

## **Personal significance:**

**A foundational element of a learning  
architecture to enable learners to co-create  
work realities within a new world of work**

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## Declaration

I declare that the research project, *Personal Significance: a foundational element of a learning architecture to co-create work realities within a new world of work*, is my own work and that each source of information used has been acknowledged by means of a complete reference. This dissertation has not been submitted before for any other research project, degree or examination at any university.

A handwritten signature in black ink, appearing to be 'C. A.', is written over a horizontal dotted line.

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My colleagues at the office, for their support, their input and their ears, listening to me talking, learning methodology, learning architecture and learning method day after day.

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C Brunette

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## **Abstract**

In this dissertation, the researcher presents an opportunity for developing an understanding of the role that personal significance plays within the emergent properties of a learning process. Personal significance is presented as a foundational element of a learning architecture that should enable the co-creation of work realities within a new world of work. In this new world of work, which is fast-paced volatile, uncertain, complex and ambiguous (VUCA), the role of personal significance has become more important than ever before. The research problem was therefore described as a general lack of understanding of the important role personal significance plays as a foundational element within a learning architecture that enables the co-creation of a new world of work realities.

The intent of the study was to ascertain deeper insight into the role of personal significance within the context of learning and a learning process. Through this newly-gained insight, the intent was to develop a high-level framework for a learning architecture that incorporated personal significance as a foundational element for learning processes.

For this dissertation, the researcher adopted an interpretivistic research philosophy, with grounded theory as the methodology. The research data were gathered through eight intensive interviews with expert learning and development practitioners. The researcher employed thematic analysis to interpret the collected data.

Theoretical sampling was applied in selecting the participating practitioners. The participants were selected first of all based on their expertise within the learning and development field, and within the sub-fields of facilitation, learning process design and learning and development management. The participants were selected as a diverse sample based on: Age range between 30 and 50 – four participants and between 50 and 60 – three participants; Gender selection of four males and three females; Experience range between 20 to 30 years – four participants and between 10 to 20 years – three participants.

The study found that personal significance is a key component within a learning process geared towards the VUCA world. The following meta-insights were gained during this study: Firstly, that there is a symbiotic, unbreakable relationship between training and learning. Secondly, learning is more than a change in behaviour, it is about an elevated level of consciousness. Thirdly, personal significance is a collective of meta-cognitive processes, which, in combination within a learning process, provide the learning with an irrevocable sense of relevance.

In recognising the vastness of the academic field of learning theory, with nine scientific disciplines, 24 learning theories, 22 learning paradigms or world views, and ten key learning concepts, the researcher invites readers of this dissertation to draw on their own experiences within the field of learning and corporate training programmes. To be sceptical and curious about making learning relevant to their world of work, making sense of the value of learning, and the real contribution of everyday training occurrences.

Keywords: Personal significance in learning; Learning architecture; co-create work realities; learning-centric training; multi-frame thinking; VUCA; New world of work; Self-efficacy.

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## List of Acronyms

|       |   |
|-------|---|
| ADDIE | Analyse Design Develop Implement Evaluate                         |
| ASTD  | American Society for Training and Development                     |
| CEO   | Chief Executive Officer   |
| DOL   | Department of Labour  |
| DTI   | Department of Trade and Industry                                  |
| ETD   | Education, Training and Development                               |
| GT    | Grounded Theory as per Strauss and Corbin (1990)                  |
| HRD   | Human Resource Development  |
| HOTs  | Higher-order Thinking skills                                      |
| MFTs  | Multi-frame Thinking skills                                       |
| L&D   | Learning and Development  |
| LMC   | Leadership and Management Competencies                            |
| NSDS  | National Skills Development Strategy                              |
| NQF   | National Qualification Framework                                  |
| ROI   | Return on Investment  |
| SAQA  | South African Qualifications Authority                            |
| SETA  | Sector Education and Training Authority                           |
| SME   | Subject Matter Expert   |
| VET   | Vocational Education and Training                                 |
| VUCA  | Volatility, Uncertainty, Complexity and Ambiguity as per Johansen |

## Definition of Terms

|                                  |  |
|----------------------------------|--|
| Personal Significance:           | As a working definition, personal significance is a reference to the confidence of an individual (a person specific) to a level beyond mere chance in his or her ability to perform a specific task with the confidence that the desired result will be reached. |
| Sense-making:                    | Sense-making is seen as central to this ideation in learning, because meanings materialise in learning within the context of the information, situation or procedure as argued by Weick, Sutcliffe and Obstfeld (2005, p. 409).                                  |
| Emergent properties of learning: | The emergent properties of learning are viewed as the development of new thinking, becoming visible within the frame of reference of a learner through the process of sense-making and construction of new knowledge.  |
| Realities:                       | apply learning elements to his or her current work tasks in order to change these tasks together with the organisation to enable the creation of improved work outcomes in a direct or indirect manner.  |
| Training:                        | Training is the active process, system or practice with the explicit intent of improving individual or collective performance.   |
| Learning:                        | Learning is viewed as a process, and not a set of outcomes, as argued by Kolb (1984).  |
| Training-Learning Relationship   | Training and learning are viewed as being different from one another, but integrated with each other. Antonacopoulou (2001). This denotes the paradoxical nature of the relationship between training and learning.  |

Multi-frame Thinking:

Multi-frame thinking is a paradoxical disposition, holding more than one view of a reality or situation, even if these multiple views might be seemingly contradictory at times.

# Chapter 1

## Introduction to the context of the study

### 1.1 Introduction

In this dissertation, the focus is on a single aspect of one of the most researched fields of human sciences. Within the field of human learning, the researcher seeks understanding of a foundational element that bonds a fragmented world of change together in a progressively evolutionary new world of work. Through this dissertation the researcher seeks understanding of the personal significance people still have within the world of work. But, more so within the process of change, and specifically in the process of adoption, evolution and transformation through a process of learning. This dissertation is a search for the understanding of personal significance within the architecture of learning that can create a learning experience for people and organisations alike.

This chapter presents the essence of the study by indicating the research philosophy, assumptions and method. It will also state the problem questions and the subsequent research aims and sub-aims. Finally, it will provide a chapter layout for the study.

### 1.2 Background

The researcher will use his 30 years of experience as a learning and development practitioner in the area of vocational and occupational education, specifically in the banking industry in South Africa, as a starting point for this study. From this perspective, as a practitioner, the researcher has observed over many years, that the learning architectures that are applied within the learning and development spaces of the major banks in South Africa have been influenced by the compliance focus. It is also noted that too many training interventions that do not contain the appropriate foundational elements to stimulate learning that will lead to the co-creation of work realities. There are three specific areas of interest which will be discussed below.

### **1.2.1        *The current learning and development conundrum***

Organisation and leadership today are faced with overwhelming challenges of complexity. Companies, as living organisms must try to make sense of a world in chaos, driven by constant change in technologies, regulations and new competitors who bring new business models and best practices, market pressures and constant changing customer demands (Drotskie, 2008). The importance of recognising the complexity of the new world of work is centred on the dynamic relationships in which similar inputs may yield vastly different outputs (McNulty, 2015). Currently some of the more prominent dynamic relationships are the advances in convergent technologies and generational balance at the workplace.

The shift in the generational balance brings different values, expectations and mind sets to the world of work. With more convergent technologies, an entire industry of agents, middlemen and supply chain related services are being disrupted (Vora, 2016). In view of the above, personal significance plays a critical role in enabling individuals to make sense of their complex world of work. Therefore, the study seeks to understand the role that personal significance plays in a learning architecture that can co-create work realities within this new world of work. It would appear that learning and development are currently caught in a conundrum of a disruptive, fierce-paced, changing world and a compliance, legislative mind set towards learning and development practices.

### **1.2.2        *Disruptive new world of work***

A commonly used reference for describing the chaotic conditions in which the modern business must thrive in is through the concept of Volatile, Uncertain, Complex and Ambiguous, or the acronym VUCA. (Bawany, 2016, p. 39). VUCA describes the new disruptive world of work as follows: Volatile, where things change unpredictably, suddenly, extremely and especially for the worse; uncertain, where important information is not known or definite, doubtful, unclear about the present situation and the future outcomes, and not to be relied upon; complex, where many different and connected parts, multiple key decision factors, interactions between diverse agents, emergence, adaptation and co-evolution exist; and ambiguous, where the world is open to more than one interpretation, and the meaning of an event can be understood in different ways.

These characteristics of the VUCA world as described by Bawany (2016, pp. 39-40), highlight the understanding that traditional training interventions are most probably not sufficient for the needs of current corporate learning. The traditional competency sets for occupations don't include a company description to enable learners to manage their learning within such a world. Bawany further argues that what is needed within a VUCA world is Cognitive Readiness. Bawany refers to Hagemann and Bawany (2016) in describing cognitive readiness as the mental, emotional and interpersonal preparedness for uncertainty and risk.

Adamson (2016) posits that allowing learners to learn in realities, and with relevant realities in ways in which their learning is natural, is one of the most important elements of developing cognitive readiness within a VUCA world. However, the relevant VUCA, and indeed cognitive readiness to the modern learner is more hidden and less obvious, but still very real. For learners, today, just following the lesson plan, obtaining the learning outcomes and recalling the procedure are not sufficient. The world of VUCA must consistently be observed during the learning process.

This new expectation of consistently observing VUCA and cognitive readiness requires all training providers in South Africa to examine the effectiveness of the training that they provide. Providers must consistently consider how they assist their learners in developing the new competencies required to deliver expected outputs within a VUCA world. These considerations should be focused on the kind of contributions that their training efforts are making. These contributions can provide a differentiated impact on the employability of the learner, the competence of the learner or the change in business results.

### **1.2.3        *Compliance, legislative mind set towards learning and development***

Reflecting on educational policy in South Africa in the light of international debates regarding regulated education, and the highly-regulated nature of the South African training and the development industry, Allais (2011) argues that education policy that is concerned with vocational and occupational education, or skills development in South Africa, has been trapped in a paradigm of self-help, employability and

labour market flexibility that work against the possibility of achieving improved levels of education and skills.

Allais (2011) further argues her point from Clark (2011, p. 108), focusing on two approaches to occupational and vocational education. First, that of the Vocational Education and Training (VET) system applied in countries such as Germany, France and the Netherlands, where VET is provided through comprehensive programmes as part of the national education system, as a continuation of education rather than training. VET is provided as more narrowly focused on the labour market driven by job requirements and the flexibility of short-term labour requirements. In the second approach, which is more prevalent in Anglo-Saxon liberal market countries, the labour process is fragmented into discrete work tasks or jobs and employers play a leading role in determining curricula that address the immediate skills needed to accomplish the job at hand as argued by Brockmann, Clark and Winch (2011). VET is seen as training, and becomes separated from the formal education system.

Providers and consumers of learning and development efforts, especially those within South Africa, are seemingly not focused on the long-term development of the human being within the occupation and the vocational strength that is required to sustain, grow and prosper as a country within the local and international economies. The focus of the providers is seemingly more set on creating their competitive advantage through effective administration (Azam, Afiqah, Madi and Huda, 2013), rather than the importance of the personal significance of the learner, and the impact that learners can have on co-creating the work reality of the future, based on the learning efforts of the provider.

### **1.3 Key Concepts**

In the following paragraphs the researcher will conceptualise the key concepts in an attempt to set an agreed meaning (Babbie, 2008, p. 136) at the onset of this dissertation. The key concepts that will be discussed are the following: Personal significance; sense-making as a learning process; an enabling learning architecture;

multi-frame thinking; Human “being” versus human “doing”; co-creating of work realities; and the VUCA prime.

### **1.3.1        *Personal significance***

An online search for the concept of personal significance in Google Scholar only returned 461 results, and when the word learning was added to the search, only two results were returned of which none was useful. A similar search in SAGE journals returned 414 results where personal significance was searched and zero returns when “in learning” was added. Springer Link yielded 1720 returns with zero when the words “in learning” were added. In Science Direct, personal significance returned 923 options with seven results within the context of learning, however none was useful. Therefore, within this dissertation, the researcher will attempt to establish a single variable of personal significance as a key concept. It is not the intent of the researcher to prove the variable of personal significance to be true, but rather to establish an early contextual reference for the use of the variable within this dissertation.

The word “personal” originates from the old French in the late 14<sup>th</sup> century, and refers to concepts pertaining to the self. It refers to the meaning of “aimed at some particulate person” (Harper, 2016), related to or affecting that specific person as opposed to the outside world or anyone else (LoveToKnow Corporation, 2016). The concept “personal” is also relating to the nature of a person or self-conscious being, or having the nature of such a person (Houghton Mifflin Company, 2000).

The word “significance” originates from the old French *significance*, or from the Latin *significancia* meaning force, energy, importance or significance. (Harper, 2016). The Collins English Dictionary (2003) defines “significance” as a measure of the confidence that can be placed in a result, especially a substantive causal premise, and not merely a matter of chance.

The researcher therefore proposes the following working definition for this concept: Personal significance is a reference to the confidence of an individual (a person specific) to a level beyond mere chance in his or her ability to perform a specific task with the confidence that the desired result will be reached. Further, personal significance is a phenomenon that provides a specific energy or motivation to an

individual which adds importance in what that individual does or contributes. It provides meaning that signifies reason for existence within a specific task or specific situation.

Within the proposed description of personal significance as stated above, the researcher recognises the importance of emotional significance as argued by Price (2013). It is suggested that emotional significance be considered as part of personal significance or linked to it, given that emotional significant situations are ones that bear on the individual's interests or concerns (Price, 2013, p. 2). Price (2013) refers to two accounts of emotional significance that may be influenced by learning, namely, moral emotions and preference emotions. Given Price's (2013) reference, the researcher proposes that personal significance, including emotional significance, might be developed through a focused learning architecture, and, in a paradoxical relationship to this proposal, that the level of personal significance may enhance the learning process itself.

A further important aspect of personal significance that the researcher intends to consider within this dissertation is the influence of context on personal significance. It is proposed that contextualisation is constructed at an individual level to ensure relevance in establishing effective learning. Van Merriënboer and Kirschner (2013) argue that what we know determines what we see, and therefore what we understand to be what we need to learn. They explain this through the example of two different persons who are using the same path in the mountains as captured in the below auto-ethnographic note.

*A geologist walking in the mountains of France will see geological periods and rock formations. A cyclist in those same mountains will see gear ratios and climbing percentages (Van Merriënboer & Kirschner, 2013).*

They both see the same thing in terms of their sensory perception, but interpret what they see in very different ways (Van Merriënboer & Kirschner, 2013, p. 180). Unique learning experiences of sense-making, which will be described in Paragraph 1.3.2, can be created for each learner through the context system used during a learning process. Therefore, if the learning context provides the platform for the individual learner with his or her own predisposition to approach that specific learning situation

from a unique and personal significance paradigm, personal significance may be utilised more effectively, and will possibly enhance the learning experience.

### **1.3.2 *Sense-making as a learning process***

According to Aggestam (2006, p. 3), learning is a major process of human adaptation which indicates a much broader concept than is commonly associated with schools and classrooms. Adaptation is described by the American Heritage Science Dictionary (2005) as a change in structure, function or behaviour by which a species or individual improves its chance of survival in a specific environment. Savchenko, Borges and Pandeirada (2014, p. 49) argue that a functional-evolutionary learning approach suggests that memory systems have evolved in a way that allows people to remember survival relevant information. Many organisms, including humans, learn useful adaptations during their lifetime. These adaptations are often the results of an exploratory search for meaning which tries out many possibilities in order to discover a good solution within a specific challenge in their environment (Hinton & Nowlan, 1987).

Sense-making as the focal concept involves turning circumstances into situations that are comprehended explicitly in words and actions. Sense-making is seen as central to this ideation in learning, because meanings materialise in learning within the context of the information, situation or procedure as argued by Weick, Sutcliffe and Obstfeld (2005, p. 409). Maitlis and Christianson (2014, p. 57) describe sense-making as the process through which people work to understand issues, events and information that are novel, ambiguous and confusing. Jarvis (2006) argues that at the heart of our thinking about learning lies intention and meaning, but in a paradoxical relation, we have to learn meaning.

### **1.3.3 *An enabling learning architecture***

The words “learning architecture” as a concept within the field of learning and development are not particularly commonly used. In an online search, Google Scholar returned a total of 697 sources for an exact word search on learning architecture, Wiley Online only yielded 36 sources. Springer Link indicated 114. Most of these returns were in terms of learning within a technology environment such as e-learning and m-learning or more so in the fields of robotics and artificial intelligence. In conceptualising a learning architecture, within limited academic

definition, the researcher proposes a working definition for the purposes of this dissertation. Starting with a definition of architecture and then contextualising the working definition within the concept of a learning architecture.

According to Your Dictionary Online (2016), architecture is firstly defined as the characteristics or features of design that make something unique or representative of a specific style. Secondly, architecture is defined as the method of designing and building something into a usable and pleasing form (The American Heritage Science Dictionary, 2005). Recognising that there is a direct reference to the design of learning within the concept of a learning architecture, it is important to note that the researcher does not wish to limit the design of learning to the context of instructional design as is a common practice within the Learning and Development industry. Within the field of instructional design, the most commonly used concept is the ADDIE – Analyse, Design, Develop, Implement and Evaluate - principle as described by Van Rooij (2009). At this early stage of the study the researcher does not want to limit his thinking to a specific practice such as the ADDIE principle.

