“Telling us about the benefits is important. The business argument must be provided”.

Overall, it was felt to be positive that the completion of the learning (and application and implementation of the ID model) was incorporated into individual job performance objectives. However this was impacted on negatively by inconsistent communication and the varying attitudes amongst direct line management and broader organisational support. In addition, especially learners indicated that independent input to and assessment of the in-field tasks (i.e. not by managers) will improve the ID model.

The third operation issue related to independent assessment. Independent inputs and assessment were seen as a problem. In-field tasks completion and the inputs thereto were the main areas to be improved on, as demonstrated by the following comments.

“I think we need an independent person to look at our tasks and tell us what was wrong or how to improve. Not just the manager. Someone who knows the standards”.

“Sign-off for tasks must be on the same basis. Maybe an outside person can be used or someone trained specifically for the job”.

“If you get someone else than the manager to help with input it will be better”.

The above themes were seen to impact from an operational point of view, since it required different planning and possibly the allocation of new or more resources in the ongoing use of the ID model.

The third main theme regarding suggested improvements to the ID model concerned feedback.

Third theme, feedback: independent assessment (as discussed above) was interlinked with the theme on feedback. Participants not only felt they needed independent assessment and feedback, but they also required more feedback on more of their efforts.

“I don’t know which [LAMS] assessments are wrong. I just get a score. I want to see what I don’t know and why I have to, say, repeat a module because I don’t pass”.

“More information must be given on the tasks. I want to know what’s wrong if I don’t get sign-off. Often you’re just told to re-do, no reasons ...”

Managers felt they would like to be able to have detailed print-outs from LAMS to obtain more specific information of who the really good performers were. They felt some distinguishing mechanism within LAMS was required to enable them to earmark individuals who may be promoted in future.

The qualitative methods yielded comprehensive results and insights into perceptions and opinions about the ID model as summarised in par. 6.2.3.8.

6.2.3.8 Summary of results from qualitative methods

The qualitative results showed that the implementation of and reactions to the ID model consisted of many inter-related themes. The ID model as such was seen to be preferable over classroom delivery of learning, since it was self-paced, in own time, with relevant applicable knowledge being of a practical nature and user-friendly. However, it was the same self-learning theme which was seen in negative light when operational issues (such as allocation of time) and organisational issues (such as competency-for-training levels of managers) were considered.

The ID model was seen to work on its own outside of its organisational environment (i.e. as a stand-alone ID model for training), because it offered practical knowledge presented in an understandable manner, supported by in-field application of job-specific knowledge and consequently cultivating and entrenching more appropriate and productive behaviour. But, in the implementation of the ID model, it was found that it could not be separated from its organisational environment.

When referring back to the conceptual representation of the qualitative results (Figure 6.2), the results from the qualitative methods may be summarised under reactions to the ID model specifically, likes and dislikes, benefits, and suggested alterations.

The ID model specifically was described as containing comprehensive and relevant learning contents, which helped learners in knowing more about their jobs and their organisation. Although it was liked that the ID model afforded *“own pace in own time”* learning, this was also causing difficulty due to the widely held feeling that everyone was *“just too busy and had no time”*. It was also felt that some of the ID model components

such as VARK learning styles and LAMS required better and more communication from superiors about the way it worked and had to be used in the organisation. In addition, LAMS was seen as one of the components of the ID model that may be criticised, due to its fixed battery of questions for which learners might remember some of the answers. The ID model was seen to be conducive for improving both job-specific knowledge and the application thereof in practice, so that people “*become better at their jobs*” (i.e. improved productive behaviour). The ID model was described as being very user-friendly and easy and simple to understand.

The likes relating to the ID model centred on four main themes. Firstly the practical, on-the-job skills and job-specific knowledge imparted by the ID model was seen to be of benefit both to the individual learners and to the case organisation as a whole. Secondly, the learning contents and its innovative and fresh presentation was seen to positively impact on both the motivation for learning and learning itself. Thirdly, the ID model was seen to empower individuals, an aspect appreciated particularly by younger learners. Fourthly, it was liked that the learning, job-specific knowledge and skills honed through the ID model were seen to provide learners with “*an edge in the market*”, whereby customers “*preferred dealing with*” the field force representatives of the case organisation. Dislikes about the ID model related by and large to the lack of time due to other pressures from organisational activities; the mandatory completion of courses which was seen to be irrelevant for some learners; the perception of managers not being skilled, knowledgeable, experienced or interested enough to fulfil their roles in the ID model adequately; and the lack of recognition in that learners did not receive any form of recognition, whether formal or informal on the completion of courses. However, most participants reported not to have any dislikes about the ID model.

The benefits of the ID model were linked to the likes about the ID model and also included “*learning by doing*”, seen to enhance and entrench job-specific knowledge and relevant behaviour; and the benefit of attaining insight into the organisation and its business on a broader level. Self-paced learning was seen to be of benefit as less out-of-field time for learning was needed. However, despite the perceived benefits, a number of organisational issues were seen to impact negatively on the benefits proffered by the ID model. These issues centred on the availability of time for learners and managers alike to do and facilitate the learning; on the perceived lack of adequate communication about the ID model and reasons for changing to “*this way of learning and training*”; and on a perceived lack of support on certain managerial levels for the ID model.

Suggested alterations to the ID model related to organisational issues rather than the ID model as such and included issues regarding a lack of time; perceived lack of managerial skills and knowledge to fulfil their role in the ID model; and the provision of some form of recognition to learners on completion of the various courses contained in the ID model. It was felt that the organisation should make specific time available wherein the learning contained in the ID model was applied, managers should undergo more comprehensive training and that independent assessments by skilled personnel were to be implemented. Insights were also obtained on the usability of the ID model and these are outlined in par. 6.3.4 to contribute to the conclusions on the performance of the ID model.

A combination of the results from the quantitative methods and the results from the qualitative methods provides the insight into and understanding of the ID model as outlined in the next section on analysis and interpretation (par. 6.3).

6.3 ANALYSIS AND INTERPRETATION

6.3.1 Introduction to analysis and interpretation

When looking at the results gleaned from both the quantitative and qualitative methods and the initial insights offered by the pilot study and observation during testing, the basis for the evaluation of the ID model emerged in the insights and understanding offered by the results. The analysis and evaluation are presented by looking at what the results revealed about the ID model and job-specific knowledge (par. 6.3.2); and the ID model and productive behaviour (par. 6.3.3). Insights were also obtained on the usability of the ID model and these are outlined in par. 6.3.4 to contribute to the conclusions on the performance of the ID model. Par. 6.3.5 offers a summary of the analysis and interpretation.

6.3.2 ID model and job-specific knowledge

Although the influence of the ID model on job-specific knowledge was specifically a quantitative measurement as reflected in Table 6.6, comments obtained from the pilot study and qualitative results offered additional insights. It was reported by both learners and their managers that the job-specific knowledge imparted by the learning contents in the ID model was beneficial for both the learners in their roles as field force representatives and for the case organisation in that it was seen in a better light because

of an improved and more knowledgeable service offering. This value creation in service offering allowed the organisation to differentiate itself in the market, whilst simultaneously developing capabilities, i.e. the collective skills, abilities and expertise of an organisation – see Figure 1.1c - and core competencies, i.e. knowledge-based and vested in employees – see Figure 1.1d.

Both learners and their managers also reported that the ID model imparted job-specific knowledge which enabled them to be “better at” their jobs. In many instances, learners commented on how the learning incurred through the ID model enabled them to apply and use the knowledge more relevantly and successfully than before. In addition, job-specific knowledge applied in practice made them feel and come across as being more confident and this was seen to make a favourable impression on customers. Having more job-specific knowledge enabled the learners to be more successful at their jobs of field force representatives. Managers also reported improved levels of job-specific knowledge that was applied in-field – as evidenced by more professional and competent execution of duties by the field force representatives.

The ID model was shown to quantitatively and measurably improve job-specific knowledge levels pre and post ID model implementation by +5 measures increases on all courses (see Table 6.6). This satisfies the defined success criteria of the ID model in the organisation (see par. 4.4.1.3e) and the action standards of the research (see par. 5.2.1.1). In addition, it was strongly felt that the increased job-specific knowledge levels enabled learners to perform better in their jobs, i.e. exhibit improved productive behaviour as discussed in par. 6.3.3.

6.3.3 ID model and productive behaviour

Table 6.1 reflected the positive ratings the learning contents of the ID model obtained on “*relevancy to my job*” (3.51 out of 4) and “*enhances information given and learning*” (3.24 out of 4) for visual contents. In the qualitative results this was corroborated and participants voiced the strongly-held perception that one of the main benefits of the ID model was that of imparting job-related knowledge and skills which enhanced productive and pertinent behaviour on the job.