In understanding a learning architecture, the researcher would, however, also be interested in research conducted in areas of learning design, specifically researchers who are more progressive towards a learning architecture. Such work includes areas of adult learning theory by Knowles (1984) as described by Kenner and Weinerman (2011); learning as a living system as described by Bateson (1987); the Brown and Duguid (1991) study on learning as work conducted in the workplace; instructional design theory as described by Reigeluth (2000); Wilson (2009) on collaborative learning and Isman's (2011) new model for instructional design.

Within the auspices of this dissertation, the researcher is set to proposing a working definition for a learning architecture that is in line with some to the existing views of a learning architecture. According to Stein and Coburn (2007, p. 9), a learning architecture focuses on expressing and reflecting the contrasting conditions for learning within different environments. A learning architecture can also be referred to as a design framework for systemic learning activities to develop organisational capability in order to accomplish business goals (Duke CE, 2016). In an industry study, "The Learning Architecture," conducted by Mallon and Johnson, (2014), they define learning architecture as a map of the learning culture of an organisation and

describe its components, structure and benefits to the bottom line. A learning architecture comprises a framework for understanding existing paradigms of change and complexity (Jaques, 1997). It adds value by mapping the learning needs agreed upon and L&D strategies in terms of the business needs, and by helping business leaders prioritise and deploy resources to achieve business goals.

The researcher therefore would suggest the following as a working definition of a learning architecture for the purpose of this study: A learning architecture is an overall map connecting various elements of learning to the use of learning, including the design, delivery and the demonstration of learning, enabling specific business results.

#### **1.3.4 *Multi-frame Thinking***

In conceptualising multi-frame thinking, the researcher conducted an online search via five data bases, resulting in 146 results of which only four were useful within the context of this dissertation. Within this search, the primary contributing authors seems to be Bolman and Deal (1991, 2000, 2011, and 2013). Bolman and Deal (2013, p. 5) describe a frame as a mental model, a set of ideas and assumptions that an individual entertains to help understand and negotiate a particular territory.

Reframing, as a core skill of the modern leader, and posited by the researcher, today's learner requires an ability to think about situations in more than one way (Bolman & Deal, 2013). Applying multi-frame thinking leads to a more comprehensive understanding of the problem situation (Brocklesby & Mingers, 1999) and learning situation. It allows the learner to find the best way of dealing with the issue at hand through the emergent reframing the manner in which the situation is understood. Senge and Sterman (1990) advocate the use of systems maps as instruments for understanding the whole, and the ability to examine how the parts are interrelated and connected. Santin and McDaniel (2013, p. 3) link multi-frame thinking to Senge and Sterman's (1990) systems thinking by referring to Bolman and Gallos (2011) who argue that multi-frame thinking requires that leaders should see the whole, as well as the parts, when creating a shared vision within organisations.

Multi-frame thinking requires moving beyond narrow, mechanical approaches of understanding (Bolman & Deal, 2014). Although Bolman and Deal (2013) refer to the four frames, structure, human resources, political and symbolic. The researcher posits that in multi-frame thinking, the frames should not be limited or structured. In this the researcher wants to suggest a working definition for multi-frame thinking as a paradoxical disposition, holding more than one view of a reality or situation, even if these multiple views might be seemingly contradictory at times. In this suggested working definition, the learning is not set to unlearn any viewpoint, but rather to add additional frames of thinking, thereby strengthening the personal significance of the individual learner.

### **1.3.5        *Human “being” versus human “doing”***

Connecting to the flow theory as described by Csikszentmihalyi (1975), within the phenomenon of personal significance, are the concepts of “being” and “doing”. “Being” and “doing” play the catalyst role within personal significance in that they act as the catalysts within the concept of learning (Crenshaw & Kenney-Noziska, 2014, p. 35). Being and doing, however, may be seen as an integrated position in which both are equally important with an approach of “both...and” rather than “either...or” as introduced by Viljoen-Terblanche (2008, p. 19). Viljoen argues that within an inclusivity transformation strategy “doing” is that which we must do and “being” is the way in which it must be done. She further argues that within a traditional approach to strategy translation, the “being” aspect is generally refuted, whereas the “doing” is executed more effectively. To the point where “being” is generally refuted, Jarvis (2006, p. 5) argues that learning is an essential element of “being”, which is at the heart of our human existence. Crenshaw and Kenney-Noziska (2014) refer to Rogers (1980), recognising the importance of “being” as an essential element of existence in describing the concept of being present, or our presence in being. Jarvis (2006) then makes the statement that theories of learning must embrace a holistic existentialist perspective.

The human “being” is more focused on during traditional training. Wilcock (1999, p. 1) describes “doing” as providing the mechanism for social interaction and social development and growth. In the researcher’s experience, many traditional training interventions follow such a mechanistic approach. Wilcock refers to Maslow (1968)

in describing “being” as the existence, nature and essence of an inner life. This description of “being” would appear to be a low focus, if any focus at all, during traditional training interventions. Therefore, the researcher posits that the level of integration and balance between human being and human doing might be seen as a key indicator of the effectiveness of a learning architecture that will enable co-creation of work realities by adding to the development of the personal significance of the learner.

### **1.3.6 Co-creating work realities**

In the concept of co-creating work realities, the focus is on the impact of learning within the workplace. Similar to the previous two primary concepts co-creating work realities within the context of learning and the influence of learning on co-creation are not widely covered in academic literature. In an online search, only a few relevant articles were found. Although Google Scholar returned 16 300 on a search for co-creating, when it was combined within the syntax of learning, zero returns were generated. The nexus database returned 37 000 results for co-creating, but only one result within the context of learning. This was not useful within this study. Sage journals returned 213 results overall on the search for co-creating and 43 linked to learning. Two of these articles were found to be useful in this research.

In the context of so little available literature the researcher will attempt to define co-creation of work realities within the context of a specific learning architecture. Most dictionaries do not define the word co-create, but describe the two concepts, “co” and “create” separately. Dictionary.com (2016) describes “co” as an abbreviation of cooperate, referring to working together. The word “create” is described as “to bring together”. According to Your Dictionary Online (2016), the concept is described in a similar trend, “to create together” and to “collaborate”. According to the Business Dictionary Online (2016), co-creating allows for, and encourages more active involvement from employees or managers to create a value-rich experience. Ringer (2009) refers to the specific association that the creator or contributor has to the meaning that is establish during a process of co-creating.

From the above, the researcher would therefore like to suggest a working definition for co-creating work realities as it pertains to this study: Co-creating work realities is the action of a learner to collaborate on creating value for an employer, with close

personal association to the value created. Work realities are viewed as “personal” realities with personal value that are created and not inherited. It should consistently be changed or re-created together with the employer and colleagues alike. Co-creating work realities cuts back to the purpose of training, in that its core focus is that of enhancing individual performance. That performance is specifically viewed from the context of work performance and organisational performance.

In this concept, the researcher is concerned with the use and usefulness of the learning provided during a training intervention. In this new age where knowledge and information are driven by their accessibility and abundance via the internet, organisations are moving away from learning as a static, individual process where one gains input for work, by learning to be dynamic, and a collaborative way to work (Long, 2013, p. 2). Wilson (2009), defines collaborative learning as a requirement for co-creation as the co-creating of something (knowledge) new that did not exist before. Runquist, Kerns, Fee and Choi (2006) confirm that learning is multi-directional and that all key actors must benefit from learning, and must also help to co-create the learning and the purpose of the learning. Traditional training interventions with superficial learning strategies tend to be linked to extrinsic motivation such as completing a set of tasks or achieving a specific learning outcome, while intrinsic motivation is more likely to result in the use of learning through deep cognitive and meta-cognitive strategies (Gray, et al., 2013, p. 37).

### **1.3.7        *The VUCA Prime***

As a counterfoil to VUCA, Johansen (2012) developed what was referred to as the VUCA prime. The VUCA prime concept is an inverted approach to VUCA, which provides some insights into what training programmes today should focus on. Not just in leadership development, but if learning in general finds a base in the VUCA prime, learning will become more relevant to each learner in classrooms and other learning environments.

As described by Lawrence (2013, p. 6), the VUCA prime suggests that volatility be countered with vision. In learning, vision can represent the clarity of reasons why the learning is required, as well as the certainty of what must be done with the learning once learned. This strengthens the relevance of the learning. Uncertainty can be countered with understanding. In learning, understanding also refers to

looking beyond the functional to make sense of the volatility. Understanding also focuses on the ability to collaborate and to find meaning within and through others. Complexity can be countered with clarity, the deliberate process of sense-making of the chaos. In learning, clarity is the ability to clearly tune into all of the minutiae associated with chaos, and specifically the chaos within the learner's direct reality. Ambiguity can be countered with agility. In learning, agility can refer to the swiftness of mind. This is the ability to hold multi-frames of reference, and to test and apply relevant frames of thinking within various changing situations.

Not only in understanding the VUCA world and the VUCA prime, but also to understand that truly transformative approaches to the conditions of early 21<sup>st</sup>-century life demand a different quality of leadership, learning and creativity that largely lie beyond current learning practices (Kegan, 1994). Nicolaidis and McCallum (2013, p. 247) refer to the findings of the Organisation for Economic Cooperation and Development (OECD) 2013 survey of adult skills, highlighting the profound change in the hyper connected societies and increasingly knowledge-based economies. These complex changes and challenges that are faced by adults require different types of learning that are liberated from habitual ways of knowing and acting. Nicolaidis and McCallum further refer to Senge, Smith, Kruschwitz, Laur and Schley (2008), in describing that leadership and learning in these complex times are about creating capacity for adults, individually and collectively, to shape or co-create the future they desire.

According to Nicolaidis and McCallum (2013, p. 248), both Senge and Heifetz are making the case that single-loop learning, that is focused on the improvement of performance only, is no longer sufficient. They argue that double-loop learning that focuses on ways to learn, and ways to inquire into assumptions and mental models that govern actions and behaviours is more appropriate. They further argue that within the world of VUCA, there is a need for triple-loop learning, or what Bateson (1973) describe as Learning-Level III, which indicates learning as a corrective change in the system of sets of alternatives from which choices are made, which lead to deeper innovation and self- or collective transformation.

#### **1.4 Research problem**

Learning and development efforts and training intervention within the South African educational landscape seem to be trapped within an ineffective system of providing low-impact learning programmes specifically within its vocational and occupational education environment. Mukora (2009), argues that levels of training in South Africa remain extremely low, and the quality of provision is very erratic.

The low levels of training in South Africa might be due to the high administrative compliance focus that organisations are adopting, contradictory to the intentions of the National Skills Development Strategy (NSDS) supported by the South African Qualifications Authority (SAQA) Act. As referred to in paragraph 1.2.3, the purpose of training, that of enhancing performance of the individual, the team or the organisation, has been lost to the compliance inputs of effective administration and achieving of predetermined learning outcomes that act as prescriptions to the educator or facilitator. There seems to be very little focus on the environment in which learners find themselves, namely that of VUCA.

Given the ideation that an effective training intervention should initiate a learning process that will lead to the improvement of an individual's, team's or organisation's performance within the context of a VUCA world and the legislative environment of South Africa, the research problem can be described as follows: Firstly, traditional training interventions, classroom sessions, virtual learning spaces and learning materials are lacking learning focus, with no focus on personal significance and the connection of the learner to the workplace task he or she is learning to perform, or the challenges the learner needs to face within a VUCA environment. Secondly, it would appear that the learning architectures that are applied within the learning and development spaces of the major banks in South Africa have been influenced by the compliance focus, rather than the development of employees to enable change and innovation. Subsequently, the role a learning architecture plays in enhancing business impact or indeed promoting learning has become very limited. Thirdly, there are too many training interventions that do not contain the appropriate foundational elements to stimulate learning that will lead to the co-creation of work realities. Overall, the research problem can be described as a general lack of understanding of the important role personal significance plays as a foundational

element of a learning architecture to enables learners to co-create work realities within in new world of work.

## **1.5 Research Aim and Objectives**

The aim of this research is to explore the role that personal significance plays as a foundational element of a learning architecture to enable learners to co-create work realities within a new world of work.

### **1.5.1 *Sub-objectives of the study***

The research objectives are the following:

- a) To explore how personal significance influences learning that enables the co-creation of work realities.
- b) To gain understanding of the emergent properties of learning during a sense-making process as the foundation of a learning process within a new world of work reality.
- c) To derive insights into the way in which a focused learning process utilises personal significance in its learning architecture to enable co-creating of work realities.

### **1.5.2 *Overall research question***

What makes personal significance a foundational element of a learning architecture that will enable learners to co-create work realities within a new world of work?

### **1.5.3 *Sub-research questions***

- a) How does personal significance manifest during a learning process that focus on co-creation of work reality?
- b) What is required within a learning process to harness the emergent properties of the learning process as a sense-making process, contributing to a stronger sense of personal significance?

- c) What insights can be derived regarding a focused learning process that engages learning at a personal significance level as a foundational element to enable co-creation of the learner's work realities?

## **1.6 Research Philosophy**

According to Creswell (2014, p. 6) the research philosophy is the belief about the way in which data about the phenomenon should be gathered, analysed and used. The philosophy adopted for this study is interpretivism as the most appropriate philosophy to apply in gathering, analysing and using data within a social sciences study (Nyaruwata, 2013). The researcher positions his ontological, epistemological and methodological assumptions for this study below.

### **1.6.1 *Ontological assumptions***

Ontology is defined as a traditional branch of metaphysics that deals with problems of being, existence, inner nature and meaning (Farlex, 2012). The ontological question provides an answer to what the form and nature of reality is, and, therefore, what can be known about the research reality as described by Lincoln, Lynham and Guba (2011). Bateson (1973, p. 313) speaks of ontology as the problem of how things are, what a person is and what sort of a world this is (McNamee, 1988).

The researcher adopts an ontological assumption of constructivism, in that what learning is, and the world that learning exists in, is a constructed reality formed within the connectedness of human being and human doing. The research reality or phenomenon is founded within interaction and consciousness of human being and human doing. The ontological position of the researcher states the existence of an external reality, independent of our beliefs or understanding, which is represented through shared social realities such as workplaces.

Constructivism will allow the research to focus on the human experiences, including perception of people that is mandated historically, culturally and linguistically. It builds on the premise that there are "knowledges" rather than "knowledge" (Willig, 2001, p. 7) A context-sensitive approach, as argued by Gibbons (2000), will recognise the process of co-evolution, and allow for a process of contextualisation

that will make it more likely that the researched society will “speak back” to the science. Context-sensitivity will allow for robustness in the new knowledge that is likely to be reliable, not only inside, but also outside the research domain.

### **1.6.2        *Epistemological assumptions***

Epistemology is defined as a branch of philosophy that scrutinises the nature, foundations and limits of knowledge (Jonas, 2005). Bateson (1979: p. 242) defines epistemology as a branch of science combined with a branch of philosophy. As a science, epistemology is the study of the manner in which particular organisms or aggregates of organisms know, think and decide. As a philosophy, epistemology is the study of the necessary limits and other characteristics of the processes of knowing, thinking and deciding (Tosey, 2006).

The epistemological assumption of the researcher is interpretivism. The researcher adopts a strong path parallel to that of Bateson (1979). The researcher builds his interpretivism epistemological assumptions on the view that the epistemology of learning is locked within the limits, characteristics and processes of knowing, thinking, deciding and acting. For the researcher, acting is an indication of the implementation of what the learners know, think and decide as a collective behaviour based on how the learners know, think and decide. For the researcher, the science and the philosophy as a conjuncture unlocks the ontology of learning. It provides for a consciousness of the world of the learner and the influences the learner has on that world, given the actions of the learner formed in the consciousness of knowing, thinking and deciding.

The interactivity with the research objective is combined with the driving principles of Mode 2 management research (Gibbons, 2000). Therefore, the research, as well as the knowledge that is produced will be in context of application; it will be trans-disciplinary in its application, although within the delimitations of the research; it will be heterogeneous and will span at least two organisational boundaries; it will have social accountability and reflexivity in its approach to interviewing; and it will have a diverse range of quality control through the process of diverse literature review.

### **1.6.3        *Methodological assumption***

The methodological question is about the way in which the researcher goes about finding out what can be known (Lincon, et al., 2011). The researcher adopts a qualitative methodology. The assumed variables and personal nature of the research suggest that individual contractions can only be elicited and refined through interaction between researcher and respondents. These varying constructions will be interpreted by using inductive logic through a grounded theory approach.

Within a qualitative approach, grounded theory, as held by primarily Charmaz (2006) and secondary by Strauss and Corbin (1990), has been adopted as methodology that is congruent with social constructivism and interpretivism (Mills & Bonner, 2006). Grounded theory will allow the freedom to collect and interpret data though inductive logic that is focused solely on the phenomenon. Utilising inductive logic within grounded theory allows for a line-by-line analysis of the raw data obtained, and constantly comparing this data in search of similarities. This approach allows for freedom of including new data sources to be explored, to exclude deviances or to redefine research parameters if required.

Based on the view that grounded theory is soaked in symbolic interactionism (Milliken & Schreiber, 2012, pp. 685 - 687), the researcher acknowledges that he will be, at least passively and by default, interconnected with the research participants, data and phenomena, relying on ideas founded in the symbolic interaction tradition. Locating the research within symbolic interactionism provides a means for investigating, not only the social world, but also the contextualised processes by which the participants construct and engage with the phenomena studied.

### **1.6.4        *Delimitations***

Given the risk of not being able to formulate and make recommendations for the entire body of knowledge, the research will be limited to Cornerstone Performance Solutions (Pty) Ltd, its strategic partners and to the banking industry in South Africa as the client base of Cornerstone Performance Solutions (Pty) Ltd. The banking industry of South Africa will be seen as part of the corporate training landscape representing one of the largest sectors of the South African economy.

According to the South African 2013 Banking Survey conducted by PwC, the total number of employees across the 22 banks they surveyed are expected to increase from 150 760 to 154 354 by 2016. The Big Four banks employed 129 060 people in 2013 and this number was expected to reduce by 3.2% to 125 000 in 2015. Participants included in the survey were 12 domestic and 10 foreign banks, ranging from local full-service banks to niche banks (PwC South Africa, 2014).

Further to the above delimitation, the research will also be limited to a single aspect of a learning architecture: that of learning in the domain of complexity and the role personal significance plays within the emerging properties of complexity. The study does not set out to define personal significance, but rather to describe personal significance as it relates to learning. This research will therefore also serve as leading research to a further study on defining and structuring a full learning architecture that will be geared towards answering the minister's question and the researcher's bigger business problem.

## **1.7 The Role of the Researcher**

In this study the researcher, as an Education Training and Development practitioner, as a designer of skills development and a builder of human capital in South Africa. The researcher will fulfil three distinct roles. Firstly, he will fulfil the role of a dedicated student with a Mode 2 knowledge production Institute. Within the role of a student the researcher will suspend his own knowledge to enable the development of new knowledge, learning and personal growth. The researcher became a student in searching to fulfil his curiosity for knowledge within the field of study to improve the learner experience. As the student, the researcher will use this dissertation to further refine these concepts as described in Paragraph 1.3. It may be an outcome of the research that the key concepts are organised and structured into a framework at the end of the research, based on the researcher's findings. Such a framework would possibly serve learning designers, managers of training and thought leaders in the field of learning and development with insight as to what must be understood, thought of and accomplished in terms of the foundational element of personal significance within an effective training design, also referred to

as a learning architecture, with a view on enabling learnings within a VUCA world and a highly legislatively regulated environment.

Secondly, it will be the role of an experienced practitioner and participant within the learning and education fraternity. With almost 30 years of extensive experience and active involvement in the field of learning and development throughout Africa and specifically in South Africa, the researcher enters this study with a certain sensory perception of the field of study (Van Merriénboer & Krischner, 2013, p. 180). From this role of the practitioner, the researcher is searching for a better approach to design and deliver learning for a designated population of the South African business community where, and through which, a bigger business impact can be made.

Thirdly, the researcher is also an employee of Cornerstone Performance Solution (Pty) Ltd, a training company and provider of learning solution primarily to the banking industry in South African and Sub-Saharan Africa. The researcher represents Cornerstone Performance Solutions, the sponsor of this study, as a thought leader in the previous of business impact learning within its client base and the learning and development industry in South Africa. In this the researcher is focused on searching for innovative and ground-breaking practices to enhance the learning service that Cornerstone Performance Solutions provide.

The researcher also wants to clarify his role as the instrument of data collection and interpretation (Denzin & Lincoln, 2003). The key concepts, as described in paragraph 1.3, are the departure point of thinking (Marshall & Rossman, 2011, p. 220) for the study. The researcher consciously suspended his insight from his role as an experienced practitioner and as an employee, to examine the concepts as a student first. The researcher sees his participation in the study, given the three roles, as a balanced role between insider and outsider (Punch, 1998). The researcher predicts that he will be more of an insider at the early stages of the study and will become more of an outsider as the study progresses.

## **1.8 Unique contribution**

### **1.8.1 *In general***

As a return on the researcher's investment in this project, the researcher hopes to make a contribution to the area of learning and development in general, in all industries that utilise corporate training as the mainstream of their occupational and vocational education system for development of their human capital. The research further seeks to contribute to the general practice of the learning and development fraternity of other organisations and training provided within South Africa and the bigger African continent.

### **1.8.2 *The learning and development fraternity***

Viewing the state of the learning and development efforts in South Africa, it is difficult to see how learners are prepared for a VUCA world, or how skills are developed beyond the interest of just employability. A change in the approach to learning and development in South Africa is most likely required. A shift in focus is probably required in providing more training that allows learners to learn, with enough personal significance to makes sense of their world of work so that they can contribute to the prosperity of the country by co-creating future work realities of a new world of work. In changing the current learning paradigm of developing the employability of the South African workforce at large, and specifically the South African Banking workforce to a focused effort of improving positive contributions in the workplace, with a conscious effort to integrate an enabling learning architecture with the compliance requirements of unit standards of learning, exit-level outcomes and administrative quality assurance requirements, training interventions might become the tool that unlocks the significant potential of organisational human capital.

Therefore, this research will attempt to make a unique contribution to the learning and development industry by establishing the importance of personal significance of the learners as a key element of an enabling learning architecture that may empower them, not just to be more employable, but also to be valuable to the organisation through their ability to co-create work realities which will allow them and their organisations to survive, transact and prosper within a new world of work.

### **1.8.3 Cornerstone Performance Solutions**

More specifically, the researcher will contribute to the body of knowledge of Cornerstone Performance Solutions (Pty) Ltd, as his employer. Also, the research may benefit the banking industry in South Africa directly as the client base of Cornerstone Performance Solutions (Pty) Ltd, who will be the indirect receivers of the results of this study. The researcher intends to utilise the learning from this dissertation and the outcomes thereof as a differentiating strategy for Cornerstone Performance Solutions (Pty) Ltd and a positive improvement in the quality of learning provided to its clients. The researcher hopes to implement and apply the meta-insights and possible framework from this research as a practice within the everyday design structure of the learning solutions produced by Cornerstone Performance Solutions (Pty) Ltd.

### **1.9 Ensuring quality data**

As with all qualitative research, grounded theory is open to the possibility of error, and most probably that the researcher might misinterpret the data (Elliott & Lazenbatt, 2005). To counter this possible error, it is acceptable practice within a traditional qualitative research study to return to the participants to validate the accuracy of the individual interview transcripts, as well as validating the researcher interpretation of the data (Seale, 1999). Elliott and Lazenbatt (2005) argue that although member validation is seen as the “golden standard” in qualitative research, it introduces an additional and separate method in the research process, which the researcher in grounded theory may opt not to use. Their view is that checking is built into the research process, and is seen as an integral part of constant comparative analysis and theoretical sampling.

Following a Strauss and Corbin approach to grounded theory, the researcher is looking to apply a more systemic tactic to ensure the quality of data. Strauss and Corbin (2008) described a method whereby the research practice of data sampling, data collection and data analysis is not seen as distinct and separate. The core focus of Strauss and Corbin’s approach in ensuring data quality lies in theoretical sampling, theoretical sensitive coding and continuous comparative analysis (Glaser & Strauss, 1967).

Both Glaser (1978) and Glaser and Strauss (1967) argue that grounded theory is not about the absolute truth, but rather in the probabilities. The results of grounded theory are therefore not a reporting of statistically significant probabilities, but a set of probability statements about the relationship between concepts. Validity in its traditional sense is not of as much importance in grounded theory. Glaser and Strauss (1967) contextualise that quality in grounded theory must stem from the modifiability of the emergent theory. They refer to the way in which the theory can be altered when relevant data is compared to existing data. A further aspect of quality is the workability of the data. Workability refers to the situation when the theory explains how the real-life problem is being solved with much variation (Glaser & Strauss, 1967, p. 192). Establishing quality in grounded theory is also about relevance. A relevant study deals with the real concern of the participants, and is not of academic interest only. For Glaser and Strauss (1967, p. 5) it was important, as it is today within grounded theory, that the quality data and the emergent theory fit the situation that is being researched. "Fit" can be described as how closely concepts fit with the data they represent, and how, through constant comparison, the data and concepts fit. The researcher will continuously strive towards a quality study by recognising that grounded theory is not about the right and wrong, but about the fit, relevance, workability and modifiability of the data.

Seale (1999, p. 71), having critically analysed the different methods of member validation, cautions against over-reliance on traditional methods of respondent validation within grounded theory studies. Instead, he highlights the importance of the researcher's readiness to revise claims in the light of what is revealed, rather than confirming mutual value positions between the researcher and what is researched. The progressive nature of theoretical sampling and constant comparative analysis suggest that the researcher utilise people who have different experiences to see whether the data holds new findings or conformations of the data (Elliott & Lazenbatt, 2005).

Within a grounded theory study, where the research participants allow the researcher into their world, this is seen as an act of trust, and that trust must be honoured (Urquhart, 2012). Ensuring that the quality of the data that they share is honoured the researcher should ensure that the data quality and integrity are kept.

The researcher recognises his own predisposition that most L&D practitioners in the field are focused on the predominant paradigm of training. That paradigm is a compliance-driven event whereby learning outcomes are achieved as a tick-box exercise where the prescribed content is covered, and therefore learning is seen to be achieved. This focused the researcher to strongly consider the substantive area of research for which the data was to be collected, regarding the collections, interpretation and reporting of quality data. Given the aim of the dissertation as described in Paragraph 1.5, the researcher will have to ensure that there will be sufficient fit and authenticity within the participants selected, as well as sufficient truth value within the data collected. To ensure this, the researcher insist on purposive sampling and purposive data to be collected.

#### **1.10 Ethical considerations**

Due consideration will be given to the ethical issues surrounding research in the social sciences and within the ethical code of the Da Vinci Institute for Technology Management. The research will be designed to adhere to concepts of mutual trust, acceptance, cooperation, and the expectations of the research participants. Further to this, the research should not damage the dignity of any participant, or infringe on a participant's vulnerability owing to their youth, age, poverty status, ignorance or powerlessness. The research is conducted locally, and therefore does not raise any ethical concerns regarding the exploitation of vulnerable populations.

Declarations of confidentiality and anonymity will be put into place with the individual participants. All identifying information will be removed from collected data and information will be referred to within a code system. All respondents will be assured that the data that they will provide will be used for academic purposes and for informing a body of knowledge on the research subject. After completion of the study, all the participants will receive feedback on the study.

## **1.11 Chapter layout**

This research dissertation consists of seven chapters, including this chapter, which serve as an introduction and orientation to the topic. It further provides a broad outline of the purpose, objective and process of the research.

In Chapter 2 the research design is discussed. It provides details of the research methodology used in this research study. The administration of the semi-structured interviews, the research population, data-sampling, data-collection and data-analysis methods are discussed.

The next chapter, Chapter 3 deals with the results from the qualitative study are presented in an attempt to provide context to views of the expert participants in the interview. A detailed introduction of the research participants is then made, to be followed by the results from the interviews.

In Chapter 4 the researcher will share the analysis of the data collected based on grounded theory method. The focus of this chapter is to present the data analysis and share the researcher's analysis results.

A focused review of current literature within the substantive area of the study to support, clarify and present an academic perspective on the data gathered and analysed in the previous chapters of this dissertation follows in Chapter 5. This chapter serves as an overview of the literature on issues relevant to the phenomenon.

In Chapter 6 the results will be evaluated and discussed within the context of the research rationale. The analysed data and the literature review that were conducted will be synthesised and the correlation between empirical data and current literature will be discussed.

In Chapter 7 the researcher answers the research question and sub-questions through an implementation and recommendation discussion. The researcher will further discuss the implementation and recommendations from this study by introducing a thinking framework to unpack the concepts and variables of the research.

# **Chapter 2:**

## **Research Methodology**

### **2.1 Introduction**

In this chapter, the researcher provides an overview of the research methodology applied in this dissertation. The researcher has selected to follow a grounded theory methodology according to Charmaz (2006), as a qualitative researcher methodology. This selection was made based on the researcher's initial concept of a learning process as described in Paragraph 1.3. Grounded theory was selected with the intent to develop a deeper understanding of the phenomenon of personal significance within a learning architecture that will enable co-creation of work realities. The chapter is organised under the headings of qualitative research, grounded theory, research design and literature review.

### **2.2 Qualitative Research**

Ormston, Spencer, Barnard and Snape (2013, p. 3) define qualitative research at a general level as a naturalistic, interpretative approach, concerned with exploring phenomena from the interior, and taking the perspectives and accounts of research participants as a starting point. Corbin and Strauss (2008, p. 4) describe qualitative research as a form of research in which the researcher collects and interprets data, where the researcher is as much a part of the research process as the participants and the data they provide.

Following an interpretivist paradigm as described in Paragraph 1.6.3, provided the freedom to collect and interpret data that was focused on the phenomenon. Data were gathered in the most naturalistic manner that was socially and experientially based. This allowed for intangible mental constructions which are not more or less true in any absolute sense, but simply more or less informed (Guba & Lincoln, 1994, p. 110). The researcher therefore followed a qualitative approach, and become part of the research process through the naturalistic gathering and interpreting of focused data.

## **2.3 Grounded Theory**

Glaser and Strauss (1967, p1) argue that grounded theory, is primarily associated with qualitative research. Grounded theory constitutes an innovative methodology facilitating the discovery of theory from data where the research is not focused on testing a hypothesis taken from existing theoretical frameworks, but rather develops a new theory from the data collected in the field. McCann and Clark (2003) and Payne (2007), argue that grounded theory is an effective research strategy for phenomena of which there is a paucity of knowledge due to relative little research (Dunne, 2011). Grounded theory was selected because of the very limited current research on this topic.

Grounded theory enables a contextually rich perspective of the processes shaping the phenomenon, making it an ideal research technique (Kempster & Parry, 2011). Moving systematically from categorising data related to the phenomenon towards linking those categories, an integrative picture can be developed of the emerging context-based explanation of the phenomenon. Within utilising grounded theory, the research adopted a contextual examination of the social processes within and during a learning process as described by Kempster and Parry (2011, p. 109). In this dissertation, the researcher followed grounded theory as structured primarily by Charmaz (2006), and secondary by Corbin and Strauss (2008).

## **2.4 Research Design**

### **2.4.1 *Introduction to research design***

In this section, the researcher will introduce the research design, as the overall strategy that was chosen to integrate the different component of the study. This section then, constitutes the blueprint for the collection, measurement and analysis of data (De Vaus, 2001). This section will be organised under the sub-heading of sampling, data gathering and data analysis.

### **2.4.2 *Sampling***

Given that grounded theory was selected as the research method, theoretical sampling was applied in selecting the participants for the research. Theoretical sampling allows for open and flexible data collection. Theoretical sampling leads

the researcher to collect data within the areas that best serve the development of the study (Corbin & Strauss, 2008). Unlike conventional sampling, where the data collection is pre-structured according to the participants – from where, how many and of which type, theoretical sampling focuses on finding data that will inform the phenomena. As Corbin and Strauss (2008, p. 135) explained; “It is concepts and not people per se that are sampled.” In this study, the researcher applied theoretical sampling to guide data collection to those areas that best serviced the research. For the sampling, the focus was on the concepts key concepts as described in Paragraph 1.3, and specific L & D practitioners that most likely had experience regarding these key concepts.

Theoretical sampling was chosen because it is concept-driven (Corbin & Strauss, 2008). It enabled the researcher to discover the concepts that were relevant to the problem, and allowed the researcher to explore the concepts in depth. It was further chosen because it is cumulative (Corbin & Strauss, 2008). Each event that was sampled, built upon concepts derived from previous data collected and analysed, adding new properties, dimensions or variations to the concepts. Another consideration in choosing theoretical sampling was to explicate the identified categories (Charmaz, 2006).

At the start of the research, there was an indication that eight interviews with experts would be conducted as recommended by Viljoen (2017). The participant was deemed an expert determined by criteria such as current influence in the workplace, ten years or more of involvement in the field and current role in the field would be sufficient, with the proviso that re-interviewing may occur. Two different types of experts were be sampled, one type where the problematic issues, as described in the research problem in Paragraph 1.4, and the conceptual variables are prevalent in their empirical world and a second type where the problematic issues and the conceptual variables are not prevalent in their empirical world. Also, sampling was not restricted to people only, but within the context of theoretical sampling, literature was included in the description of sampling. Although the literature review was withheld as will be described in Paragraph 2.5, literature for sampling purposes were focused on learning as personally significant, learning in the complexity domain,

learning as an architecture, learning to enable co-creation, learning as sense-making and learning influences and focuses. All of the above was treated as data.

### **2.4.3 Data Gathering**

In this section, the researcher describes the approach followed during data gathering. As a qualitative method, grounded theory has one great advantage over quantitative research – it can add new pieces to the research while gathering data, which can even occur later in the research (Charmaz, 2006). This provides flexibility, and simultaneously gives more focus than many other methods. For this study, data was gathered through intensive interviews as will be described in Paragraph 2.4.3.1.