“If you do this, go through all the sections, you know what to do and how to do it. You’ll do it better, it’s a positive thing”.

“This helps to remind you of how to do things the [... organisation’s ...] way. It is best practices and makes us professional in the market”.

Clear and understandable learning contents, seen to be interesting and relevant to the job-at-hand, were of importance in an ID model of this nature, as it directly influenced productive behaviour of relevance for the organisation in the market. A further point applied. The in-field tasks in the ID model (see par. 4.5.2.4) pertained specifically to the application of learned skills and knowledge, and were only “signed off” by the manager once a satisfactory and competent demonstration of skills mastery was demonstrated by the learner. From that view, the ID model was believed to enhance and develop job-related skills and knowledge required for productive behaviour. Productive behaviour is linked to those actions of the workforce that improve and enhance the competitive performance of an organisation (see Figure 1.1e) and may relate to core behaviour (relevant for core and distinctive competencies) and situation-specific behaviour (relating to job-specific knowledge and productive behaviour) appropriate at particular points in the value chain of the organisation. The ID model was seen to contribute positively to improved productive behaviour.

Clearly, as evidenced by the results, job-specific behaviour and the application thereof, and productive behaviour were seen to be interlinked and mutually impacting on each other. The results showed that where job-specific knowledge was increased, productive behaviour improved should this increased job-specific knowledge be applied.

The ID model was reported to improve productive behaviour and therefore satisfies the defined success criteria of the ID model in the organisation (see par. 4.4.1.3e) and the action standards of the research (see par. 5.2.1.1).

In the analysis and interpretation based on the pilot study and more specifically the results from the quantitative and qualitative methods, further insights on the usability of the ID model are obtained. Consideration of these results is important to answer the research objective regarding the performance of the ID model (and its components) and how it is experienced by users. ID model usability is reported on in par. 6.3.4.

6.3.4 ID model usability

Apart from the rating of the components of the ID model (see par. 6.2.2.2 to par. 6.2.2.5), insights regarding the usability of the ID model were gleaned from the qualitative results.

These insights offer further understanding of how and why the ID model was seen to work and need consideration in assessing the performance of the ID model.

In Table 6.2 it was shown that although generally rated positively, participants indicated they were not always able to easily find the information they required, and both instructions on how to use the programme and in-field tasks relevant to learner contents sections could be improved. This was in contrast with qualitative results, where participants reported they found it easy to access and use all the components of the ID model, and did not report difficulties with finding either the relevant information or applicable in-field tasks. A possible explanation was that the qualitative phase of the study was conducted three months after the quantitative assessment and both learners and managers had time to become more *au fait* with the workings and various components of the ID model. Also, the relatively lower rating regarding the usability of the ID model on the electronic device can be explained as being related to different levels of computer-literacy and proficiency amongst all users (both learners and managers).

“You see, not everyone can work the computer as well as everyone else, some they learned in school, some only here. So you must do that first before you can use [...] the ID model [...] well”.

The usability of the ID model was further defined by the processes involved in how the ID model was experienced through the organisational prototype of the ID model in the case organisation (see par. 4.6).

Overall, apart from the process of accessing LAMS through the manager’s PC, participants seemed to rate the ID model process as satisfactory (see Table 6.3). Participants liked the easy-to-understand-and-follow process of the ID model and saw it as being easy to use. But qualitatively, the LAMS process was described as cumbersome, since access to the LAMS was only through the manager’s PC at a time convenient to the manager. This was felt to impede on the progress of some learners, as they had to *“wait for manager time”* and availability to log on to LAMS.

In the qualitative results learners mentioned the difficulty of setting time with managers to do LAMS, while managers viewed this as an *“interruption”* in their already full and hectic daily schedules. From the perspective of future development and refinement of the ID

model this will need re-consideration and a possible re-design of this aspect of the process.

Within the ID model process, managers rated the opportunities for facilitation inputs to their teams negatively, relative to other ratings (2.61 out of 4, see Table 6.4). However, during discussion, learners felt opportunities for receiving facilitation had increased greatly by implementing the ID model. When asked to explain how increased facilitation inputs from managers impacted on them, learners highlighted the following both in the quantitative results of the research, through an open-ended question in the questionnaire (see Appendix 6) and results obtained from the focus groups.

- It helped to extend industry knowledge and they (learners) were better able to apply this job-specific and industry knowledge to benefit of the case organisation and its customers.
- It improved organisational knowledge and gave more understanding of functional knowledge, how various functions in the organisation fit together and contributed to overall organisational success and a clearer understanding of what specific jobs and functions were about in the bigger picture.
- They had a clearer understanding of what their “*own job*” was about; better knowledge of what is expected; opportunity to review job areas and functions they were not that familiar with; sharpened in-field skills and application of job-specific knowledge.
- It improved motivation and opportunities for communication.

The qualitative results also revealed that interaction and input from the managers were major issues with significant impact on the performance of the ID model. Skills of managers were perceived to be, or were by nature of managers’ experience and interest levels, unequal or inadequate and consequently a huge disadvantage was placed on their team members that impacted negatively on perceptions of the workings of the ID model. For the ID model to be successful, consistent and high level facilitation and assessment feedback from line managers were seen to be important.

Operationally, managers were seen to not necessarily have the requisite skills to facilitate or teach, or have the knowledge to be able to positively influence and contribute to the

learning through the ID model and learner participants felt much improvement was needed on this component.

“It they can all be trained more, or if there are independent people to help us and give us input, it will improve the problem of some managers not being on the same level as others”.

Managers highlighted their perceived lack of time as the biggest impediment to the proper implementation of the ID model, and the qualitative results explained this further. Not only was the manager’s availability (i.e. time) an issue, but generally participants felt that an overall lack of specific time, allocated by the organisation for the learning imparted by the ID model, was lacking. It was felt that other organisational initiatives impacted negatively not only on the ID model’s implementation, but perceptions thereof.

“If we had time, formal time to do this, people will be more open and positive to really get on with it. Now it’s our own time and I just don’t have it”.

6.3.5 Summary of analysis and interpretation

In considering results from the pilot study and observation during testing, the quantitative and qualitative results, it was evident that, by and large, the ID model was judged to be effective and measurably increased job-specific knowledge. The ID model usability and process were rated positively, although organisational issues such as availability of time and skills and knowledge levels of managers impacted on the perceived performance of and perceptions about the ID model.

The ID model and its positive improvement of job-specific knowledge were seen to be particularly applicable in and relevant for the improvement in productive behaviour. The ID model and its positive impact on productive behaviour through the application of job-specific knowledge and improved perceived professionalism in the market was demonstrated quantitatively and confirmed qualitatively. A key tenet of this dissertation is contained in the constructs of job-specific knowledge and productive behaviour being improved through training and the ID models employed, and the contribution of job-specific knowledge and productive behaviour to organisational capabilities and core competencies, which in turn contribute to SCA.

Generally and overall, the results indicated that the ID model positively contributed and improved job-specific knowledge and productive behaviour in the case organisation.

Although summaries had been offered for the various results (i.e. pilot study and observation during testing; results from quantitative methods and results from qualitative methods), a summary overview of research results, analysis and interpretation is offered in par. 6.4.

6.4 SUMMARY OVERVIEW OF RESEARCH RESULTS, ANALYSIS AND INTERPRETATION

The results of this research bear out that the ID model was seen to achieve both the success criteria defined by the organisation (see par. 4.4.1.3e) and the action standards of the research (see par. 5.2.1.1). With a few exceptions such as LAMS access and a suggested upgrade of the LAMS questions, all the components in the model were rated positively. This exploratory and interpretive research did not reveal a problem or design flaw with the ID model as such and its comprising components and overall the ID model was seen to make a contribution to the job-specific knowledge and application thereof in practice, which culminated in improved productive behaviour of benefit to the case organisation.

The contents of the ID model were rated as very understandable, easy-to-use and relevant to learners' jobs. Although the visual representation of the knowledge was not used by all learners, it was felt to add to the ID model as it caters for visual-style learners. However, more attention could be paid to this to strengthen this component (and indeed, catering for all the learning styles) in the use and application of the ID model.

Usability of the ID model was rated positively, although some issues regarding the access to the assessment on the LAMS were problematic. These mostly related to the availability of the manager since log-on was via his/her PC and also the availability of a convenient time for both managers and learners for doing the assessments.

The in-field tasks were seen to be one of the most beneficial components of the ID model, since they allowed learners to apply knowledge in practice, and this helped to entrench

positive behaviour which added to productivity and ultimately set the organisation apart in its service offering in the market.