Within the parameters of a grounded theory approach as described by Charmaz (2008) and Bluff (2005), data gathering and analysing the collected data occurred simultaneously. Each piece of data was analysed as it was collected. This process of immediate analysis allowed the researcher to build stronger focal points and increase the level of theoretical sampling. In applying continuous comparison as described by Corbin and Strauss (2008), the researcher was hopeful that the data would lead to insights into the content and the context, action, meaning and structures of the phenomena.

#### **2.4.3.1 Intensive Interviews**

To ensure that fundamental questions about what is happening were answered, the researcher applied intensive interviewing as a data-gathering method. Intensive interviews, also referred to as in-depth interviews, are described by Boyce and Palena (2006, p. 3) as a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular situation. Charmaz draws on Lofland and Lofland (1984, 1995) in describing an intensive interview as a directed conversation (Charmaz, 2006). Intensive interviewing permits an in-depth exploration of a particular topic or experience, and is thus a useful method for interpretive inquiry.

From the onset, the researcher was hopeful that the data would lead to insights into the content and the context, action, meaning and structures of the phenomena. Therefore, the researcher attempted to delve into problematic topics seeking data that described his own experiences of the participants, answering fundamental

questions about ‘what is happening here?’ (Charmaz, 2006). With this in mind, the researcher started with some background assumptions and disciplinary perspective as indicated in Paragraph 1.2.2 and 1.2.3, to guide and alert certain possibilities and processes within the data. These assumptions and perspectives assisted in shaping the research topic, and guiding conceptual emphases based on the notion of sensitising concepts rather than interrogating evidence (Charmaz, 2006). The researcher used these assumptions and perspectives as a point of departure for gathering and looking at the data. Using these sensitising concepts, the researcher evaluated the fit between the initial research interest and the emerging data without forcing the pre-conceived ideas and theories directly upon the data, rather following leads that were defined in the data. The initial assumptions and perspectives used by the researcher are graphically demonstrated in Figure 2.1 below. This structure was used in preparing the broad open-ended questions which were utilised as discussion directors during the intensive interviews.

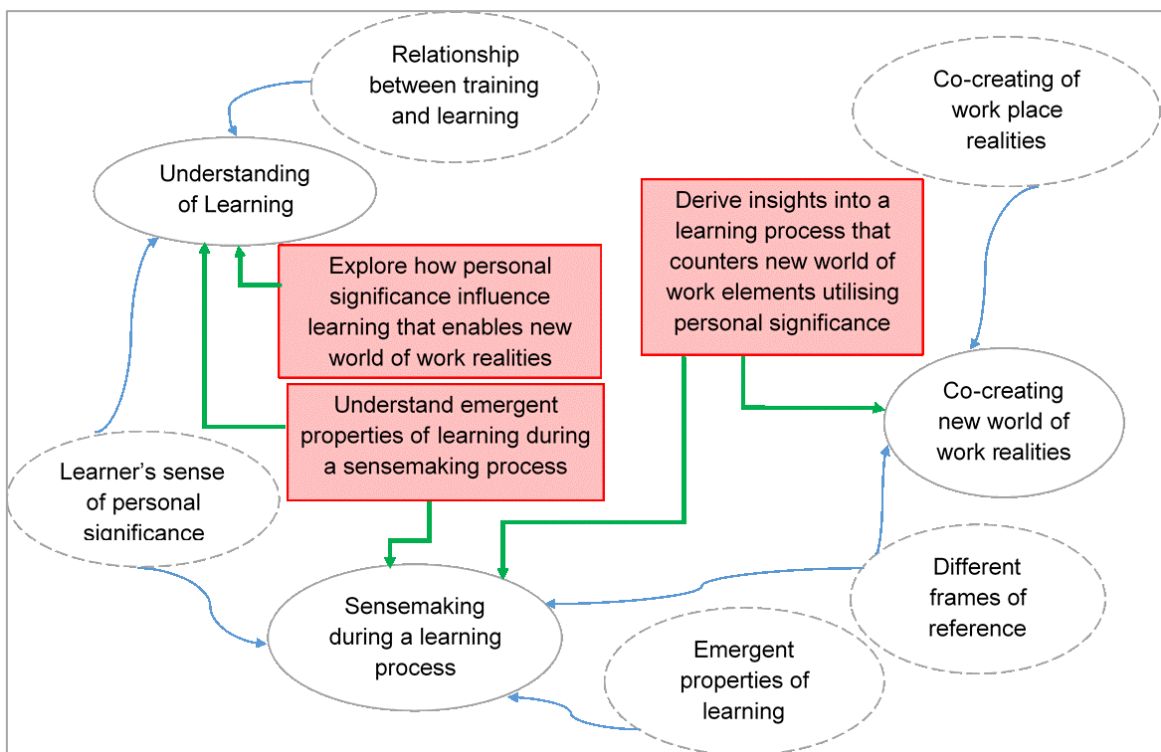


Figure 2. 1 Initial assumptions and perspectives by the researcher

Figure 2.1 above indicates how the aim, sub-aims and research questions were integrated and viewed by the researcher to articulate the initial assumptions and perspectives. The sub-aims as described in Paragraph 1.5.1 were placed in the centre of the researcher thinking as indicated by three boxes in the figure. The three

sub-aims are the following: Sub-aim i) To explore how personal significance influence learning that enables new world of work; Sub-aim ii) To gain understanding emergent properties of learning during a sense-making process; Sub-aim iii) To derive insights into a learning process that counter new world of work elements utilising personal significance. Each of the three aims was then linked to one or more assumptions or perspectives. These assumptions, indicated in the solid-line bubbles, were made as follows: Perspective a) Understanding learning, which was linked to sub-aims i and ii. Perspective b) Sense-making during a learning process, which was linked to sub-aims ii and iii. Perspective c) Co-creating new world of work realities which were linked to sub-aim iii. From the three perspectives, five concepts were developed and linked to one or more perspectives. The five concepts are: i) The relationship between training and learning, linked to Perspective a. ii) Learner's sense of personal significance, linked to Perspectives a and b. iii) Emergent properties of learning through a process of sense-making, linked to Perspective b. iv) Co-creation of work realities, linked to Perspectives b and c. v) Different frames of reference during a learning process, linked to Perspective c.

In preparing for the intensive interviews, ten broad open-ended questions were devised which can be found in Appendix A. The ensuing conversation was focused on inviting detailed discussions of topics that allowed for descriptive statements and rich stories of 'what is happening' to emerge. The questions were aimed at eliciting definitions of terms, situations and events and to tap into the participants' assumptions, the implicit meanings and tacit rules they apply, as well as their experience within the scope of the research topic (Charmaz, 2006). The questions were developed with the participants and the aim of the research in mind. With the participants being experts in the field of learning and education, the questions were structured as challenging and thought provoking. The five concepts described in Figure 2.1 above, were consistently introduced throughout the interview framework to tap into the participants' experience and thinking around the research objectives and sub-questions. These five concepts are: i) The relationship between training and learning ii) Learner's sense of personal significance iii) Emergent properties of learning through a process of sense-making iv) Co-creation of work realities v) Different frames of reference during a learning process. These five concepts were

also used to keep the interviews consistent, and will then further be used during the data analysis to ensure consistency.

The intensive interviews were conducted during one-to-one discussions to ensure that the essence of the discussion was captured. The interviews were conducted in a private office or boardroom at the participants place of work. All the conversations were audio recorded on an electronic recording device during the on-to-one sessions and directly stored to cloud storage. These recordings were later transcribed into MS Word and also stored in cloud storage to ensure safety of the data. Additional notes that carpeted the emotional setting and contextual depth of the conversation were taken during the conversation.

## **2.4.4 Data Analysis**

### *2.4.4.1 Introduction*

In this section, the process of analysing the data will be discussed. As mentioned in Paragraph 2.4.3, data analysis and data gathering were conducted simultaneously in a continuous comparative process. Data analysis was conducted through a qualitative coding process.

Qualitative coding is the process of defining what the data is about. It is the first step in the analytic process (Charmaz, 2006), and as described by Glaser and Strauss (1967), analysing data in a grounded theory approach starts with data collection, and takes place simultaneously and throughout the data-collection process. Coding is the process of naming segments of data with a label that simultaneously categorises, summarises and accounts for each piece of the data (Charmaz, 2006).

Coding within a grounded theory approach places emphasis on the emergence of ideas, concepts and further questions that may arise from the codes rather than emanating from earlier frames being applied to the data. Coding is the link between collecting data and developing an emergent theory to explain the data. Coding defines what is happening in the data and provides the opportunity to discover what it means (Charmaz, 2006). Within this dissertation the researcher consistently searched for emergent concepts across the data collected in accordance with the aim and sub-aims of the research. The researcher consistently diverged and converged through the contributions of the participants, integrating emergent

properties to develop or explain the theory as intended through the research question and sub-questions.

#### 2.4.4.2 *Open Coding*

According to Bluff (2005, p. 154) *open coding* as referred to by Strauss and Corbin (1998) or Level 1 coding as referred to by Hutchinson and Wilson (2001) is initially employed to name and give meaning to the data. Open coding was used by the researcher as the first pass at the data, in understanding the data from the experience of the participants. The process of open coding was used continuously during and simultaneously with data collections. The open-coding process was also used to compare the data as it was collected with each other to establish understanding of the participants' world of experiences. The researcher applied a three-step approach during open coding to assist in unpacking the detail of the rich data gathered during the intensive interviews. During open coding, the researcher asked: 'What is the data a study of?' and 'What theoretical category does this specific data indicate?' (Glaser, 1978, p. 57) referred to by Charmaz (2006, p. 47).

In Step 1 of open coding, a comprehensive analysis of the data is done in search of actions within the stories. This focus on coding actions rather than applying a pre-existing category curbed the tendency to make conceptual leaps and adopt extant theories at too early a stage before all the analytic work was completed (Charmaz, 2006). Although this seemed like a tedious process, it allows for ideation that would have escaped if data were read as a general thematic analysis (Charmaz, 2006). During this first step of coding the researcher's focus was on analysing and understanding the interviews and conversations between the researcher and the research participants. Within Step 1 of open coding, the researcher remained open to exploring theoretical possibilities within the data. Throughout this step, the focus was on discovering what the research participants viewed as problematic so that the research could zoom in and view the perceived problem areas analytically. A constant comparative method (Glaser & Strauss, 1967) was used to establish analytic distinction. Data was compared with data to find similarities and differences between data within the same interview, and data between interviews. The purpose of applying a constant comparative method was to make analytic sense of the data as early as possible so as to challenge any taken-for-granted understandings.

The second step during open coding was a convergent process. In this second step of open coding, the fractured codes of step one were brought back together as a coherent whole (Strauss & Corbin, 1998). This step was applied to build a dense texture of relationships of the categories by sorting, synthesising and organising large amounts of data, and then reassembling them according to the emerging analysis (Charmaz, 2008). During this step of the coding process, the researcher followed the practice of Strauss and Corbin (2008) to apply scientific terms to highlight the links between categories in order to answer the 'why', 'where', 'how come', 'when', 'by whom', 'how' and 'what happens' questions. Like Strauss and Corbin (2008, p. 89), the researcher applied the following: i) Conditions, in describing the circumstances or situations that form the structure of the studied phenomenon ii) Conditions were used to answer the 'why', 'where', 'when' and 'how come' questions. iii) Actions/Interactions in describing the participants' routine or strategic responses to issues, events or problems iv) Actions were used to answer the 'by whom' and 'how' questions. v) Consequences for describing the outcomes of actions and interactions. vi) Consequences were used to answer the 'what happens' question

The third step in the open coding process was to crystallise the open codes as the final stage of the intensive interview coding. The focus shifted to conceptualising the manner in which the substantive codes relate to each other, and the emergence of relationships being integrated (Glaser, 1978). In this step of open coding, the focus was on identifying a single category or event as the core code. This final step of open coding helped to build the core analytic narrative of the data, which helped the research to move in a theoretical direction.

During the three steps applied during open coding, the researcher expected to establish the views of the research participants regarding personal significance and the relationships that personal significance forms within a learning architecture with the focus on co-creating work realities. The purpose of the open coding process was to create a focused view of the participants within a common language, namely that of the researcher, to further understand the emerging properties from the interviews. Figure 2.2 on the next page is an example of the intensive interview coding.

|                                     |  |                    |     |   |
|-------------------------------------|--|--------------------|-----|---|
| Step 3                              | Step 2                                   | Step 1             | Q1: | Intensive Interview Questions   |
| <i>Consolidated conceptual view</i> | <i>Integrate into congruent clusters</i> | <i>First label</i> |     | <i>Verbatim transcript of the participant's answers and ensuing conversation.</i> |

Figure 2. 2 Example of Interview Coding

In Figure 2.2 above, the step-by-step open coding process is illustrated as it will be applied in this dissertation. First of all, the participant's responses per question are captured in the column to the right. Working from right to left, Step 1 is to assign the first label or code, sentence-by-sentence. Step 2 is then to integrate the Step 1 codes into congruent clusters to highlight any links between the first step codes. Step 2 described the circumstance and, or conditions within the data. In the third step, left column, the second step is consolidated within a conceptual view of the data. Reading the coding table from left to right, provides a rich texture within the data.

#### 2.4.4.3 Axial Coding

After the initial open coding of the data, the researcher further analysed the all the data with the focus on constructing categories from the open-coding process, and to summaries the categories within emerging themes (Charmaz, 2008). Both these two steps will be described in more detail below. The focus during these two steps of analysis was firstly to extract occurring categories from the coded interviews. Secondly, the extracted categories were compared across the data in a process to develop themes from the categories. For this purpose, axial coding was applied.

Axial coding (Strauss and Corbin, 1998) or Level 2 coding (Hutchinson and Wilson, 2002) follows the open coding process, and is used to make connections between categories and sub-categories (Bluff, 2005, p. 154). Glaser (1978) indicates that axial coding allows the concepts to emerge and a framework to be established from the connections between the relationships within the context, contingencies, consequences and conditions. Axial coding allowed the researcher to make connections between the sub-categories and the core categories.

Following a continuous comparative practice as described by Strauss and Corbin (1998), it was important to analyse the data, not just from a single view, but to corroborate the data within the context of the research participant group. Data was therefore further analysed by viewing the data collectively with the purpose of finding emerging categories from the data across the data as it was collected and coded through a manual paper-based coding process. The interpretations were based on the researcher's initial background assumption, and were consistently informed and adapted to on-going interviews and memos written by the researcher during the data analysis process. The process of extracting categories allowed the researcher to view the data holistically across all the interviews. It allowed the data to reveal similarities, and for generic categories to emerge.

In the second step of the axial coding process, theoretical categories were developed. In developing the theoretical categories, the researcher employed theoretical sensitivity, which was meant to find relevant data and to reflect on all the empirical data, without forcing categories onto the data (Kelle, 2007). The researcher viewed the collective data category by category to establish theoretical categories within the data and the codes. Again, this was conducted as a manual paper-based exercise. After completion of the paper exercise, the analysis was transferred to MS Word. The purpose of the theoretical category coding was to establish specific insights and the popularity of those insights across the research participants. The search for the theoretical categories within the data was conducted with a strong consciousness of the aim of the study and the research question and sub-questions. The focus of this step was to find possible answers for the research question.

#### 2.4.4.4 *Selective Coding*

Selective coding as the final phase in the data analysis is about choosing and integrating core categories as emergent themes by relating them to other categories and core categories (Jones & Alony, 2011, p. 100). In comparing the extracted categories and the theoretical categories of the first two phases of the data analysis, the researcher was able to select and organise three themes. The research was careful not to jump to selective coding before the core theoretical categories was described in accordance with Holtan (2007, p. 276). The researcher's intent is to be

able to correlate the emergent themes in terms of the aim and sub-aims of the study. The researcher will further strive to organise the themes in such a manner that they will enable him to answer the research questions.

#### 2.4.4.5 *Data saturation*

Reaching data saturation within a theoretical sample was not seen as the point where the same pattern occurred from the data, but was based on the conceptualisation of comparisons of incidents that yield different properties of the pattern (Charmaz, 2006). In this study, there was an applied consciousness to establish the point of saturation where there were no more different properties shared, and the comparisons were clear within the concepts being questioned (Locke, 2001, p. 54). The researcher attempted to be conscious and active in deciding the point where theoretical framework was worked sufficiently, and the analysis did not bring any new categories, even though the stories of the participants might have varied.

#### 2.4.4.6 *Analytical Memos*

Thornberg (2012, p. 256) describes memos according to Glaser (2004, p. 61) as theoretical notes about the data and the conceptual connections between emergent categories. Memo-writing is typically defined as the intermediate stage between data collection and writing of a research paper (Charmaz, 2008, p. 166). Charmaz describes the process of memo-writing as the capturing of ideas in process and progress of data collection and analysis. The acts of writing and storing memos provide a framework for exploring, checking and developing ideas. It provides the opportunity to learn about the data. Analytic memo-writing is a process that allows the researcher to make his internal dialogue about the data explicit and external (Milliken & Schreiber, 2012).

Memos were written from the first interview through to completion of the data analysis phase of the study. It prompted the researcher to analyse the data and codes early in the research process (Charmaz, 2006). The researcher started writing analytic memos by expounding on his own pre-existing knowledge and experience of the phenomenon, and continued by recording evolving understanding of the phenomenon as insights deepened through the analysed data (Milliken & Schreiber, 2012). These memos documented the researcher's internal dialogue in

constructing deeper understanding of the categories, helping to bring about conceptual clarity and raising the level of theoretical abstraction. The memos further assisted in crystallising the coding and extraction of categories. It was also incorporated in the evaluation and discussion of the research results in Chapter 6.

## **2.5 The use of literature**

Utilising a grounded theory approach presented the researcher with the challenge of how and when reviewing the literature should be done. Within the field of grounded theory, debate continues over the timing of conducting a review of the literature as it is recognised within grounded theory that preconceived ideas can inhibit the process of discovery (Bluff, 2005). In *The Discovery of Grounded Theory* (1967), Glaser and Strauss explicitly advise against conducting a review of literature at an early stage of the research process (Dunne, 2011, p. 113). Then, Dunne (2011) refers to Bryant and Charmaz (2007, p. 19), commenting that since Glaser and Strauss' publication, concerns have been raised regarding how students should approach and use existing literature that is relevant to their studies as most inquiry strategies engage with literature prior to the primary collection of data. Dunne (2011) further refers to Cutcliffe (2000) and McGhee (2007), who argued that the crux of the matter is not whether a review of literature should be conducted, but rather when it should be conducted and how extensive it should be.

Glaser clearly stated his position (1998 p. 67) that review of literature in the substantive area and related areas should not be done till the latter stages of the research when it can be woven into the study as additional data for constant comparison (McCallin, 2006). Glaser is not alone in this, with (Dunne, 2011) echoing that grounded theory requires the researcher to enter the field with no preconceived problem statement, interview protocols or extensive review of literature. For Glaser, detailed review of literature would contaminate the data collection and analysis by leading the researcher to impose existing frameworks upon the data, which would in turn undermine the focus, authenticity and quality of the grounded theory study (Dunne, 2011, p. 114). According to Glaser and Strauss (1967) and Glaser (1978, 1992, 1998), theory is generated from the data, and grounded in the data. For this reason, Glaser does not believe in an initial review of literature (Bluff, 2005, p. 150).

Glaser's main objection is that the researcher may be side-tracked by acquiring knowledge and interpretations that support assumptions that are not relevant in a new area of study (McCallin, 2006, p. 15).

On the other side of the debate, Urquhart (2007) argues that there should be no reason why a researcher cannot be self-aware and able to appreciate other theories without imposing them on the data. Allowing other theories to impose on data would be both unfortunate and unconstructive, or might sacrifice the numerous advantages derived from conducting an early review of literature based on concerns about what impact existing ideas may have on the researcher (Dunne, 2011, p. 117). Bluff (2005, p. 150) refers to Morse (2001) who believes that an initial review of literature provides novices with knowledge that they can then use to compare with their categories as they emerge from the data. This view is confirmed by Charmaz (2014, p. 59) when he states that researchers should be informed about current experiences or situations that they will be studying. Strauss and Corbin (1998) updated the original grounded theory regarding the approach to review of literature, arguing that at the beginning of a study the review of literature is useful in formulating questions that act as a stepping-off points during observations or interviews. They further argued that the researcher brings considerable background in professional and disciplinary literature to the inquiry (McCallin, 2006, p. 15). Bluff (2005) also refers to Strauss and Corbin (1998), suggesting that it is not necessary to review all of the literature prior to the study.

Taking this debate into consideration the researcher recognised, as indicated by Dunne's (2011, p. 115) reference of Dick (2007) and Locke (2001) that the most relevant literature to a study may not actually be known at the outset. Therefore, the researcher opted not to conduct a time-consuming extensive review at the start of the study. Although an initial review was conducted to assist in the formulation of the research questions and to develop a current view of the aim of the study, the intensive review of literature was delayed at this point to avoid importing pre-conceived ideas and imposing them on the study, as suggested by Charmaz (2006, p. 165) (Dunne, 2011). The full literature review was only conducted after the data gathering and analysis, and is presented in Chapter 5.

## **2.6 Conclusion**

In this chapter, the researcher provided a view of the research preparation and the decision that was made at the initial phase of the research study, as well as decisions within the research during the research process. The first indication was where the interest for the study originated and how the study evolved to be a qualitative grounded theory study. It reflected on what grounded theory is as a justification for the reason why this research project became a grounded theory study.

Further, it provided an overview process of the research design applied during the study in describing the unique sampling process of theoretical sampling that was followed in true grounded theory approach. It described the gathering of data from the inception of the research to the latter stages, indicating the interaction between data gathering, theoretical sampling and data analysis. It gives an overview of the process, and provides a view of the analysis process of coding and the different coding systems that were applied during different phases of the research process. In Chapter 3, the researcher will share the interview results as the empirical data used during the analysis.

# **Chapter 3:**

## **Interview Results**

### **3.1 Introduction**

In this chapter, the results of the qualitative study are presented in an attempt to provide context to views of the expert participants in the interview. Therewith, a detailed introduction of the research participants is made where-after the results of the interviews will be given. As positioned by Viljoen-Terblance (2008, p. 279) referring to Marton (1994) and Scott and Usher (2000), the researcher presented the results in a way in which the world appears to the participants, and the perceptions of the participants in terms of the phenomenon that is described.

In this chapter, the data will be presented based on the concepts as organised within the intensive interviews as discussed in Paragraph 2.4.3.1. This will provide the reader with rich descriptions of the participants' responses, as well a description of the research settings within the areas of study, relating to transferability within the study. The responses will be reported on as summaries and interpretations of the responses. In an attempt to highlight the participants' views, some verbatim replays are incorporated in the presentation of the results.

This chapter is preceding the data analysis, and therefore does not represent the research findings, which will be discussed in Chapter 6. This chapter, therefore, serves to provide context and insight into the responses of the participants. The full transcripts of the interviews can be seen in Appendix B.

### **3.2 Relationship in data collection and data analysis**

As indicated in Paragraph 2.4.3.1, with specific reference to Figure 2.1, the collection of data was conducted through intensive interviews. The structure of the interviews was led by pre-prepared questions based on, and structured in accordance with, the three sub-questions of the research study as stated in Paragraph 1.5.2 and 1.5.3. For each sub-question, interview questions were

structured within the concept of variable analysis to seek specific variables that arise from the problematic research issues in the studied empirical world (Charmaz, 2008).

The researcher viewed the participants and himself as embedded in the research rather than as distant observers of the empirical phenomena (Charmaz, 2008). Therefore, the selected participants and the researcher himself formed an integrated relationship in the data collection and data analysis. As indicated in Paragraph 2.4.2 two different types of participants were selected for the intensive interviews. Four of the seven participants were, selected from the first type, referred to as the prevalent group. Three of the seven participants were selected from the second type, referred to as the non-prevalent group. In presenting the results of the participants' views, these views will be indicated via a code assigned to each participant. The last two digits of this code is indicative of the type of participant, indicated either by a '01' or '02'. At this point it is prudent to note that eight interviews were conducted, where one participant was interviewed twice. This participant was selected to be interviewed twice based on his level of expert status within the field of learning and development, as well as his forward thinking within the concepts being tested.

### **3.2.1        *The research participants***

#### **3.2.1.1      *Participant DS01***

As owner of a learning provider company within South Africa, DS01 is an expert in the field of learning delivery and an entrepreneur. DS01 has 30 years' experience in the field of Human Resources and learning delivery of which nine years are in banking. He holds a PhD qualification in psychology.

#### **3.2.1.2      *Participant CM01***

CM01 is an expert in the field of learning delivery and management consulting. CM01 has 15 years' experience as a learning and management consultant of which most are in the banking industry. CM01 holds a post-graduate qualification, and is currently enrolled in a Master's programme in ontological coaching at the University of Colorado.

#### 3.2.1.3 *Participant PC01*

PC01 is an ETD practitioner with 11 years' experience in the field of learning delivery and instructional design, of which six years were in the banking industry. PC01 holds an ETDP qualification.

#### 3.2.1.4 *Participant CP01*

As owner of an instructional design company CP01 is a learning delivery and instructional design expert and entrepreneur. CP01 has 11 years' experience, which includes several projects within the banking industry. CP01 holds a Bachelor's degree in Industrial Psychology and is currently undertaking an honour's degree in industrial psychology.

#### 3.2.1.5 *Participant GL02*

GL02 is a banking and educational specialist with 31 years' experience in the banking and educational industries. GL02 holds an MBA degree and is currently studying for a PhD.

#### 3.2.1.6 *Participant DC02*

DC02 is a Human Capital specialist with approximately 25 years of banking experience of which 11 years were at a senior and executive level. DC02 holds a Bachelor of Commerce degree in Human Resource Management.

#### 3.2.1.7 *Participant BA02*

BA02 is an educator and psychologist with 25 years of experience in education and extensive experience in the banking industry. BA02 holds a Bachelors of Theology and a PhD in Psychology. BA02 has delivered lectures and workshops nationally and internationally regarding learning and development needs for working adults and various topics of human development practices.

### **3.3 Conducting the interviews**

Eight interviews were conducted, with one participant being interviewed twice. The eight conducted interviews are seen as the empirical data, and are referred to as the expert practitioner voices. Also, seen as part of the empirical data, is the researcher's voice. As indicated in Paragraph 3.2, the researcher has viewed

himself as imbedded in the research, including seeing his own views as data. Seeing himself and his views as data aligns with Glaser's view that everything is data (1978). The researcher expressed his own views as empirical data through theoretical memoing which is shared in Paragraph 3.5.

The interviews were conducted face-to-face in a private setting as described in Paragraph 2.4.3.1. All of the interviews were recorded and then transcribed into MS Word. The duration of the interviews, although not actively controlled, was on average 60 minutes. However, enough time was allowed for exploring the emerging elements of the participant's inputs. During the interviews, the interview framework (Annexure A) was used as a guide and structure of the interviews, yet the participants were allowed to explore and share the experience on the peripheries of the questions. An effort was made to link all explorations and emergent properties either back to the specific leading question or the overall aim of the study. After the first interview, the interview framework was adapted, to enhance the link back to the overall aim and sub- objectives of the study. This was deemed necessary as the first framework seemed too complicated, given that the researcher had to rephrase the leading questions during the interview to create aligned understanding. The first interview, however, still yielded sufficient and usable data.

Within the process of continuous comparison, the researcher recognised that interviews later in the schedule were influenced by previous interviews, and by insights gained during the coding process of conducted interviews. This had a specific importance in that, as the interviews were semi-structured, the conversations in the later interviews were guided in more specific directions based on what had emerged from the previous interviews.

### **3.4 Results of the interviews**

The results of the interviews will be summarised below. The researcher will present the results in order of the intensive interviews, and clustered according to the sub-research questions as described in Paragraph 2.4.3.1. The results will be presented for each inquiry as verbatim responses from the participants followed by the researcher's review of the comparative experiences of the participants.

### 3.4.1 *Understanding learning*

The first interrogative focus was on the way in which learning manifests within a training intervention that enables complex relationships between emerging properties of learning content through a process of 'sense-making'.

For this inquiry, there were three interview questions (Questions 1, 2 and 3). Through this line of inquiry, the researcher searched for insights into the manner in which the participants understood learning. The focus was on the defining of learning within the context of differentiating between training and learning. Furthermore, the empiricism investigated the participants' understanding of differentiating between the factors that influenced training and learning.

#### 3.4.1.1 *Difference between training and learning*

- The participants' experiences

"Training is something that somebody stands in front of a classroom and does..."; "learning is what happens as people grow and adapt to new circumstances"; "learning is behaviour changing, ... I see cognitive thinking..."; "training makes no reference to learning"; "training is very structured..."; "learning gives you tools, knowledge and context, ..."; training focuses on specific objectives and outcomes,... learning focuses on broader context and environment..."; "training denotes what the trainer knows..."; "learning is transformative..., a learner has a choice whether to learn or not"; "learning is an attitude or mind-set"; "training is a conduit..."; "training is giving information..."; "learning is teaching people how to change..."; "training is specific to a procedure..."; "training is led, learning is facilitated".

- Comparative description of experiences

The responses from the participants allowed for the following emergent properties: DS01 reported that learning induced a change in behaviour, and, inherently a change in the individual, whereas training may or may not lead to learning. PC01 indicated that training was focused on specific outcomes, whereas learning focuses on knowledge within a context. PC01 also indicated that training relied on repetitiveness of information or procedure, while

learning relied on insight and contextualisation. CP01 indicated that training might happen without learners learning. This is in line with DS01's views. CP01 further asserted that training could become disconnected from learning. CM01 was of the opinion that training was more like traditional teaching of skills and knowledge, while viewing learning as being more transformational. GL02 viewed training as driven by information sharing, and learning as the use of information to change behaviour. DC02 indicated that learning was a broader concept than training, where training was directed and learning was open. This is similar to the views of PC01. DC02 further indicated that training was driven by organisational goals, and learning was focused on the goals of the individual. This can be linked to the views of GL02.

#### 3.4.1.2 *Factors influencing training*

- The participants' experiences

“what makes training good or bad, is whether or not there's learning”; “...business send people on training...to produce specific outcomes”; “...training is outcome driven...procedure driven”; “the knowledge and experience of the trainer is important to the quality of training”; “...content and time”; “...keep training focused and simple”; “...clear ... on expectation”; “...expected...to be successful in the job”; “outcomes to achieve...”; “tick of the boxes...”; training stops at knowledge transfer...”.

- Comparative description of experiences

DS01 indicated that learning (to the extent that it happens or does not happen) determined the quality of training. PC01 and GL02 indicated that training was an event in time influenced by logistical elements. PC01 also suggested that training was influenced by the trainer's subject matter expertise (SME). CP01 reported that training was reliant on, and driven by, specific outcomes with a focus on organisational procedures. CM01 also reported that training was dependent on specific outcomes, but related the specific outcomes to the quality of the content. CM01 added that training became a tick-box-driven event. DC02 indicated that effective training should be focused and straightforward.

### 3.4.1.3 *Factors influencing learning*

- The participants' experiences

"... learning stops at behaviour change"; "...strategic alignment"; "...take new insights...apply in work"; "...learning requires training..."; "learning is more informal..."; "...they learn from each other..."; "...it has multiple purposes..."; "training is the start of learning"; "... learning is an on-going process"; "...learning is about using the information"; "... if they are not applying what they have learnt, ... no learning happens"; "...learning... a high level of relevance is required"; "... this is improving...what I do"; "... fulfilment of potential"; "... openness to experience"; "...behaviour change...cannot happen without mind-set change"; "... personal choice, personal significance..."; "...desire to grow..."; "learning is natural...it is not pre-packaged..."; "...personal relevance"; "... learning happens in many ways"; "there is not a linear relationship between learning and teaching"; "... there is a personal problems that should be solved" "part of learning... get them to appreciate personal significance...".

- Comparative description of experiences

There were similarities in participant responses to this question. That learning should have personal relevance to the learner was reported by DS01, GL02 and DC02. DS01, BA 01, PC01 and GL02 linked learning to finding and matching learning to problems within the learner's personal context. CP01 and CM01 both referred to changes in behaviour during or after learning. CP01 indicated that learning was about a change in mind-set which led to a change in behaviour or change in attitude, whereas CM01 indicated that learning stopped at behaviour change, whereas training stopped at knowledge transfer. DS01 also indicated that there was no a line relationship between training and learning, but a dynamic relationship, where training might or might not lead to learning. PC01 reported that learning was a process of nature, indicating that learning was natural and inherent. PC01 indicated that learning involved choosing to learn and change. CP01 indicated that learning required openness to experience. DC02 indicated that training

should be combined with learning, which required an open environment of thinking.

### **3.4.2 Sense-making during a learning process**

The second interrogative focus was on how complexity thinking or higher-order thinking as a part of the sense-making process built personal significance within the process of integrating 'old knowledge' with new insights.

For this inquiry, the focus was on two concepts: Firstly, exploring the participants' understanding of the importance of personal significance of learners during the learning process, or as an outcome of the learning process; and, secondly, understanding the importance of applying multi-frame thinking in the process of integrating 'old knowledge' or existing knowledge with new insights or 'new knowledge'. Interview Questions 4 to 8 covered this section.

#### *3.4.2.1 Importance of sense of personal significance*

- The participants' experiences

"... personal significance establishes relevance..."; "... create a kind of desire..."; "enacting the realisation that learning is personal not abstract"; "... it is relevant to me..."; "... probably the most important factor..."; "... each have a different personal significance"; "if a learner does not feel worthy, important...not going to learn"; "it is a belief..."; "definitely in an adult space"; "... it is critical"; "... opportunity to reframe themselves"; "...they should be hooked in a way"; "... can see the application of it"; "...it needs personal context"; "... relevant to what they do"; "within understanding is where insight into significance is driven from".