The ID model was seen to be preferable to classroom delivery, because the learning obtained through self-learning lasted for the longer-term, especially if it was backed up by practical in-field application of the supplied job-specific information. In addition, the ID model was seen to represent the future of training and the change-over needed to be managed more intensively.

However, even though the ID model was seen to work and its benefits evident to both learners and managers alike, the research showed that the implementation of the ID model was integral to the perceived performance of the ID model and buy-in from users. Both operational issues (time allocation) and organisational issues (line management levels of competence, communication and recognition systems) impacted considerably on the way the ID model was perceived, and therefore approached and reacted to. Thus, although the ID model may be developed with all the components which support learning and the creation of an organisational advantage, it cannot be separated from the organisational environment within the organisation where it is implemented.

The summary, critical reflection, conclusions and recommendations emanating from this research are presented next in Chapter 7.

CHAPTER 7

SUMMARY, CRITICAL REFLECTION, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

Pervasive, ongoing change places new demands on organisations and the business-level strategies they employ to remain in business and perform and prosper. Fundamental to strategic thinking and management is how organisations can, through ongoing superior organisational performance, achieve and maintain sustainable competitive advantage. One of the ways to achieve SCA is through the development of a productive, skilled and competent workforce. Both through the inequalities of the past and the pressures to become increasingly competitive internationally, South Africa is faced with the challenge of creating not only its workforce of tomorrow, but also of today. Human resource development, specifically through training, increasingly needs to cultivate job-specific knowledge and productive behaviour to develop and build a competent and productive (skilled) workforce. In the South African context, the focus on fast-tracking skills development is on the national agenda as one of the top priorities for the country.

Training, through the ID models it employs, is facing increasing demands to align with the strategic intent and business strategies of organisations (and by inference in the South African context, the country) to increase relevant job-specific knowledge (and skills) that contribute, through improved productive behaviour, to organisation capabilities and core competencies as sources for SCA.

This research put forward an extended ID model, contextualised and positioned within the RBV, that aimed to address the issues of job-specific knowledge and productive behaviour (as embodied in relevant skills) as proxies for SCA.

Figure 7.1 reflects the contents of Chapter 7 which provides a summary (par. 7.2), critical reflection (par. 7.3), conclusions (par. 7.4), and recommendations (par. 7.5) of the research.

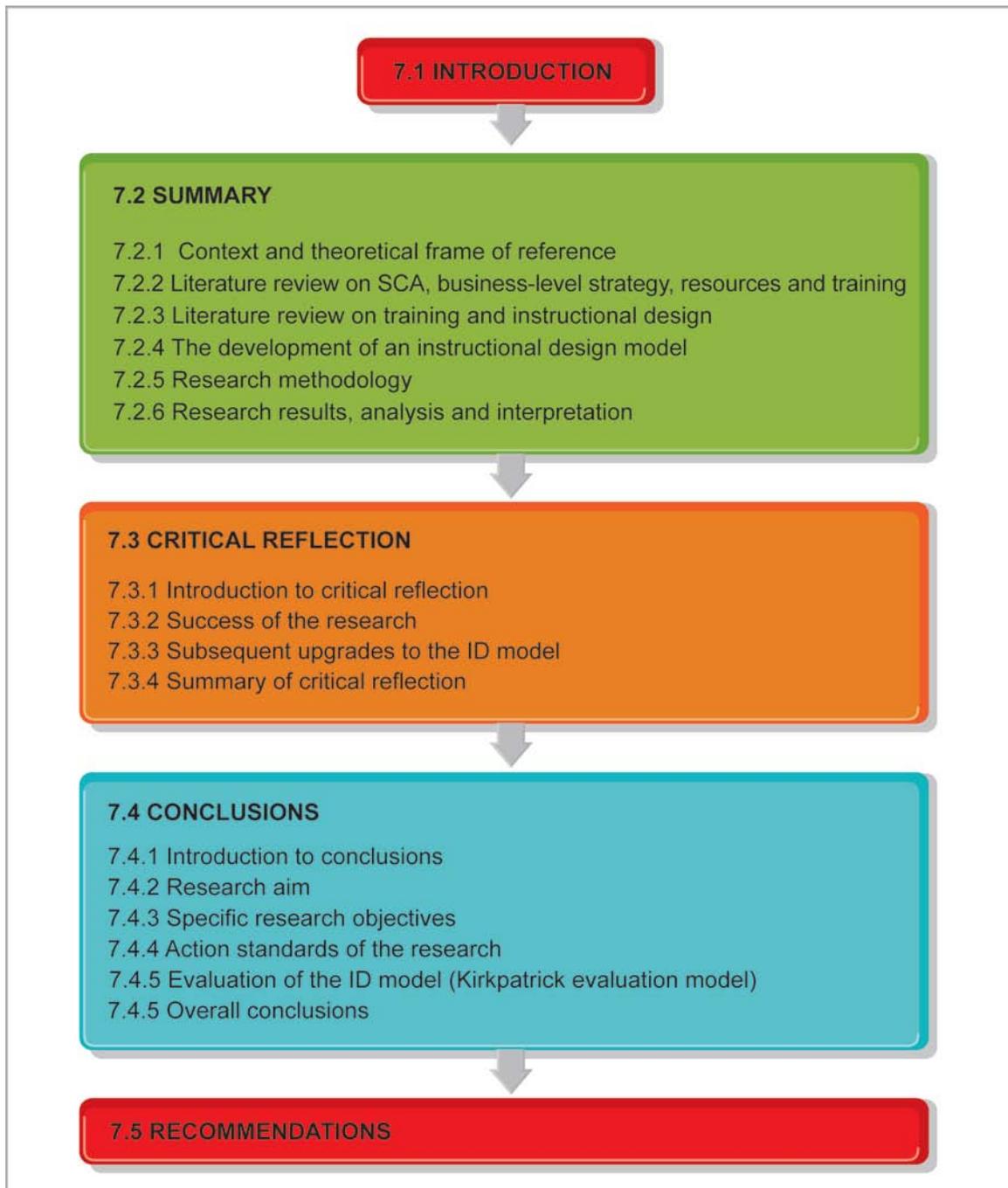


Figure 7.1: Contents of Chapter 7

7.2 SUMMARY

This section will review a summary of the research from the perspective of its context and theoretical frame of reference (par. 7.2.1); literature review on SCA, business-level strategy, resources and training (par. 7.2.2); literature review on training and instructional

design (par. 7.2.3); the development of an instructional design model (par. 7.2.4); the research methodology (par. 7.2.5); and research results, analysis and interpretation (par. 7.2.6).

7.2.1 Context and theoretical frame of reference

In Chapter 1, the context for the research was defined as being situated in the volatile and changing external and internal environments that organisations operate in that demand pertinent and relevant job-specific knowledge and productive behaviour from the workforce that will contribute to superior organisational performance.

As discussed in Chapter 1, one of the primary goals of business-level strategy is to create sources of SCA through organisation capabilities (the capacity for a bundle of resources to perform a task) and organisation core competencies (that which an organisation is good at doing). Resources, especially intangible resources vested in human capital are, when using the RBV as theoretical home, a key source to provide the organisation with valuable, rare and inimitable dynamic capabilities, which provide the input to organisational core and distinctive competencies.

One of the ways in which capabilities is developed, is through training, and specifically the development and implementation of ID models aimed at improving the job-specific knowledge and productive behaviour of the workforce. Tools of this nature (the ID model) provide the organisation with dynamic capabilities to reconfigure resources to its benefit in an environment of constant change. Shortcomings are found in many current training practices and ID models, which prompted the development of the ID model, put forward in this research, since the literature provides much evidence of the positive link between the development of human capital, training and organisational performance. The focus of the ID model presented here is on the development of job-specific knowledge and productive behaviour as proxies for SCA, and developed through training, allowing the organisation to differentiate its position in the market.

It is this line of logic from the goals of business-level strategy through the creation of organisation capabilities and dynamic capabilities through human resources as sources for core and distinctive competencies by using training and ID models that the theoretical frame of reference for the dissertation was defined.

Increasingly, the value of a competent, well-skilled workforce is seen to be of high strategic value. Particularly in South Africa as a developing country, the need for skills development is defined as being critical for economic growth and improving South Africa's international competitiveness. To do this, training and the methods it employs needs to demonstrate its contribution to job-specific knowledge and productive behaviour aimed at improving on-the-job performance. The contribution of this research is in the development and evaluation of an ID model aimed at addressing previous shortcomings of job-specific knowledge improvement and the application thereof as productive behaviour, the proxies for organisational performance and SCA.

7.2.2 Literature review on SCA, business-level strategy, resources and training

As discussed in Chapter 2, SCA lies at the heart of organisational performance and strategic management, particularly business-level strategy concerns itself with how to achieve and maintain a competitive advantage. Two of the main schools of thought on how to attain SCA, namely the RBV (that regards intangible resources in human capital as key for value-creation) and the PBV (that considers external positioning relating to cost or differentiation – also through resources - as key for value-creation) were highlighted. The choice of strategy is facilitated by the beneficial deployment of the organisation's value chain that represents both primary and support activities. Training, as a support activity through human resources, impacts on the ability of an organisation to display and apply capabilities and core competencies to its advantage.

The abilities, knowledge, skills and expertise vested in the people in organisations are regarded as strategic resources that must be developed and harnessed by organisations to achieve SCA. The focus of this dissertation is on the improvement of the abilities, knowledge, skills and expertise of the workforce through the development and implementation of a revised training practice, that aims to improve job-specific knowledge (relevant knowledge and skills) and productive behaviour (core behaviour integral to successful competitive performance and situation-specific behaviour essential at a particular point in the value-chain of the organisation). The underlying source to generate and develop such knowledge and behaviour is contained in the HR system, and training as an HR practice lead, amongst others, to a skilled workforce that engages in productive and functional behaviour for the organisation, thus forming the potential for SCA.

7.2.3 Literature review on training and instructional design

Chapter 3 presented training, as one of the activities to human capital in organisations, facing increasing demands to produce a competent workforce, with the required levels of job-specific knowledge and productive behaviour to serve as enablers for SCA for organisations through improved performance.

Changes in the demands on training and changes in training practices that focus largely on providing the workforce with the skills and knowledge that culminate in productive behaviour. In South Africa in particular, there is an ever-increasing demand for fast-tracking skills development to aid both organisations and the country to enable performance at incrementally increased levels. Therefore, modifying operating routines for training, or developing new and revised ID models to fast-track skills development is essential in the quest for SCA by organisations and the country.

Instructional design, concerned with understanding, improving and applying methods that improve relevant learning of benefit to both individuals and organisations, provides a roadmap of ID models and their various components. However, a multidisciplinary reading of the literature provides insight into the constituents of new ID, to take ID beyond the core ADDIE foundations and its permutations. The ID model put forward in this dissertation is developed from a multidisciplinary approach, to extend, broaden and deepen the ADDIE foundation and offer a revised ID model pertinent to the new demands on training.

7.2.4 The development of an instructional design model

Chapter 4 presented the ID model as consisting of four components. The first component pertains to organisational context and consists of a qualitative judgement on the organisational character, project complexity and available resources, serving to initiate working relationships, formulate overall working processes and the scope of the ID model development. The second component pertains to the orientation to learning, learning and ID theory and the ID strategy underpinning the development of the ID model. This ID model is based on a constructivist approach to learning, which focuses on preparing learners for real-life situations. The third component pertains to the ID model processes that include the decisions to be made in the development of the ID model, resource allocation, project management, quality assurance and implementation. The fourth component pertains to the ID model activities and incorporates design activities, development activities, allowance for possible future revisions and updates and evaluation.

The four components culminate in an organisation prototype that forms the “visible face” of the ID model in the organisation and for learners and other stakeholders. The organisation prototype contains the delivery medium (in this case electronic device), the training intervention name under which the courses and modules are resident and accessible, the learning actions and role of the manager in the ID model, all of which are contained in the ID model infrastructure.

Whilst the ID model as put forward seems theoretically sound and based on best practices from multidisciplinary literature, its value in impacting on job-specific knowledge and productive behaviour forms the crux of this research.

7.2.5 Research methodology

In Chapter 5 the main aim of the research was described as being to evaluate the ID model and explain the relationship between the ID model and its perceived impact on job-specific knowledge and productive behaviour by using the Kirkpatrick (1994) evaluation model, a standard evaluation tool in business and industry (Bassi *et al.*, 1996; Boyle & Crosby, 1997). The Kirkpatrick (1994) evaluation model comprises of four levels, i.e. the reaction of learners to the ID model (Level I: reaction); the degree to which the learners have learnt the material (Level II: learning and job-specific knowledge improvement); the perceived ability of learners to transfer the learned knowledge by applying it in the workplace (Level III: application). Level IV evaluation, measurement of ROI and other quantitative measures fell outside the scope of this research, based on the research purpose.

The main aim of the research was underpinned by specific research objectives, namely to investigate reactions to the ID model; to determine levels of learning and job-specific knowledge improvement brought about by the ID model; to analyse the impact of the ID model on job-specific knowledge application; to evaluate the performance of the ID model and to understand how and why (if) the ID model is seen to work. Attached to these research objectives were the action standards of the research, specified as to obtain a positive reaction to the ID model; to bring about a measurable increase in job-specific knowledge and improvement in the application thereof in the way the workforce executes their jobs and to obtain positive ratings for the components of the ID model.

The purpose of the research was exploratory and interpretive in that it strived to gather explanations and gain insight into and understanding of a phenomenon about which little is known, i.e. the ID model as presented.

The main aim of the research and the research purpose was operationalised in the research methodology followed for the empirical research. The research was conducted from an interpretivist point of view, since it aimed to answer “why” and “how” questions. In light of this, the case study tactic was used, with both qualitative and quantitative methods for data collection. Quantitative data were aggregated, presenting an evaluation of how the various features of the ID model were rated by using the mean and also by reflecting pre-post knowledge scores from LAMS. The data obtained from focus groups, depth interviews and observation provided the raw data inputs for the qualitative research which were analysed both inductively, whereby the interpretation flowed from the data; and deductively by allocating the groups of themes and topics to a focused coding scheme. The integrity of the research was defined by the rigour, quality and trustworthiness of the methods used and dependability was demonstrated through a description of the methods, coding and data analysis strategies and additional measures such as member checking and triangulation. The case bounds identified both the profile of the case organisation, as an international FMCG organisation with traditional organisational structures and operating in seven regions in South Africa and the time boundaries of the case. Within this single-case design, three EUAs were incorporated and to two of these, both qualitative and quantitative methods were applied. Researcher bias may be present in the researcher also being the developer of the ID model, however this was believed to have been addressed through integrity measures such as data triangulation, member checking and stringent R+Q measures implemented in the research.

7.2.6 Research results, analysis and interpretation

Chapter 6 presented the research results, analysis and interpretation. Overall, the performance of the ID model was judged to be effective both by the case organisation and when assessed through the action standards of the research. The rating of the ID model in terms of all its components and underlying descriptors were significantly positive, except that LAMS and the access thereto were rated at lower levels. However, this was a function of the back-end technical infrastructure of the case organisation at the time of the research. Subsequent upgrades to the technical infrastructure were used to improve LAMS and the access thereto.

Overall reactions to the ID model were positive and reactions very favourable with both learners and managers being well-disposed to the ID model. It was felt that, through the learning facilitated by the ID model, learners were more knowledgeable about their jobs and could do their jobs better. It was felt that the practical application of job-specific knowledge contained in the learning contents through the in-field tasks reinforced learning and improved productive behaviour in both core and situation-specific situations in the value chain of the organisation. The pre-post ID model implementation measure of job-specific knowledge, showed, at two points in time, 5+ increases for all courses in the ID model.

Although the ID model was seen to work and its benefits evident, operational issues at the case organisation, such as time, line management levels of competence, communication and recognition did impact on feelings about and attitudes to the ID model. Generally however, it was reported that increased job-specific knowledge and the application thereof to facilitate improved productive behaviour for the organisation outweighed the negativity of the operational issues.

From this exploratory and interpretive research, there were five main reasons why and how the ID model was seen to positively contribute to learning and the improvement of job-specific knowledge and productive behaviour. First, the self-paced, “learning by doing” design of the ID model was seen to contribute positively to why the ID model worked. The practical application of knowledge through the in-field tasks was a facilitator of this. Second, the learning contents’ relevance to the specific organisation and the specific jobs of learners caused the ID model to be seen as making a positive contribution to relevant learning job-specific knowledge was measurably increased. Third, because of the organisation and job-specific contents, the ID model worked because it was seen to impact positively on organisation-relevant productive behaviour, and the application thereof in practice, when servicing customers. Fourth, the ID model was seen as an easy-to-use system, which allowed easy access to learning contents and clear instructions on the processes to be followed. Lastly, reaction to the ID model was positive, i.e. learners liked it and preferred it to classroom-based training, as it was seen to be empowering and the way of the future.

Emanating from the summary of the research as presented in par. 7.2, follows a critical reflection, as presented in par. 7.3.