- Comparative description of experiences

The participants provided the following responses to the fourth interview questions. DS01, BA02 and GL02 indicated that personal significance made for self-efficacy and self-empowerment. DS01, CM01 and DC02 referred to the establishment of personal relevance within learning. CP01, GL02 and DC02 were of one mind that most current training interventions are not doing enough to establish personal significance for the learners during the learning

process. DS01 further indicated that personal significance created an inner readiness to learn. DS01 stated that if there was concurrence on the relevance challenge, there was concurrence on the learning challenge. PC01 felt that personal significance was the most important factor in learning. PC01 added that learning could change the individual's sense of personal significance. CM01 specified that when the sense of personal significance was low it inhibited learning.

#### 3.4.2.2 *Emergent properties of learning*

- The participants' experiences

"... you 've got to have a combination of order and chaos or emergent properties ... leading to context and relevance"; "... you cannot have a very structured approach to learning"; "we all learn from a base of knowledge, ... adding personal significance to new knowledge is optimal learning"; "... there is value in really contextualising things for people"; "... we have to define in a very clear way what the order requirements are..."; "the emergent stuff of the learning is actually explored"; "... you want people to think differently..."; "...teach people to navigate their environment..."; "relevance exist in the emergent properties of learning"; "... working with what comes out of learning"; "... broaden the person's knowledge"; "... you cannot ignore the old knowledge"; "... we are living in an evolving knowledge world"; "... if you only supply order factor ... you get low reviews on training success, ... they expect more from training"; "any face-to-face time should be about contextualising..."; "learning should explore the emergent properties between order factors and context"; "... everyone has a personal context".

- Comparative description of experiences

DS01 indicated that in training, outcomes could be pre-determined because of its mechanistic approach, but in learning, it was linked to personal significance, and that problem-solving was different for everyone and could not be pre-determined. Learning was founded in the un-order and the emergent properties of the learning process, whereas training required the replication of procedural thinking, the known and knowable. PC01 is of the

opinion that learning should be seen as order plus context. Context is often more focused on the relationships than the order factor. CP01 conveyed that the focus should be on integrating context with existing knowledge rather than providing new information. CM01 views learning as not just being known and knowable; it should also attempt to include the complexity of new thinking. GL02 reported that relevance of knowledge only existed within the context of the learning. DC02 was of the opinion that with limitations on time in the class, less time should be spent on just order factors, and that learning should seek new relationships between existing knowledge.

Four of the participants referred to the importance of integrating the workplace context with existing knowledge. PC01 indicated that integrating old knowledge with a new context allowed for exploring emerging properties within the learning process. CP01 also referred to the exploration of emerging properties when new thinking was allowed within the same space as old knowledge, without an attempt to replace the old knowledge. CM01 pointed out that there should be an opportunity within the learning process to combine new understanding with old knowledge. GL02, however, advocated that old knowledge should be un-learned and replaced with relevant new knowledge. DC02 viewed training that was able to integrate existing knowledge of the workplace with new emerging properties as more sustainable and of greater value to the learner.

#### 3.4.2.3 *Developing multi-frame thinking*

- The participants' experiences

"... get people to slow down enough to think"; "... get them to make decisions"; "... mapping context around a procedure..."; "... discover meaning in context"; "allow the person to see the world of work..."; "the multi-level way of looking at a situation provides personal significance"; "...there should be an element of multi-frame thinking..."; "I can explore... I am making sense"; "two people can get to the same outcome by navigating differently"; "it is important to have diverse frames of thinking..."; "different people having different views about the same thing"; "... linked to complexity and work context"; "frames of

thinking are important... when you get into a problem situation”; “make the context more explicit”.

- Comparative description of experiences

DS01 indicated their importance when more than procedural thinking was required; ensuring that outcomes were linked to multi-frame thinking helped to ensure correct decisions. Content should be added to thinking about problems as context added different meanings. PC01 asserted that developing multiple frames of thinking in providing more work context led to more options, more possibilities. There was a deeper understanding. CP01 reported that not adding a work context to training was wasting time. CM01 indicated that the work context was a link to personal significance. Multi-frame thinking should add to the complexity, not the degree of complication in learning. GL02 insisted that context should be relevant. DC02 indicated that context was linked to organisational success. Context was also central to meaningful work.

DS01, PC01 and CP01 were aligned in regarding different frames of reference during learning interventions as providing new possibilities and opportunities within the existing procedures. DS01 further indicated that multiple frames of reference made the context more explicit. DS01 also highlighted the pre-conception of knowledge as a limitation to learning. CP01 added that multiple frames of reference allowed for innovation, and that brought complexity, which stimulated emergence. CM01 specified that it uncovered current mind-sets and built new mind-sets in learners, it helped learners to contextualise their reality. GL02 is of the view that it is the responsibility of the learning programme to uncover or add multi-frame thinking. It provides relevance and focus. DC02 reported that it allowed for different navigations through the information. It built levels of alignment to the organisation.

### 3.4.3 *Co-creating new world of work realities*

The third interrogative focus was on the way in which the learning architecture of a training intervention should engage in learning and personal significance to enable co-creation of the learner's work realities?

This inquiry was covered by interview Questions 9 and 10. The focus of this inquiry was on establishing a deepened view of how the learning process culminates and integrates back in the workplace. The empiricism focused on understanding the importance of learning being linked to and contextualised in the workplace, and the need for the application of learning to co-create work realities by the learner.

#### 3.4.3.1 *Understanding co-creating work realities*

- The participants' experiences

"...let's explore the idea..."; "... building and engaging ... in the workplace"; "... better map of the context to navigate the reality"; "... make sure people can read maps..."; "... in the classroom, is there construction of the workplace?"; "a work reality is a system..."; "the way you are learning shape the system"; "...shape beliefs to create significance"; "with personal significance... wouldn't see their mundane task as just a task..."; "co-create their work context..."; "... we are all in a process of co-creating something new"; "... there will be a level of understanding in the workplace..."; "they have change their way of thinking... have the chance to change the workplace"; "... if I belief in myself..."

- Comparative description of experiences

DS01 indicated that knowledge did not help unless it changed the workplace. PC01 indicated that learning provided a view of work realities, and that aligning the view was as important as differentiating the view. Multi-frame thinking allowed different views, thereby providing an opportunity to change reality. CP01 stated that integration of learning and work experiences was essential for effective learning. CM01 pointed out that creating a common understanding of knowledge and context was important. Implementation of that understanding meant co-creating. Learning could not be about

conformity. BA02 and GL02 indicated that learning interventions might assist in creating something new so that the learning process became a part of co-creating. DC02 reported that the design of the learning programme should relate to the workplace, there should be integration between learning and the workplace.

#### 3.4.3.2 *Importance of personal significance in co-creating work realities*

- The participants' experiences

"... the being would drive the energy..."; "... the ability to think differently"; "your engagement levels are different"; "strong personal significance... effects how you collaborate and co-create"; "you've made a connection"; "now that I have been here... what am I going to focus on..."; "self-belief will drive confidence..."; "... contribute in the workplace"; "learning creates self-belief"; "...no sense of self-worth, they don't co-create"; "... give them a sense of responsibility"; "... to feel important"; "... personal significance needs to be shaped..."; "... empower them..."; "change to produce better outcomes..."; "... it is not mechanistic, it is not linear – it is significant" "... more time spent on co-creating the problem that the insight solve..."; "...sense of personal significance shifts the bell-curve"; "... go from personal significance to problem significance"; "... it is beyond Bloom... it is an emotional taxonomy".

- Comparative description of experiences:

DS01 and CM01 indicated that personal significance gave energy to the change that flowed from learning. DS01 further reported that personal significance was also about making problems significant. If the problem was personal and significant learning happened, and learning was finding solutions to problems. PC01 indicated that personal significance made work important enough to change it. CP01 alluded to personal significance being a sense of self-worth. No sense of self-worth meant no co-creating of work realities. In this, learners should take responsibility for their work. CM01 also added that personal significance gave one the ability to think differently. GL02 reported that self-belief would drive confidence to change and co-create work realities. DC02 is of the opinion that not enough is currently being done to

develop personal significance during training sessions. Personal significance is what influences work realities.

### **3.5 Theoretical memos**

Theoretical memos were used by the researcher throughout the data-collection and data-analysis stages of the study as recommended by most scholars in the field on grounded theory, including Glaser (1978). Goulding (2002, p. 65) states that memos are used as part of the process of abstraction, and therefore the researcher should express memo ideas in conceptual terms, and not necessarily people terms. To this view, the researcher used the process of theoretical memoing to conceptualise and integrate his own ideas and the data as abstracted from the interviews and conversations. In the sub-paragraphs below, the researcher will provide the memos as he constructed them during the research process. The memos are sorted according to the four primary categories that emerged and that are integrated into the theory discussion in Chapter 6.

#### **3.5.1 *Memos on Personal Significance in Learning***

PSM01

A seemingly current reality within the learning environment or learning event is that learning becomes confirmation of the "teacher's" knowledge. Learning as confirmation of someone else's knowledge is evaluated to the standard of the other. Learning is then labelled as the level of recall of what someone else knows or does, or the way in which someone else behaves. In that case learning is not required, but recall and duplication without thinking are required. From this no creation can exist, and there is no innovation or existence outside the norm or the rules of others.

PSM02

Training effectiveness is often measured not by what the learner has gained, but rather by what the trainer has given. Training is seen as successful when the trainer has ticked all the boxes as set out in the objectives. This is also referred to as the learning outcomes. This approach of trainer-led processes and practices allows for a uniform delivery of objectives to various groups of learners. Everyone gets the

same. The success of the delivery of the training is then measured to the extent that everyone, most or as many as possible, reports that they received the same message, the same thinking and the same information. Be it through learner feedback or through a process of assessment, the objective has been reached when the learners confirm what the "teacher" knows. Trainers and assessors feel important or gratified if the learner confirms or conforms to what they, the teachers know. It becomes a confirmation of the trainer's significance to the level that the organisation's goals have been performed and the objectives of the training session have been met. The objectives are met when the learners think the way the trainer thinks. This may not be the real thoughts or view of the trainer, but more those of the organisation as interpreted by the trainer.

As a deterrent of training effectiveness this traditional approach to training, which over time and for various reasons has become the norm for training, is falling short in many ways. The biggest shortfall is that it does not focus on learning. It does not focus on the individual and the personal significance of the individual. It does not focus on what the individual must do to enhance individual performance which is the key element in training.

#### PSM03

Knowledge, as much as it is the indicator to change behaviour, must also be the indicator not to change behaviour. Not to change in behaviour as a conscious decision based on new knowledge acquired, or due to the emerging properties of knowledge is as much learning as adopting a new behaviour.

Learning, therefore, is more about raising the level of consciousness to enable a person to make the decision to change or not to change his or her behaviour. Selecting the most appropriate behaviour in a given situation, within an ever-changing environment is where learning becomes most evident.

#### PSM04

Learning is a natural state of human being. However, learning in its natural state is only in predisposition when the knowledge presented is relevant. Relevance exists when there is a direct requirement for the knowledge. (Knowledge here is grouped

as information, experience or skills that are required to solve a life problem. A life problem is seen as any situation that requires a solution to advance or improve any situation within the life of the person's reality, including, but not limited to, the work environment.) When the knowledge is required or necessary to advance within or through a specific situation, learning is required. Knowledge can be provided by various means and media, yet what is required is learning from the knowledge. This can only occur if there is enough relevance within the knowledge presented. Therefore, for learning to be created, the necessity for learning must be created for the knowledge to become relevant, and then only will learning occur.

If considering learning in a group, such as training in a classroom situation, given this relevance clause, learning is highly unlikely to occur for all group members. At best knowledge will only become relevant to some of the group members, who will then learn from that knowledge. Relevance can be increased via the introduction of multi-frame thinking, whereby the same situation is viewed from different angles of thinking. The application of multi-frames of thinking may create relevance for more of the group members, even some that may not have had a relevance experience before. By focusing on creating relevance, and not on the actual information content, learning becomes more appropriate, more visible or more apparent.

#### PSM05

Learning is not just the acquisition of information. It is also about the usefulness of information. Useful information becomes knowledge when it allows a person to connect the dots or connecting the dots that are not normally connected. That provides the learner with a sense of knowing. Knowing or knowledge provides a level of, or a new level of, consciousness to the person. This consciousness allows the person to identify patterns that are relevant to him or her. These are patterns that emerge from the knowledge and the application of the knowledge in different situations.

Connecting the dots becomes personally significant once the connected dots are relevant to the person connecting them. The person with the knowledge or the heightened level of consciousness is more likely to recognise new patterns or emerging properties within his or her own world, touching their own realities and

thereby showing how to change or not change their current behaviour. Knowledge, when personally significant is therefore the turnkey to learning. If learning is recognised as the change in behaviour with knowledge providing the insight or consciousness, knowledge must be the catalyst. However, knowledge as much as it is the indicator to change behaviour, must also be the indicator not to change behaviour. Not changing behaviour as a conscious decision based on new knowledge acquired or due to the emerging properties of knowledge is as much learning as adopting a new behaviour.

#### PSM06

As observed by an interviewee, humans do not seem to have the capacity to learn. If learning is defined in the way in which they change behaviour, or as behavioural change, the change in behaviour must be sustained. Yet, as observed, humans as a society still struggle with age-old problems that do not seem to go away. After two millennia as a world society, there is still substance abuse, there is still crime, there is still alcoholism and there is still child abuse. It seems that we cannot change as a society. Changing back to the default behaviour as a society seems like a human trait. It might be more difficult to change the human being. Therefore, a distinction must be made between changing the human being and changing human behaviour. Human behaviour can change, and normally changes as a conscious decision based on knowledge alone. Yet, seemingly, it is not sustainable unless there is a significant change in the consciousness of the person. When knowledge becomes personally significant, leading to a change or heightening of consciousness, there can be change in the human being, who, as a changed being then makes the decision within a situation to change or not to change. In a society as a collective consciousness, it would seem that not enough has been done to facilitate the changes to the social problems within the world. Where the collective consciousness has been heightened enough, there is evidence that a society has changed. The being of the society has changed.

To the researcher's mind, such an example is racism in South Africa. The researcher recognises that there are individual occurrences of racism in South Africa, but as a collective society, the view is non-racial. For 40 years the aim of the freedom struggle in South Africa was about raising the collective consciousness of

all the citizens of the South African society. That has been achieved, and where racism was the means of rule, now it is the history of the country. As a society, South Africa has changed, and most of her citizens choose consciously not to act in a racist manner. Her new citizens, the new South African generation, are born with a higher level of consciousness, and act without an active decision in a non-racial manner.

PSM07

If training would be effective, there should be more than just a change in behaviour, even more than a sustained change in behaviour. There must be a change in the human being. There must be a change in the consciousness of the person that will manifest consistent decisions to be different, and thereby act differently with a consistent different result. People must become new, different and more significant within their world of life and world of work. There must still be life after the change. There must be the ability to be creative, and to co-create new realities. A heightened personal significance with a far greater consciousness is a far better outcome of learning than just a behavioural change.

### **3.5.2        *Memos on Multi-frame Thinking as it relates to Higher-order Thinking***

MFTM01

Given that learning is still a bit one-dimensional in South Africa, introducing re-framing as a learning mechanism may be risky. Because the learning system is still on-dimensional the risk of introducing multiple frames of thinking is that of making the learning space complicated rather than complex. Learners may not be able to make the connections between emerging properties of multi-frames of thinking, viewing the different frames of reference as conflicting and disjointed.

There is a further risk that when the facilitator introduces multi-frames of thinking, that frame of thinking becomes the new knowledge, and is purely accepted because it was introduced by a perceived authority. Complexity in emerging properties must be managed so that re-frames can develop rather than be introduced. This indicates that re-framing, and indeed creating multiple frames of thinking within one

knowledge concept, must be by design rather than by process or forced leader-led interaction.

#### MFTM02

Designing for a co-created learning event requires a bit more complexity via layering the design with possibilities where the specific concepts are captured through options. Learners must be provided with the opportunity to create their own learning path. They must be allowed to explore their own learning according to their unique value system in what they need confidence for and what problems they need to solve from this learning. These options or paths of learning must be built into the learning and the learning must be engineered to do this. It can be explicitly made known to the learners that they are co-creating their learning according to their unique learning needs, and that they should find and link their learning to their personal problem system and significance system. This may also enable the learner to go back into the workplace and with the learning gained, co-create the work reality.

#### MFTM03

The aim of taking learning to the un-order space and into the domain of complexity would be to develop emerging properties. However, the risk lies in forcing the properties through linking of multi-frames of thinking and multi-frames of reference by sharing of experiences. Emerging properties must be allowed to develop, and cannot be induced or forced. If they become forced by the learning leader or facilitator, learning will become a linear process of moving from one view to another view. Complexity of learning will not develop, and the value of learning will not emerge. The learning experience must hold a value for the learner. The value must be unique to the learner. The value to the learner is seen as value only if it helps the learner to solve problems experienced, or it helps to uplift the confidence of the learner within a specific context, or both. Developing value for a learner is what a learning-centric training programme should do. It is the primary objective of all learning.