7.3 CRITICAL REFLECTION

7.3.1 Introduction to critical reflection

In reviewing the research, a critical reflection on a number of points emerges. This section provides a critical reflection on the success of the research (par. 7.3.2) by considering how the results impact on theory and extend the literature (par. 7.3.2.1) and how the results impact on practice (par. 7.3.2.2). The results of the research precipitated a number of subsequent upgrades to the ID model, which is reflected on in par. 7.3.3. A summary of the critical reflection is provided in par. 7.3.4.

7.3.2 Success of the research

The success of the research is considered through reviewing if it set out to do what was intended, i.e. to develop an ID model as a strategic enabler for SCA and to evaluate the ID model in terms of its perceived impact on job-specific knowledge and productive behaviour and provide an explanation of the internal construct relationship. The evaluation of the ID model is facilitated by investigating and understanding the impact of the ID model on productive behaviour, defined through the improvement and application of job-specific knowledge. The results show that the ID model is seen to make an overall contribution to improved understanding and on-the-job application of job-specific knowledge. Through the proxies of job-specific knowledge and productive behaviour, and the flow and line of logic that link these constructs to SCA, the ID model may be seen to be an enabler for SCA. Internal construct relationships are explained in that the components of the ID model are seen to contribute to improved job-specific knowledge and productive behaviour. The research has thus contributed to a better understanding of and insight into a previously unknown phenomenon, the contextualised ID model, which answers to the exploratory and interpretive purpose of the research.

However, the exploratory research also shows that the ID model was not without its problems, which specifically relate to the organisational environment in which it is applied. Where support for the ID model was shortcoming, it impacted negatively on perceptions of the value of the ID model, and thus motivation to apply it. Where time-pressures were high and many other organisational initiatives present, learning through the ID model tended to take a back seat, which impacts negatively on the perceived delivery of the ID model.

Predominantly however, the research did obtain exploratory and descriptive information about the ID model, which serves as the input of how these results impact on theory and extend the literature, as reflected on in par. 7.3.2.1 below.

7.3.2.1 How the results impact on theory and extend the literature

In the theory, this dissertation is largely positioned in the RBV which maintains that intangible resources provide inputs to the organisation, which lead to capabilities and core and distinctive competencies that contribute to SCA. Where human capital, through strategic human resource management, uses training as one of the activities whereby productive behaviour in an organisation is enhanced, training (and the ID model as the vehicle for such training) may be viewed as an enabler for SCA.

In these results, the ID model is judged to be effective in enhancing and improving job-specific knowledge which is applied successfully on-the-job and consequently results in improved core- and situation-specific (productive) behaviour. The results also positively indicate that, through the job-specific knowledge imparted by the ID model, the organisation attains an advantage amongst customers by providing a better and more knowledgeable service. These results are consistent with the literature (see par. 2.6) and thus support and confirm the broad premise that there is a positive linkage between the development of human capital through training and SCA. Therefore, it may reasonably be surmised that the results from this research may be seen to be transferable and the ID model exportable to other organisations. In the South African context, with the development of skills (delineated in this dissertation as job-specific knowledge and productive behaviour) as a priority on the national agenda, this ID model is seen to offer a viable alternative to existing and underperforming ID models.

However, more research will be required to put quantitative values to the degrees of improvement in both core and situation-specific behaviour brought about by the ID model if this linkage is to be precisely delineated. The results do not impact on the theory in any other way than to, as is consistently presented in RBV discourse and the impact of training on productive behaviour as the sources for organisational performance, corroborate the effect of the development of job-specific knowledge and relevant productive behaviour on the positive performance of the workforce which ultimately benefit the organisation. In that sense, this research shows consistency with and extends the literature.

The ID model developed for the purposes of this dissertation, combines components of ID models within the literature to answer to a set of broadly defined requirements. In that sense it is consistent with the literature. However, through a multi-disciplinary approach, the ID model adds components which are relevant for the development of core and situation-specific behaviour, to enable the contribution of the ID model to extend beyond behaviour improvement, to organisational competencies enhancement. The research shows that the ID model improves and positively impacts job-specific knowledge and productive behaviour. However, as in much of the literature, the quantitative value impact of the combined job-specific knowledge increases and levels of improved productive behaviour are not measured, and this offers opportunity for further research.

The ID model put forward in this dissertation therefore extends, broadens and deepens the literature by positioning it within business-level strategy and the RBV, and, by defining a wide scope of components to be incorporated in the development of ID models, such as organisational context, ID and learning orientation, ID model processes and ID model activities and an organisational prototype. The ID model put forward extends the ADDIE foundation and, through thick description of the wide scope of components included in the ID model, provides a possible blueprint for the development and implementation of extended, contextualised organisational ID models that add value to organisations (and by extension countries) through improved job-specific knowledge and productive behaviour. Through extending the literature and providing an extended ID model, the results impact on practice, as reflected on in par. 7.3.2.2.

7.3.2.2 How the results impact on practice

The results of this research suggest that the ID model as put forward in this dissertation, may offer an extended value-added ID model for organisational training from a business-level strategic viewpoint. Through the specification and thick description of the various components of the ID model, specific guidelines are provided for other organisations with characteristics similar to the case organisation to apply this ID model. In effect, this plan may be seen to provide the organisation with a dynamic capability, i.e. a tool to modify existing operating routines in pursuit of effectiveness and as such, provide the enhancement of SCA. In addition, the results highlight issues which may be overlooked in the implementation ID models, but are important to organisations, for example the simultaneous implementation of a specific change management programme when training practices in organisations are adapted or changed; organisations needing to allocate focused time for learning imparted by an ID model, even if the model is self-paced, self-

driven learning; and the importance of line-management skills and knowledge where they form an integral part of the ID model.

This ID model is shown to positively impact on job-specific knowledge and productive behaviour, proxies for SCA. As such, it is suggested that the ID model may be seen to provide an alternative for existing ID models, in that it considers the broader strategic goals of the organisation and serves to make a contribution to the performance of the organisation. Further research whereby the ID model is implemented in other organisations, and quantitative measures of its impact, will further enhance practice.

In addition, it is recommended that further research is required to investigate the transferability of the ID model to training in the public sector. Management in the public sector has been undergoing a major metamorphosis since Hood (1991) first referred to “New Public Management”. With this as benchmark it has been noted that the public sector in Africa needs a “customer-orientated civil service (which) requires an attitudinal-focused training (program)” (Economic Commission for Africa, 2003:43). In South African in particular, Kamoche observes that it is doubtful if training in the public sector has so far led to any noteworthy organisational performance, lacking both knowledge and skills (Kamoche, 1997:268).

Based on the results, and subsequent changes in amongst others the technology offering at the case organisation, a number of upgrades and changes formed the basis for an evolution of the ID model in 2007. These subsequent upgrades to the ID model are reflected on in par. 7.3.6.

7.3.3 Subsequent upgrades to the ID model

After completion of the research and compilation of the results, a number of upgrades were made to the ID model. This was largely precipitated by three main factors, namely technology (par. 7.3.3.1); senior management buy-in (par. 7.3.3.2) and the allocation of additional resources (par. 7.3.3.3).

7.3.3.1 Technology

During the course of the implementation and use of the ID model, the electronic devices used by the field force representatives (i.e. learners) changed from the NetBook (a basic function PC) to Dell laptop computers (a high-end PC with advanced technical specifications and capabilities). This enabled the ID developer to bring about changes and

enhancement to the way the learning contents are presented through the inclusion of animation and sound. Informal feedback indicates that this is seen to enhance learning even more and to entice learners to use some of the learning contents as “presentation material” when they are with customers.

Subsequent changes to the back-end ID framework facilitated two improvements to LAMS. One, managers are now able to draw specific and precise reports on all their learners, including the modules the learner have completed, a full record of tasks submitted and a history of attempts at assessments. This is felt to be an important improvement to the ID model. The second improvement is to the assessments itself. Where it previously contained a fixed battery of questions, the answers of which some learners reported to remember when assessments were attempted on a number of occasions; it now consists of an extended battery of questions that are randomised for each assessment test. Although not necessarily liked by learners since it makes assessments more difficult, informal feedback indicates that this is seen to be a major improvement. Results reports drawn from the improved LAMS are presented to senior management, who now exhibit greater buy-in for the ID model and its contribution to the improvement of job-specific knowledge in the organisation.

7.3.3.2 Senior management buy-in

Senior management buy-in to and support for the ID model have become more visible, largely based on two factors. The first factor is the demonstration of the improvement in job-specific knowledge pre and post ID model implementation. The second factor is colloquial feedback they get from field force representatives, their managers and some customers in the trade about the professionalism and knowledgeability of the field force representatives that are described as them “knowing more” about their jobs, the organisation and the industry. Although it is obvious that this improvement in professionalism is not singularly brought about through the ID model only, senior management reports that they believe the implementation of the ID model was a contributory factor. The benefit of this for the upgrade to (and evolution of) the ID model is that additional resources were allocated to the ongoing implementation and use of the ID model. The significance for this research is that, when ID models can demonstrably and measurably show improvements in job-specific knowledge and the application thereof, additional resources may be allocated to the implementation and further fine-tuning of the ID model. In that sense, when applied in other organisations, the business case for

resources is already demonstrated through this research having shown that demonstrable improvements were brought about by the ID model in the case organisation,

7.3.3.3 Additional resources

The qualitative results showed that a shortcoming of the ID model is the knowledge and competencies of managers, and the lack of independent assessors for judging in-field tasks, or assessments sign-off. Since the research, the organisation has appointed ID model experts (MSMs or Marketing Skills Managers) in all regional offices, who are responsible for implementing the ID model, helping where managers lack knowledge or skills and be independent assessors on in-field tasks and assessments sign-off when necessary. Informal feedback from learners and managers again indicate this to be seen to be a significant improvement to the ID model. In practice, when developed and implemented in other organisations, this component may be considered and incorporated at the outset.

These subsequent upgrades to the ID model are, on reflection, further guidelines on how to successfully develop and implement this ID model, and need consideration and possible inclusion in future iterations and implementations of the ID model.

Par. 7.3.4 contains the summary of critical reflection.

7.3.4 Summary of critical reflection

In reviewing the research a number of points emerged that needed reflecting on. This relates to the success of the research and its impact on theory and practice; and the upgrades to the ID model due to the research.

The intention of the dissertation to develop an ID model as a strategic enabler for SCA was investigated through the exploratory and interpretive purpose of the research. Thick description and insights were obtained and the research is considered to be successful. The results corroborate the positive linkage between improved job-specific knowledge and productive behaviour, which, as in the RBV literature; serve as enablers for SCA through improvements in organisational capabilities and core competencies. The research results plausibly suggest that the ID model as put forward in this dissertation may offer an extended value-added model for organisational training positioned in business-level strategy and the RBV that positively increases job-specific knowledge and productive behaviour. From both an organisational and a South African perspective, this is

meaningful in that skills development is on the national agenda as a major priority. The ID model as presented offers an alternative to many current training practices that are considered to be inadequate and not conducive to fast tracking skills development. As a viable alternative, it may be applied and implemented to the benefit of the workforce, other organisations and ultimately the country.

The results of the research and technological capability improvement at the case organisation facilitated upgrades to the ID model. Prompted by reports and feedback on the positive impact of the ID model on job-specific knowledge and productive behaviour, buy-in and increased support from senior management at the case organisation saw the allocation of additional resources, improving components of the ID model previously seen to require revision.

Based on the foregoing summary, critical reflection and a holistic interpretation and view of the research, par. 7.4 presents the conclusions that may be drawn from the research.

7.4 CONCLUSIONS

7.4.1 Introduction to conclusions

The conclusions from the research are reflected in Table 7.1 and are based on the main aim of the research and the specific objectives underpinning the main aim (see par. 1.4) as manifested in the research questions (see par. 1.5). The conclusions from the research are presented under the research aim (par. 7.4.2); specific research objectives (par. 7.4.3); action standards of the research (par. 7.4.4); evaluation of the ID model (par. 7.4.5); with the overall conclusions from the research presented in par. 7.4.6.

Table 7.1: Summary of research conclusions

7.4.2 Research Aim	
Described as	Conclusions
7.4.2.1 Evaluate the ID model on a) impact on job-specific knowledge b) impact on productive behaviour	Showed quantitative increases felt to contribute positively, better in-field performance of tasks reported, improved service delivery to customers,

7.4.2.2 Explain relationship between ID model and job-specific knowledge and productive behaviour	Learning and job-specific knowledge improvement facilitated better understanding that culminated in doing the job better
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7.4.3 Specific research objectives			
Described as	Research questions	Conclusions	
7.4.3.1 Reactions to the ID model	a) Feel about ID model? b) Likes and benefits? c) Dislikes? d) Suggested alterations	Relevant learning contents, self-paced, practical, provides job-context with specific knowledge, easy-to-use Job-specific knowledge, innovating learning contents, self empowerment, edge in market, organisation commitment Time issues, manager skills, communication, recognition, mandatory completion Time, manager skills, independent experts, feedback, LAMS	
7.4.3.2 Levels of learning and job-specific knowledge improvement brought about by the ID model and impact of the ID model on job-specific knowledge application	a) What knowledge acquired? b) What skills developed? c) What learnt? d) Extent of job-specific knowledge improvement	Job-specific, core and situation-specific Job, organisation and industry knowledge,, know what to do, confidence Job-specific knowledge, organisational context, how to perform better for own/organisation benefit Quantitative improvement of +5 measures for all courses measured at 2 intervals	
7.4.3.3 Evaluate the performance of the ID model	Rating of components	Contents overall Text/written contents Visual imagery Usability Process In-field tasks LAMS Preferred to classroom	3.36 3.31 3.23 2.98 3.09 3.20 3.15 3.48

7.4.4 Action standards of the research	
Described as	Conclusions
7.4.3.4 Understand how and why (if) the ID model is seen to work	<ul style="list-style-type: none"> • Job-specific knowledge improvement demonstrated • Productive behaviour improvement observed and reported • Visible to all involved • Increased support and buy-in
7.4.4.1 To obtain a positive reaction to the ID model	Positive reaction obtained (see par. 7.4.3.1)
7.4.4.2 To obtain a measurable increase in job-specific knowledge and improvement in the application thereof	Increases of +5 measures for job-specific knowledge obtained and improved application thereof reported (see par. 7.4.3.2 and par. 7.4.3.4)
7.4.4.3: To obtain positive ratings for the components of the ID model	Positive ratings obtained for most components (see par. 7.4.3.3)

7.4.5 Evaluation of the ID model (Kirkpatrick evaluation model)	
Described as	Conclusions
7.4.5.1 Level I: Reaction to the ID model	<ul style="list-style-type: none"> • Largely positive and satisfied • Seen to bring about benefits • Positive rating on most components
7.4.5.2 Level II: Learning and job-specific knowledge improvement	<ul style="list-style-type: none"> • Liked for knowledge imparted by ID model. • Improved job-specific knowledge seen to improve relevant behaviour in market place. • Improved service offering to customers.
7.4.5.3: Level III: Application	<ul style="list-style-type: none"> • Demonstrated through sign-off on in-field tasks • Proficiency and ability demonstrated to apply knowledge

7.4.2 Research aim

The research aim was an evaluation of the ID model on (a) impact on job-specific knowledge and (b) impact on productive behaviour as presented in par. 7.4.2.1 and to

explain the relationship between the ID model and job-specific knowledge and productive behaviour as presented in par. 7.4.2.2.

7.4.2.1 Evaluate the ID model

The research aim was described to evaluate the ID model through (a) its impact on job-specific knowledge and (b) its impact on productive behaviour.

The results showed (a) quantitative increases in excess of +5 measures in job-specific knowledge and the ID model was felt to contribute positively to the learners knowing more about their job function and how to do the job better. Regarding the impact on (b) productive behaviour, better in-field performance on job tasks was reported, including perceptions of an improved service delivery to customers.

7.4.2.2 Explain relationship between ID model and job-specific knowledge and productive behaviour

The results indicated that participants reported an improvement in learning and job-specific knowledge facilitated by the better understanding culminating in doing the job better that was facilitated by the ID model.

7.4.3 Specific research objectives

The conclusions regarding the specific research objectives (par. 7.4.3.1 – par. 7.4.3.4) as serviced by the research questions (par. 7.4.3a-d) are presented below.

7.4.3.1 Reactions to the ID model

Reactions to the ID model were serviced by research questions regarding the ID model relating to (a) how participants felt about the ID model; (b) likes and benefits; (c) dislikes; and (d) suggested improvements.

a) Feel about ID model?

Results showed positive feelings about the relevant learning contents, the self-paced and practical nature of the ID model and that it provided the job-context with specific knowledge and that it was seen to be easy-to-use.

b) Likes and benefits?

Results on likes about and benefits of the ID model centred on its provision of job-specific knowledge through innovative learning contents that empowered learners, gave them an

edge in the market and showed organisational commitment to its people and skills provision.

c) Dislikes?