MFTM04

During a learning process or a learning event, contextualising should be introduced at the start of the learning event. The sooner the learner is exposed to context, be it their own viewed context or a challenge to their own viewed context, the sooner the learning process of manipulating or reframing of the epistemological elements can impact on the current-to-new consciousness so that it can be applied.

### **3.5.3        *Memos on an Enabling Learning Architecture***

LAM01

The consistency of the relationship between training and learning is at the foundation of an effective learning architecture. In developing an effective training intervention or corporate training programme there must be an unbreakable bond between training and learning. The architecture must produce learning-focused or learning-centric training.

In most of today's training events it would appear that there is confusion within the definitions or purpose of training and learning. Training is presented with the focus on process and procedure, with a strong reliance on information, content and the compliance of covering the content. This allows the presenter of the training to claim that training was delivered. The purpose of training is that of improvement, and the individual's performance is not considered.

Often, though, there seems to be a new trend. Reference to training as an event or a process, is being named learning. Learning in this sense is then misinterpreted as the training event. Again, the learning session is presented without an understanding or a link to the definition of learning.

In my opinion, there is an unbreakable bond or consistency relationship between training and learning. The training event, with its purpose of improving the individual's performance is the vehicle for learning, where the definition of learning is to heighten the individual's consciousness to be able to make a decision to change behaviour or not to change behaviour within the context in which they are operating. In this instance, the learning that was acquired during the training event

is the catalyst for co-creation of work realities. The training event can be any event or process delivered via any approach.

LAM02

Contextualising at the start of the learning event is to allow learners to grapple with their personal contexts. They need to decide what they know or don't know, what they should know, given their workplace context; what they think or how they think about their world, or world of work; the decisions they make within the context of what they know and what or how they think and their actions based on what they know, think or decide. These are all challenges at the start of the learning process. Learning is introduced as a disruptive force to the status quo of the learner's knowledge. The disruption is the key to the current limitation of the consciousness of the learner.

### **3.5.4        *Memos on Co-Creating Workplace Realities***

CM01

Education in South Africa currently seems to be one-dimensional. It is still based on set curricula, with pre-determined learning outcomes. Education is set to its purpose of making members of society more employable. This is based on the premise that a qualification makes people in a society more employable. Although there may be some truth to this premise, the reality is that people in the work force are required to solve problems. An education does not necessarily assist people in solving problems, given that the education curriculum is predetermined and based on a general idea of what content (information, knowledge and skills) will be important for the student. In education, the goal is to get as many people to pass through a set curriculum in the shortest possible time so that they have a qualification which will make them more employable. This ideation is not in context of current employment figures or the actual employment status of SA, but in the context of only having people more employable in the sense that they have a qualification.

It would appear that corporate training is following a similar approach, given that the training industry is regulated and governed by the same government department as education in the country. This leaves us with a training system that is based on making people more employable. Making people more employable, follows a set of

predetermined training outcomes with the purpose of covering generic content which is in general believed to be what people should know given the outcomes of specific work tasks.

It does not allow for individual capability, individual knowledge, personal view points or personal work reality. Given that it is generic, the expectation often is to have generic thinking, and not allowing for individual approaches, uniqueness of problems and differentiated work context. This makes it one-dimensional.

### **3.6 Conclusion**

The aim of this chapter was to provide the views of the research participants during the interview stage of the study. It provides a view of the empirical information for this study. It structured the development of the concepts as it was intended and designed within the research-questioning structure, and was therefore presented question-by-question. In this chapter, the interviewer's results were shared by interviewee narrative responses from which rich data emerged. In the next chapter, the rich data will be analysed and the findings presented. In Chapter 4 the data analysis will be presented.

# **Chapter 4:**

## **Data Analysis**

### **4.1 Introduction**

In the previous chapter the data of the research results was presented to provide a context to the manner in which the participants experienced the phenomena within the field of study. In this chapter, the researcher will share the analysis of the data conducted based on a grounded theory method. The data was reviewed several times in an attempt to analyse it further, after presenting it in Chapter 3. Large bodies of text were broken down into smaller units and interpretations of the participants' experiences. Theoretical memos as reported in Paragraph 3.5 were used to capture the researcher's thoughts and insights for later reference and interpretation. The focus of this chapter is to present the data analysis, and share the researcher's analysis results.

### **4.2 Coding of the interviews**

As indicated in Paragraph 2.4.3.2, open coding of the interviews was the first step in a two-step analysis process. During this step of coding the interviews, both action and analytical questions were asked as stated by Glaser (1978. p 57), namely "What is happening here?" and "What theoretical category is being studied?" (Charmaz, 2008). The open coding process is described below.

The interviews were conducted one-on-one within a private setting. With permission of the participants, all the interviews were recorded to ensure data quality. The interviews were transcribed into an MS Word document immediately after the interview. To ensure anonymity, the participants who were interviewed were provided with a unique label known only to the researcher as indicated in Paragraph 3.2.1. Transcripts of the eight coded interviews can be viewed in Appendix B.

## **4.3 Open Coding**

### **4.3.1 *Initial coding of interviews***

At the initial stage of the research, the interviews were coded as they were conducted. During this phase of the research, the focus was on collecting data, as well as gaining insight into the world of the phenomena. It required an understanding of the data at a deeper level than just the stories that were shared during the interviews. For this purpose, the interviews were coded interview by interview, following a three-step coding process as described in Paragraph 2.4.4.2. The coded interviews are available as Appendix B.

The codes of the interviews were consistently compared with one another as the process of collecting data continued. This was done by tabling the key initial codes from Step 3 from each interview as the coding process was completed. The researcher allowed himself to be influenced by the interviews through the coding process and the writing of memos. This assisted the researcher in building insights into the variable as posed by the interview questions and ultimately in gaining understanding of the key variables in the research. These tables were then used during the next phase of the analysis, the development of categories. As the coding process progressed, the researcher consistently analysed the data as it was coded. For this purpose, the researcher consistently kept track of the new codes being developed through the tabling process. The researcher also wrote various memos on aspects of the data that informed the aims of the research.

### **4.3.2 *Developing of categories***

The initial process of coding the data did not provide clear evidence of emerging categories. In developing relevant categories, a process of creating tables in the interview coding stage that indicated all the theoretical codes across all the interviews was adopted. For this purpose, the researcher applied a manual process of “sticky-notes” on paper, where all the codes were sorted on coloured “sticky-notes”. Once sorted, the “sticky-notes” were transferred into tables. These tables representing the “sticky-note” exercise, reflecting the initial codes are in Appendix C.

The tabled view of the interviews was used to extract and synthesise the information into category codes. The category codes were also tabularised as a summary of the developed codes per participant. The frequency of the contributing initial codes was also indicated to provide a view of the importance of a category. The five integrated concepts as described in Paragraph 2.4.3.1 were applied as organising principles during the initial analysis of the data. In the following paragraphs, the data analysis will also be shared according to these five concepts.

4.3.2.1 *The relationship between training and learning*

The first concept that was applied during the organising phase of the open coding was the relationship between training and learning. The relationship between training and learning was linked to exploring how personal significance influenced learning that enabled new world of work realities. Table 4.1 below provides a view of the sub- categories that emerged from the interview codes, indicated per participant.

Table 4.1 Summary view of analysis Concept 1

| <b>Category Codes</b>   | <b>BA02</b> | <b>PC01</b> | <b>CP01</b> | <b>DS01</b> | <b>DC02</b> | <b>CM01</b> | <b>GL02</b> | <b>DS01</b> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Training should focus on improving performance (5/8)                                |             | ✓           | ✓           |             | ✓           | ✓           | ✓           |             |
| Training (the event) is the start of the learning process, not the conclusion (4/8) | ✓           |             |             |             | ✓           | ✓           | ✓           |             |
| Training is non-integrative/multi-dimensional – learning is integrative (5/8)       | ✓           | ✓           |             |             | ✓           | ✓           | ✓           |             |
| Traditional training is not focused on personal significance (1/8)                  | ✓           |             |             |             |             |             |             |             |
| Training is about outcomes (learning outcomes) (1/8)                                | ✓           |             |             |             |             |             |             |             |

| Category Codes  | BA02 | PC01 | CP01 | DS01 | DC02 | CM01 | GL02 | DS01 |
|---|------|------|------|------|------|------|------|------|
| Traditional training is not natural, it is forced (1/8)   | ✓    |      |      |      |      |      |      |      |
| Training is extrinsic/learning is intrinsic (organisation vs. personal driven) (2/8)            |      |      | ✓    | ✓    |      |      |      |      |
| Opportunities to learn and engage should be openly created during a training intervention (2/8) |      |      | ✓    |      | ✓    |      |      |      |
| Learning is transformative (2/8)  |      | ✓    | ✓    |      |      |      |      |      |
| Learning is about the consciousness to choose (2/8)   | ✓    |      |      |      |      |      |      |      |
| Learning is not about behaviour change (1/8)  | ✓    |      |      |      |      |      |      |      |
| Learning should be more than classical behaviour (1/8)  |      | ✓    |      |      |      | ✓    |      |      |
| Learning is constructive and should be experienced (2/8)  |      | ✓    | ✓    |      |      |      |      |      |
| Learning is about relevance (2/8)   | ✓    | ✓    |      |      |      |      |      |      |
| Learning is contextual (1/8)  |      |      |      | ✓    |      |      |      |      |
| Learning will occur irrespective of the lesson plan (1/8)                                       |      | ✓    |      |      |      |      |      |      |
| Learning is based on collaboration (2/8)  |      |      |      | ✓    | ✓    |      |      |      |

In Table 4.1 above the initial developed codes are indicated in the left column as an extraction and synthesis of what each participant experienced. In the columns to the right the participant who contributed to the developed code is indicated. Table 4.1 above provides a view of the understanding the training and learning of each of these concepts, and how they are experienced by the participants. From this view,

the relationship between training and learning can be observed. As an initial analysis, it can be viewed that there is a strong relationship between training and learning and that the use of the labels training or learning is often interchangeable. Five out of the eight interviewees indicated that training should focus on improving of performance, but it is implied that it does not. Five out of the eight interviewees indicated that training is non-integrative, whereas learning is integrative – creating context. Four out of the eight interviewees indicated that training is only the starting point of learning, and learning is not concluded during the training event.

#### 4.3.2.2 *Learners’ sense of personal significance*

The second concept that was applied during the organising phase of the open coding was the learners’ sense of personal significance.

Table 4.2 below provides a view of the sub-categories that emerged from the interview codes, indicated per participant.

Table 4.2 Summary view of analysis Concept 2

| <b>Category Codes</b>  | <b>BA02</b> | <b>PC01</b> | <b>CP01</b> | <b>DS01</b> | <b>DC02</b> | <b>CM01</b> | <b>GL02</b> | <b>DS01</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Contextualisation is inherent to sense-making (1/8)  | ✓           |             |             |             |             |             |             |             |
| Complexity is about making sense of complicatedness (1/8)  | ✓           |             |             |             |             |             |             |             |
| Personal significance is the main focus of learning (process) (1/8)  | ✓           |             |             |             |             |             |             |             |
| The success of the learning (process) depends on the level of sense-making and personal significance (1/8) |             |             | ✓           |             |             |             |             |             |

| Category Codes   | BA02 | PC01 | CP01 | DS01 | DC02 | CM01 | GL02 | DS01 |
|--|------|------|------|------|------|------|------|------|
| Personal significance drives the sense of purpose in the learning process (2/8)  |      | ✓    |      | ✓    |      |      |      |      |
| Learning is sense-making and sense-making is equal in importance with content and skills development (3/8)                             | ✓    | ✓    |      | ✓    |      |      |      |      |
| By challenging beliefs and myths, learners become significant in the co-creation of the work system (2/8)                              |      | ✓    |      |      |      |      | ✓    |      |
| Learning (process) should be focused on constructing persistent mind-sets to build stronger personal significance (2/8)                |      |      | ✓    |      |      | ✓    |      |      |
| Personal significance has a direct influence on the level of learning experience (3/8)   |      |      |      | ✓    | ✓    |      | ✓    |      |
| Learning should develop the personal motivation that enforces the human being (2/8)  |      |      | ✓    |      |      | ✓    |      |      |
| Learning (process) should develop a higher level of thinking (consciousness) to enable the learner to choose to change behaviour (3/8) |      | ✓    |      |      |      |      | ✓    | ✓    |
| Personal significance is defined in relevance as sense-making (5/8)  | ✓    |      |      | ✓    |      | ✓    | ✓    | ✓    |
| It is the responsibility of the training programme / learning process (design) to develop personal significance (Architecture) (7/8)   | ✓    | ✓    | ✓    |      | ✓    | ✓    | ✓    | ✓    |
| Training should be focused on problem-solving (personal problem-solving) (2/8)   |      |      | ✓    |      |      |      |      | ✓    |

In Table 4.2 on the previous page, the initial developed codes are indicated in the left column as an extraction and synthesis of what each participant experienced. In the columns to the right the participant who contributed to the developed code is indicated. Table 4.2 above provides a view of these concepts, and how they are experienced by the participants. As an initial analysis, it can be viewed that the most prevalent experience is that the responsibility rests with the training programme or learning process, through its design, to develop a sense of personal significance in the learner. Seven out of the eight interviewees indicated this experience. The next strongest experience, with five out of the eight interviewees reporting that personal significance is defined in the relevance of the learning as sense-making to their world of work. Other important experiences reported, with three out of the eight interviewees each are; the learning process should stimulate higher-order thinking skills to allow the learner to choose to change behaviour or not to change behaviour; the level of personal significance that is developed during the learning process has a direct influence on the learner's learning experience and; learning is a sense-making process, and sense-making is just as important as the content covered during the learning process.

#### 4.3.2.3 *Emergent properties of learning through a process of sense-making*

The third category concept that was applied during the organising phase of the open coding was the emergent properties of learning through a process of sense-making. Table 4.3 below provides a view of the sub-categories that emerged from the interview codes, indicated per participant.

Table 4.3 Summary view of analysis Concept 3

| <b>Category Codes</b>   | <b>BA02</b> | <b>PC01</b> | <b>CP01</b> | <b>DS01</b> | <b>DC02</b> | <b>CM01</b> | <b>GL02</b> | <b>DS01</b> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Sense-making leads to deep understanding and higher levels of conscious awareness (2/8) |             | ✓           |             |             |             |             |             | ✓           |

| Category Codes   | BA02 | PC01 | CP01 | DS01 | DC02 | CM01 | GL02 | DS01 |
|--|------|------|------|------|------|------|------|------|
| Emergent properties of learning are within various context including a personal context of the learner (2/8)                                       | ✓    |      |      |      |      |      |      | ✓    |
| Successful learning (process) cannot occur in a static “order” world (making sense of work) (3/8)  |      | ✓    |      |      | ✓    |      |      | ✓    |
| The design (architecture) of a learning process should allow for emergent properties as a process of making sense of the (new) world of work (3/8) |      |      | ✓    |      | ✓    |      |      | ✓    |
| Effective learning (process) is about making sense of context through emergent properties (2/8)  |      |      |      |      |      | ✓    |      | ✓    |
| Contextualisation allows for new knowledge to emerge which enables sense-making (4/8)  |      |      | ✓    |      | ✓    | ✓    | ✓    |      |
| Making sense of context is a key element in deciding to change behaviour (2/8)   |      |      | ✓    |      |      |      | ✓    |      |
| Emergent properties within learning (process) allow for integration of context and knowledge (1/8)   |      |      |      |      |      |      | ✓    |      |
| Emergent properties in learning are a natural occurrence (1/8)   | ✓    |      |      |      |      |      |      |      |
| Learning (process) should challenge the learner’s belief about work realities (2/8)  |      | ✓    | ✓    |      |      |      |      |      |

In Table 4.3 on the previous page, the initial developed codes are indicated in the left column as an extraction and synthesis of what each participant experienced. In the columns to the right the participant who contributed to the developed code is indicated. Table 4.3 above provides a view of these concepts and how they are experienced by the participants. From this view, the participants' experience of emergent properties of learning through a process of sense-making can be observed. As an initial analysis, it can be viewed that the most prevalent experience is that contextualisation of content during the learning process allows for new knowledge to emerge which enables sense-making to occur. Four out of the eight interviewees indicated this experience. The next two strongest experiences, with three out of the eight interviewees reporting that; a successful learning process cannot occur in a static "order" domain (Snowden, 2003), but complexity and context are required and; the architecture of the learning process must allow for emergent properties as a process of sense-making for the learners within the new world of work. The analysis also showed that this concept was not as strongly experienced as the learners' sense of personal significance. This may indicate that the participants are not as familiar with incorporating or utilising learning processes as a sense-making process.

#### 4.3.2.4 *Co-creation of work realities*

The fourth category concept that was applied during the organising phase of the open coding was the co-creation of work realities. Table 4.4 below provides a view of the sub-categories that emerged from the interview codes, indicated per participant.