Results on dislikes centred on time, or rather the perceived lack thereof for implementation of and learning contained in the ID model; the lack of communication about change management and the organisational rationale for the switch-over to the ID model; the lack of recognition for completing courses and the organisational directive that it was mandatory for all field force representatives to complete at least 3 of the courses contained in the ID model.

d) Suggested alterations?

Results on suggested alterations focused on the recommendation by learners and managers that the organisation ought to make time available for the implementation of and learning contained in the ID model as it was seen to benefit both individuals and the organisation. Another suggested improvement related to upskilling managers to allow and enable them to provide more skilled and expert feedback. It was recommended that assessments and sign-off for both in-field tasks and assessments would benefit from having independent experts involved in this and overall, improvements to LAMS were made relating to both how it was accessed and the number of assessments questions available.

7.4.3.2 Levels of learning and job-specific knowledge improvement brought about by the ID model and the impact of the ID model on job-specific knowledge application

The levels of impact on learning and job-specific knowledge improvement and application were serviced by research questions relating to (a) what knowledge was acquired; (b) what skills were seen to be developed; (c) what was learnt; and the quantitative measurement of (d) levels of job-specific knowledge improvement.

a) What knowledge acquired?

The results showed that participants reported that in their perception, the ID model imparted job-specific knowledge; knowledge about how to do the job better (core behaviour); and knowledge about how to deal with specific situations more professionally (situation-specific behaviour).

b) What skills developed?

The results showed that participants reported improved skills and understanding related to job-specific, organisational and industry-related issues which helped them know what to do and thus provided confidence in themselves and what they did.

c) What learnt?

The results showed that learning about their specific jobs and the organisational context within which the jobs fit, allowed participants to perform better for their own and the organisation's benefit.

d) Extent of job-specific knowledge improvement

Results showed, at two points in time, a quantitative improvement of more than 5+ measures for all courses taken from LAMS. The lowest job-specific knowledge improvement measure was at +6, while the highest measure was at +19.5.

7.4.3.3 Evaluate the performance of the ID model (rating of components)

The evaluation of the performance of the ID model was based on participants rating all components on a 4-point scale, whereby 4 represented excellent. Overall, all components were rated positively (e.g. contents overall = 3.36; text/written contents = 3.31; visual imagery = 3.23; usability = 2.98; process = 3.09; in-field tasks = 3.20; LAMS = 3.15 and ID model learning preferred to classroom = 3.48 for agreement out of 4). These ratings were investigated further through the qualitative methods, whereby usability and process relatively low ratings were explained by the cumbersomeness of, for example, getting access to LAMS.

7.4.3.4 Understand how and why (if) the ID model is seen to work

The results showed that the demonstration of the increase in job-specific knowledge and the observed and reported improvement in productive behaviour was seen to be visible to all stakeholders in the organisation which brought about increased support and buy-in. The ID model is seen to work because it increased job-specific knowledge resulting in more productive behaviour of benefit to individuals and the organisation. It was felt that the ID model worked because it provided a new and revised way of organisational training through innovative, visual and easy-to-use learning contents that are available 24/7, allowing learners to learn at their own pace, but more importantly, apply the knowledge through execution of the in-field tasks. This aided in entrenching learnt principles and

reinforcing job-specific knowledge and relevant skills that resulted in more productive behaviour.

7.4.4 Action standards of the research

The action standards of the research were defined as being to obtain a positive reaction to the ID model (par. 7.4.4.1); to obtain a measurable increase in job-specific knowledge and the application thereof (par. 7.4.4.2); and to obtain positive ratings for the components of the ID model (par. 7.4.4.3).

7.4.4.1 To obtain a positive reaction to the ID model

This action standard was achieved and the results show that both learners and their managers reacted positively to both the ID model, its contents and the benefits brought about through the implementation thereof (see par. 7.4.3.1).

7.4.4.2 To obtain a measurable increase in job-specific knowledge and improvement in the application thereof

This action standard was achieved and the results show a quantitative improvement of +5 measures as extracted from LAMS at two intervals. Also, improved application of the job-specific knowledge was reported (see par. 7.4.3.2 and par. 7.4.3.4).

7.4.4.3 To obtain positive ratings for the components of the ID model

This action standard was achieved and the results show that positive ratings were obtained for most components (see par. 7.4.3.3).

7.4.5 Evaluation of the ID model (Kirkpatrick evaluation model)

Although an evaluation of the ID model, its main components and underlying descriptors was evident in the presentation of the quantitative and qualitative research results and conclusions, the Kirkpatrick model of evaluation formed the evaluation insights framework, and an overview of the three levels of evaluation relevant for the purposes of this research (see par. 4.5.4.2) are presented by looking at Level I evaluation that refers to reaction to the ID model (par. 7.4.5.1); level II that refers to learning and job-specific knowledge improvement (par. 7.4.5.2); and level III that refers to application (par. 7.4.5.3).

7.4.5.1 Level I: Reaction to the ID model

Evaluation at this level appraised how the participants in a training programme, in the instance of this research and dissertation, the ID model, felt about their experience. The

results showed that feelings about the experience with the ID model were largely positive, although there was some negativity emanating from a specific profile of participants, i.e. White, older males within the organisation. Generally, participants (learners) were satisfied with what they have learned and they regarded the learning contents as being relevant to their jobs.

This was not equally true for managers, the “other participants” in the ID model. Although they saw the benefits of the ID model, the learning and skills it imparted and the process positively, they felt the ID model placed a high demand on their already “*stretched timing schedules*”. However, although their feelings about the ID model were influenced by their perceptions of the amount of time they had available, managers felt positively about the experience of the majority of their learners with the ID model. These positive feelings related to not only the learning contents of the ID model, but also the benefits seen to be brought about through the development and enhancement of job-specific knowledge and productive behaviour.

In addition, reaction to the ID model was measured by obtaining ratings on the various main components of the ID model and their underlying descriptors. Overall, the ID model was rated positively and although LAMS and the process surrounding it were rated at a relatively lower level, this component needs consideration in further upgrades and/or implementations of the ID model.

7.4.5.2 Level II: Learning and job-specific knowledge improvement

In this level, learning is defined as the principles, facts and techniques that were understood, absorbed and applied by the learners in their place of work. The results of this research reflected that the ID model was not only rated positively by learners and managers alike on the job-specific and pertinent knowledge imparted, but also attitudes and feelings reflected a positive assessment of the ID model on the level II evaluation. Results highlighted improved knowledge about the organisation, its industry context, position and challenges and the role of the learners within this bigger scope. This was reported by participants to aid in more relevant behaviour in the marketplace with customers, which related to application of the improved job-specific knowledge.

In addition, the LAMS indicated a job-specific knowledge improvement in pre-post ID model implementation measures which confirmed the positive impact of the ID model on job-specific knowledge improvement.

7.4.5.3 Level III: Application

Application is evaluated from a perspective on how well the job-specific knowledge was applied in practice, thus bringing about more productive behaviour.

Improved on-the-job productive behaviour is one of the goals of organisational training through ID models. Level III evaluation involved assessing the learners' ability to perform learned skills and apply knowledge practically on-the-job which was demonstrated through participants' completion and obtaining sign-off on in-field tasks, demonstrating proficiency and application of job-related skills and knowledge. The research results indicated improved levels of application, as illustrated by the following representative comment.

"You are better at what you do when you do [... the ID model ...] it helps you improve things like listening and presentation or conflict handling, and it reminds you of the best way to do things if you've become a bit rusted".

In appraising the ID model through Kirkpatrick's evaluation model for training, the ID model was seen to be effective. Level I evaluation showed positive reactions to the ID model, albeit that there were change management issues relating to acceptance amongst older profile learners. Also, the performance of the ID model in terms of how it was rated was positive on most components, except for access to LAMS. Dislikes of the ID model pertained to operational (time availability) and practical (manager proficiency levels) issues and did not relate to the ID model specifically or its design. Level II evaluation showed that the ID model was seen to impart relevant skills and knowledge, relevant to learners' jobs, and that a job-specific knowledge increase was brought about by the ID model. The ID model was seen to positively impact on pre-defined core and situation-specific behaviour instances that have a bearing on capabilities and core competencies of the organisation. This behaviour included a better overall understanding of the organisation and job-specific knowledge; to facilitate better on-the-job performance in terms of applying learned principles and techniques; and benefits brought about by improvement of understanding and application of job-specific skills and knowledge.

The overall conclusions from the research are presented in par. 7.4.5.

7.4.6 Overall conclusions

From the results, the following overall conclusions may be inferred:

- The ID model does impact positively on job-specific knowledge and productive behaviour, therefore human capital in the organisation is improved. Through this improvement in job-specific knowledge and productive behaviour, the ID model is a tool that can be used to reconfigure resources to the benefit of the organisation.
- The change in training practices, in the instance of this research specifically through the development and implementation of a revised ID model aimed at increasing organisation capabilities and improving organisation competencies, enables the organisation to provide a better service and differentiate itself.
- Therefore, on the basis of this exploratory and interpretive research, the ID model may be viewed as an enabler for SCA for the case organisation for which it was developed and in which it was implemented.

The ID model put forward in this research, as a revised and extended ID model positioned within business-level strategy and the RBV to provide training within the organisation, was seen to bring about a measurable increase in job-specific knowledge and a reported improvement in productive behaviour, in both core and situation-specific instances. Core behaviour relate to the core and distinctive competencies integral to the successful competitive performance of the organisation, whilst situation-specific behaviour relates to behaviour essential at a particular point in the value-chain of the organisation. Core competencies, being knowledge-based become distinctive competencies when they represent a superior resource strength and this may be embodied in, amongst others, the tools organisations use to develop and enhance the collective skills, abilities and expertise of the organisation as vested in its human resources, one of the key intangible resources an organisation has to contribute to the strategic quest of delivering and maintaining sustainable competitive advantage.

In light of the South African context, ID models that aid in “learning by doing” and thus provide measurable increases in job-specific knowledge and the productive behaviour facilitated through increased understanding and on-the-job application of knowledge and skills, may be seen to contribute to a more productive workforce. A productive workforce is one of the facilitators of improving organisational performance, that in turn impact on

economic growth rates, decreases in unemployment and the social well being of citizenry in the country.

This dissertation put forward guidelines for a revised and extended ID model which may be seen as a strategic enabler for SCA, as the output performance of the ID model was seen to positively contribute to improved understanding and application of job-specific knowledge and productive behaviour on-the-job. The contribution of the ID model to organisational effectiveness was evidenced by the perceived and stated improvements in overall understanding of the organisation's strategic stance and the role of specific employees within this; and also in the positive influence that this knowledge and understanding have on on-the-job productive behaviour that contributes to enhance organisational capabilities and core and distinctive competencies.

Although organisation-specific learning contents for each organisation where the ID model is additionally applied are to be generated, it is suggested that the results of this research indicated that the benefits for learning, job-specific knowledge and productive behaviour outweigh the time and cost implications that may be seen as impediments for the implementation of this ID model in other organisations.

The implementation and evaluation of the ID model in other organisations will add further value to and insight into the use of the ID model in organisations.

7.5 RECOMMENDATIONS

The recommendations emanating from this research relate to (a) recommendations about the formulation of the ID model; (b) recommendations about the implementation of the ID model and (c) recommendations for further research.

a) Recommendations about the formulation of the ID model are:

- For assessments of knowledge, a LAMS should be developed to allow for assessments beyond rote remembering only. Where possible, LAMS should consist of a large battery of questions, also allowing for the capture and evaluation of interpretive responses. In addition, LAMS need to have different pre and post assessments with the capacity to randomly present questions to learners. A re-development of the LAMS

assessment system for the ID model as applied in the case organisation is recommended.

- Also, an upgrade of the assessment system (LAMS) within the ID model, whereby not only more “assessment questions” are developed, but whereby technology is utilised to, for example, record in-field application of learned skills and techniques. Once recorded, specific sessions with the learner can then be used to comment on, and suggest improved handling of the recorded sessions. However, there are practical implications for this which will in turn require further research.

Subsequent to this research, the LAMS in the ID model was updated and adapted to improved technological capabilities in the case organisation. That LAMS now present rotated assessment questions, randomly presented from an increased questions database and is reported to be a major improvement and a noteworthy enhancement to the ID model. It is recommended that in the implementation of this ID model in other organisations, the system used to assess the knowledge levels of learners is developed, as far as is technically possible, with an extensive battery of questions, randomly presented, as this improvement to the ID model put forward in this dissertation had a positive impact on perceptions and experience.

- Focused learning contents and in-field tasks pertaining to individual learning styles preferences are developed; and remedial inputs are to be designed according to the styles of particular learners. The learning contents, delivered electronically through an available IT infrastructure, should contain learning material designed for various learning styles of the adult learners in the organisation. Where possible, audio and video contents are to be incorporated to enhance learning.

Subsequent to this research, sound and animation (catering for aural and visual learners) had been added to the learning contents of the ID model put forward in this dissertation, also reported as being a valuable and noteworthy improvement to the ID model as originally implemented.

- Where the ID model uses line management as an integral part of the delivery of the ID model, once-off TTT and availability of FGs are not sufficient. Line management is to be upskilled on an ongoing basis; alternatively, the use of “ID model training experts” to manage the ID model implementation and learning over time is to be employed.

Upskilling of line-management or making available ID model training experts who are knowledgeable and motivated to apply the ID model principles and who are able to provide relevant, constructive and expert inputs are thus recommended.

Subsequent to the research, the case organisation in which the ID model was implemented appointed “ID model experts” in all their regions. These ID model experts serve as independent assessors of in-field tasks, they provide facilitation and remedial input when required and are seen to make a valuable contribution to the implementation and ongoing use of the ID model. It is recommended that in the implementation of the ID model in other organisations, at least one or two such “ID model experts” are appointed to support managers in their assessment and facilitation role if possible.

- The learning contents of the ID model are to be practical, relevant to both the organisational strategic goals and the job-specific learning needs and goals. It needs to be developed with organisation-specific learning contents that tie in with and back to organisational strategy and strategic goals.
- b) Recommendations about the implementation of the ID model are:
- Where the ID model represents a marked change from classroom-based training delivery to self-paced, electronic and “learning-by-doing” training as contained in the ID model, supportive communication to all stakeholders and participants in the ID model is imperative. This communication is to clearly define organisational goals for and gains from the change, both for the individual employees and the organisation as a whole.
 - Communication about the ID model strategy and benefits (i.e. organisational arguments and business case) is also to be applied on an organisation-wide scale to obtain awareness and buy-in from all stakeholders. The development of the learning contents of the ID model is dependent on employees in all levels of the organisation. Their knowledge and understanding of the ID model’s philosophy and approach will facilitate access to their inputs when required. It is therefore important that communication of the ID model is organisation-wide; to ensure that when inputs to the ID model are sought, time is spent on obtaining this, rather than using it to explain the rationale and benefits of the ID model.

- In implementation of the ID model in other organisations of a similar type, it is recommended that recognition in the form of, for example, a certificate of completion of courses is given, prior to NQF accreditation.
- In implementing the ID model in other organisations of a similar type, the ID model will benefit from being part of a planned change management programme on a bigger scale that prepares the organisation's workforce and stakeholders for a new and/or different way of going about training.
- The implementation and performance of the ID model may be enhanced if organisation-specific time is allocated for the learning. This implies that the ID model requires "out-of-field" time dedicated to learning. However, this needs further research since one of the goals of the ID model is to decrease practical out-of-field time for training.

c) Recommendations for further research

Recommendations for further research are twofold and relate to (i) the implementation of the ID model and to (ii) extending the scope of the ID model by its implementation in other organisations.

i) The implementation of the ID model

The recommendations for further research relating to the implementation of the ID model are:

- The measurement of ROI measures (e.g. "hard" business results such as decreased absenteeism, quantitative productivity measures – or Level IV measures in the Kirkpatrick evaluation model) attributable to the implementation of the ID model may provide further evidence of the efficacy of the ID model.
- A longitudinal and comparative evaluation of the value of this ID model compared to existing (other) training practices in organisations as pertaining to increased job-specific knowledge and productive behaviour may provide supplementary and generalisable substantiation and corroboration of the exploratory and interpretive results of this research.

- ii) Extending the scope of the ID model by its implementation in other organisations.

The recommendations for further research relating to extending the scope of the ID model by its implementation in other organisations are:

- The implementation and evaluation of the ID model in other organisations – both of a similar type as the case organisation in this research and other types of organisations.
- In view of the critical reflection regarding the transferability of the ID model to the public sector, it is recommended that the applicability and performance of the ID model in the public sector are investigated.

In conclusion it is suggested that the ID model put forward in this dissertation, and ratified by the results, contributed to knowledge and theory by using a multidisciplinary approach and positioned within business-level strategy and the RBV, to provide an extended and broader ID model that measurably increases job-specific knowledge and is seen to improve the application of this job-specific knowledge and related skills in productive behaviour.

The ID model put forward in this dissertation may be seen to offer an alternative to outdated and largely inadequately performing training practices. Although further research is required, this dissertation offered a blueprint for an ID model to serve as an enabler for sustainable competitive advantage.

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Appendices

Appendices only available in hard copy.