Table 4.4 Summary view of analysis Concept 4

| <b>Category Codes</b>   | <b>BA02</b> | <b>PC01</b> | <b>CP01</b> | <b>DS01</b> | <b>DC02</b> | <b>CM01</b> | <b>GL02</b> | <b>DS01</b> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Successful learning (process) is designed (architecture) within the work context, and allows the learner to explore within that context (1/8) |             |             | ✓           |             |             |             |             |             |

| Category Codes  | BA02 | PC01 | CP01 | DS01 | DC02 | CM01 | GL02 | DS01 |
|---|------|------|------|------|------|------|------|------|
| For co-creation to exist, the learning (process) should focus on higher-order thinking and not conformity (1/8)                   |      |      |      |      |      | ✓    |      |      |
| By design (architecture) the learning process should focus on the intentionality to contribute and co-create work realities (2/8) |      |      | ✓    | ✓    |      |      |      |      |
| A business impactful learning experience (learning process) is geared to co-creation of work realities (3/8)                      |      |      | ✓    |      | ✓    | ✓    |      |      |
| Co-creation is using personal significance to influence work outcomes (4/8)   | ✓    |      | ✓    |      |      |      | ✓    |      |
| Personal significance viewed within the new world of work is the backbone of co-creation of work realities (7/8)                  | ✓    | ✓    | ✓    |      | ✓    | ✓    | ✓    | ✓    |
| Co-creation requires a collective and collaborative voice within an open and incorporative learning process (5/8)                 | ✓    |      |      | ✓    | ✓    | ✓    | ✓    | ✓    |
| Co-creation of work realities cannot occur through lecturing, it should be the collaboration of the learning group (1/8)          |      |      |      |      |      |      | ✓    |      |
| Co-creation of work realities can be addressed and enabled during a learning process (2/8)  |      |      |      | ✓    |      |      | ✓    |      |

In Table 4.4 above the initial developed codes are indicated in the left column as an extraction and synthesis of what each participant experienced. In the columns to the right the participant who contributed to the developed code is indicated. Table 4.4 above provides a view of these concepts and how they are experienced by the

participants. From this view, the participants' experience of co-creation of work realities can be observed. As an initial analysis, it can be viewed that the most prevalent experience is that personal significance, viewed within the new world of work, is the backbone of co-creation of work realities. Seven out of the eight interviewees indicated this experience. This is the highest combined experience reported through the study. The next strongest experiences reported, with five out of the eight interviewees is that co-creation requires a collective and collaborative voice within an open and incorporative learning process. Also of note are the next two strongly represented experiences, co-creation is using personal significance to influence work outcomes with four out the eight interviewees, and a business impactful learning experience is geared towards co-creation of work realities.

#### 4.3.2.5 *Different frames of reference*

The fifth and final category concept that was applied during the organising phase of the open coding was different frames of reference. Table 4.5 below provides a view of the sub-categories that emerged from the interview codes, indicated per participant.

Table 4.5 Summary view of analysis Concept 5

| Category Codes   | BA02 | PC01 | CP01 | DS01 | DC02 | CM01 | GL02 | DS01 |
|--|------|------|------|------|------|------|------|------|
| Different frames of reference are the building blocks for multi-frame thinking (1/8) |      |      |      |      |      | ✓    |      |      |
| Multi-frame thinking builds mind-set (1/8)   |      |      |      |      |      | ✓    |      |      |
| Multi-frame thinking is an emergent property (2/8)                                   | ✓    |      |      |      |      |      |      | ✓    |
| Multi-frame thinking broadens context (2/8)  |      | ✓    |      |      | ✓    |      |      |      |
| Multi-frame thinking enables effective problem navigation (2/8)                      |      |      |      | ✓    |      |      |      | ✓    |

| <b>Category Codes</b>   | <b>BA02</b> | <b>PC01</b> | <b>CP01</b> | <b>DS01</b> | <b>DC02</b> | <b>CM01</b> | <b>GL02</b> | <b>DS01</b> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Multi-frame thinking creates more meaning (sense-making) of the new world of work (2/8) |             |             |             |             |             | ✓           |             | ✓           |
| Multi-frame thinking enhances the ability to choose relevant actions (2/8)              |             |             | ✓           |             |             |             | ✓           |             |
| Multi-frame thinking helps to understand complexity within the workplace (3/8)          |             | ✓           |             |             | ✓           |             | ✓           |             |
| Multi-frames of thinking are essential to learning (process) (3/8)                      | ✓           |             | ✓           |             |             | ✓           |             |             |

In Table 4.5 above the initial developed codes are indicated in the left column as an extraction and synthesis of what each participant experienced. In the columns to the right the participant who contributed to the developed code is indicated. Table 4.5 above provides a view of these concepts, and how they are experienced by the participants. From this view, the participants' experience of different frames of reference during a learning process can be observed. As an initial analysis, it can be viewed that the two most prevalent experiences are that multi-frame thinking helps to understand complexity within the workplace, and multi-frame thinking is essential to an effective learning process. For each of these experiences, three out of the eight interviews indicated this as important. The analysis also showed that this concept was not as strongly experienced as the learners' sense of personal significance. This may indicate that the participants are not as familiar with incorporating or utilising learning processes as a sense-making process.

## **4.4 Axial Coding**

### **4.4.1 *Relating and developing the categories***

As the second stage of the analysis, axial coding was used to make connections between categories and sub-categories in an attempt to emerge a conceptual framework. During this phase, the researcher re-organised the category codes using a structure of for relationships to be reviewed based on cause, condition, context and consequence (Bluff, 2005, p. 154). Axial coding was performed as a colour-coded paper exercise to facilitate finding the connections between the four criteria as indicated above. To search for the relationships, the category codes as identified during open coding were organised by using the three research questions as presented in Paragraph 1.5.2 as an organising structure.

The outcome of the paper exercise was then tabularised, and will be discussed in detail below. During axial coding, some of the open codes were combined to form new codes, and some open codes were discarded. During the axial coding process, the four views of cause, condition, context and consequence were applied to all the open codes to establish the relationship and connection between the codes and across the three research questions. Each open code was scrutinised to firstly, establish if it was the cause of something within the concept of the research question, or the reason for a participant experience. Or, secondly, was the code a condition for something to be experienced or exist and did it relate to any of the causes identified? Or, thirdly, did the code provide context for the experience for a cause or a context identified? And, lastly, was any of the code seen as a consequence of a cause, a condition or a context identified? The axial coding process produced core categories in each of the research questions which would be used in a conceptual framework.

### **4.4.2 *Focus 1: Manifestation of personal significance during a learning process***

The first research question was reflected on from the view of how personal significance should manifest during a non-traditional learning process. Table 4.6 on the next page, shows how the codes were organised and connected within the four views of cause, condition, context and consequence.

Table 4.6 Manifestation of Personal Significance

|   | <b>Cause</b>   | <b>Condition</b>  | <b>Context</b>   | <b>Consequence</b>   |
|---|--|---|--|--|
| Personal significance manifests within a natural transformative learning experience | Traditional training is not natural, it is forced                                    | A learning process should be natural and allow personal significance to develop                           | A learning process is not about forcing a change in behaviour                      | A non-traditional learning process is integrative                                    |
|   | Traditional training is focused on outcomes and not focused on personal significance | Personal significance should be the main focus of a learning process                                      | Learning will occur irrespective of the lesson plan                                | Personal significance drives or creates purpose for and within the learning process  |
|   |  | The learning process should be focused on developing personal motivation that re-enforces the human being | Personal significance is equal in importance as is content in the learning process | Personal significance has a direct influence on the individual's learning experience |
|   |  |   | Training (the event) is the starting point of the learning process                 | Learning is transformative – creates personal significance                           |
|   | Constructing persistent mind-sets develops personal significance                     | Opportunities to learn and engage should be openly created in a learning process                          |  |  |

|   | <b>Cause</b>   | <b>Condition</b>  | <b>Context</b>  | <b>Consequence</b>   |
|---|--|---|---|--|
| Personal significance manifest through relevance and sense-making of context                            | Challenging personal beliefs and myths, learners become more personally significant      | For personal significance to develop, a level of relevance is required                                | Learning is about relevance and context to the individual   | The decision to change behaviour is driven by the level of sense-making of the context       |
|   |  |   | Personal significance is defined in the level of relevance  |  |
|   |  |   | Multi-frame thinking broadens context, personal context leads to personal significance  |  |
| Personal significance manifests in the ability to choose to change behaviour or not to change behaviour | Higher-order thinking or higher consciousness creates the sense of personal significance | To develop personal significance, the learning process should develop higher-order thinking skills    | Higher-order thinking skills develop personal significance that enables the learner to choose to change behaviour, or not to change behaviour | Learning is about the consciousness to choose to change behaviour or not to change behaviour |
|   |  | Higher levels of personal significance are required to cope with the demands of the new world of work | Sense-making is about contextualising the learning problem in the complexity of the new world of work   | The decision to change behaviour is driven by the level of sense-making of the context       |

In Table 4.6 on the previous page, the open codes were grouped together according to the relationships or connections that were made between the various codes based on the process described in Paragraph 4.4.1. In Table 4.6 above, the first grouping of codes was clustered around training and learning, indicating the importance of understanding the difference between what is labelled training and what is labelled as learning. It highlighted that there is a relationship between training and learning, although not describing this relationship. It did indicate that personal significance is a key part of the label learning, and that it is more absent within the label of training. It also indicated a second grouping of codes around constructing specific mind-sets during a learning process that is linked to developing of personal significance. From these two groupings of codes, the first core category emerged. The first core category, personal significance, manifests within a natural transformative learning experience, is described in the left column of Table 4.6, across the first two clusters of codes.

In Table 4.6 above the second core category is indicated as personal significance and manifests through relevance and sense-making of context. The second core category stretches across the next cluster of codes. This cluster of codes is described within the concepts of challenging learners' beliefs, myths, context, frames of reference, relevance and sense-making. Although this core category only encapsulates one cluster of codes, it is deemed imperative to the understanding of how personal significance manifests during a learning process.

The third core category as indicated in Table 4.6 above is that of personal significance manifested in the learner's ability to choose to change behaviour or not to change behaviour. This core category relates to the learning being defined as the ability to choose to change behaviour rather than a blanket statement that learning is a change in behaviour. Personal significance provides the ability to choose the behavioural change given the situation in which learners find themselves and given the relevance, context, knowledge and sense the learners are making from the situation. The cluster of codes within this core category was around higher-order thinking skills, the new world of work and choosing different behaviours or action within a VUCA world.

**4.4.3 Focus 2: Requirements for harnessing emergent properties within a sense-making process**

The second research question was reflected on from the view of the requirement for harnessing emergent properties of learning through a process of sense-making. Table 4.7 below shows how the codes were organised and connected within the four views of cause, condition, context and consequence.

**Table 4.7 Harnessing emergent properties through sense-making**

|  | <b>Cause</b>   | <b>Condition</b>   | <b>Context</b>  | <b>Consequence</b>  |
|--|--|--|---|---|
| Sense-making is emergent in the context within personal significance                           | Sense-making leads to higher levels of conscious awareness | Emergent properties of learning are relative to the personal significance of the learner | Personal significance is defined in the relevance created through sense-making                        |   |
|  |  | Emergent properties of learning are within the context of the learner                    | An effective learning process is about making sense of the context through emergent properties        |   |
| Sense-making is the contextualisation of multi-frames of thinking within the new world of work |  |  | Sense-making is about contextualising the learning problem in the complexity of the new world of work | Contextualisation allows emergent properties which enables sense-making |
|  |  |  |   | Multi-frame thinking creates more meaning of the new world of work      |

|   | <b>Cause</b>                                       | <b>Condition</b>  | <b>Context</b>   | <b>Consequence</b>  |
|---|--|---|--|---|
| Sense-making is about making decisions in the domain of complexity                              | Sense-making requires higher-order thinking skills | Learning process should unlock or challenge the un-order to produce sense-making processes  | Learning as sense-making is/occurs in the domain of un-order/complexity                    | Sense-making leads to the ability to make decisions within the domain of complexity |
| Multi-frame thinking allows flexibility to choose relevant actions within the new world of work | Multi-frame thinking is an emergent property       | Multi-frame thinking requires higher-order thinking skills                                  | Multi-frame thinking broadens the context, personal context leads to personal significance | Multi-frame thinking allows for flexibility in thinking and learning                |
|   |  | Different frames of thinking or references are the building blocks for multi-frame thinking |  | Multi-frame thinking creates more meaning of the new world of work                  |
|   |  | Multi-frame thinking is essential to a learning process of sense-making                     | Multi-frame thinking builds and aligns mind-sets   | Multi-frame thinking enhances the ability to choose relevant action                 |

|  | <b>Cause</b>   | <b>Condition</b>   | <b>Context</b>  | <b>Consequence</b>  |
|--|--|--|---|---|
| Sense-making is integrative in the choice to change behaviour  | A focus on integration enables sense-making                  | Opportunities to learn and engage (making sense of) should openly be created in a learning process                   | Emergent properties enable the integration of context and knowledge                 | Sense-making of context allows for or enables decisions to change behaviour |
|  |  | A learning process should challenge the learner's beliefs about work realities which leads to a sense-making process | Personal significance is defined in the relevance created through sense-making      | Sense-making leads to the ability to make decisions within the complexity   |
| Emergent properties and contextualisation are natural occurrence in a learning process focused on sense-making | Emergent properties are a natural occurrence in sense-making | A learning process should be natural and allow emergent properties   | Learning will occur irrespective of the lesson plan (training)                      |   |
|  |  | Multi-frame thinking is required in contextualisation  | Contextualisation allows for new knowledge to emerge                                | Contextualisation allows emergent properties which enables sense-making     |
|  |  |  | Emergent properties of learning are relative to the learner's personal significance |   |

In Table 4.7 on the previous page, the first grouping of codes was clustered around emergent properties of learning being formed within the context of the learning process rather than the content of the training. In this cluster of codes, it was also mentioned that for learning to become emergent a higher level of consciousness should be created during or in the learning process. It was deduced from the open codes that the emergence, and level of emergence of learning properties are linked to the level or feeling of personal significance of the learner group. This significance was primarily driven by the context within the learner group. From this grouping, the first core category for harnessing of emerging properties of learning emerged. This first core category was sense-making is emergent within the context of personal significance.

In Table 4.7 above the second core category indicated as sense-making is the contextualisation of multi-frames of thinking within the new world of work. The second core category stretches across the next cluster of codes. This cluster of codes is described within the concept of contextualising the learning problem within the complexity of the new world of work. Emergent properties of learning are seen as a consequence of contextualisation of context and complexity, which enables sense-making. This cluster also includes the code that emergent properties and contextualisation leads to multi-frames of thinking.

The third core category as indicated in Table 4.7 above is sense-making, and is about decision-making in the domain of complexity. This core category only spans one cluster of codes, which focuses on sense-making as a process of decision-making. It also indicates that learning as a process of sense-making occurs within the domain of un-order and specifically in the domain of complexity as described by Snowden (2003). This core category suggests that learning cannot be static within the order domain of knowing or knowable, but must be within the dynamic environment of complexity where new knowledge is allowed to emerge through the relationship formed between knowledge and context.

In Table 4.7 above the fourth core category is described as multi-frame thinking that allows flexibility to choose relevant actions within the new world of work. The cluster of codes that formulate this core category deals with the learner's ability to hold multiple frame of reference at once, referred to as multi-frame thinking. Multi-frame

thinking is described as an emergent property which links this core category to the third core category indicating that a learning process cannot be a static process within the order domain. As a consequence, multi-frame thinking allows for more flexibility in thinking, allowing for more meaning within the new world of work, and opening the learner's ability to choose.

A fifth core category is described within Table 4.7 above. This core category is sense-making as integrative in the choice to change behaviour. Here, the codes are grouped in two clusters. The first cluster is about the role sense-making plays in the integration of knowledge and context through emergent properties of learning. Through the integrative properties of sense-making, the learner is enabled to choose to change behaviour or not to change behaviour, depending on the context. The second cluster is about the role sense-making plays in personal significance through the relevance created by emergent properties. Through personal significance, sense-making leads to the learner's ability to make decisions within complexity.

The sixth core category described in Table 4.7 above is that emergent properties and contextualisation are natural occurrences in a learning process focused on sense-making. The cluster of codes within this core category is focused on emergent properties being a natural occurrence within the process of sense-making. It also indicates that a learning process should be built on or as a natural occurrence. It recognises that contextualisation through emergent properties is relative to the learner's sense of personal significance. As a consequence within this cluster of codes, contextualisation allows for emergent properties which enable sense-making.

#### **4.4.4        *Focus 3: An engaging learning process that enables co-creation of work realities***

The third research question was reflected on from the view of an engaging learning process that enables co-creation of work realities. Table 4.8 on the next page, shows how the codes were organised and connected within the four views of cause, condition, context and consequence.

Table 4.8 Enabling co-creation through a learning process

|  | <b>Cause</b>   | <b>Condition</b>   | <b>Context</b>  | <b>Consequence</b>  |
|--|--|--|---|---|
| A learning process that focus on collective and collaborative thinking is required to enable co-creation of work realities | A learning process that focuses on conformity will not lead to co-creation of work realities | Co-creation requires a collective and collaborative voice within an open and integrative learning process        | Co-creation occurs within a collective and collaborative learning environment or work reality         | The consequence of collaboration and collective thinking is co-creation of work realities           |
|  |  | Co-creation of work realities cannot occur through lecturing, is should be a collaboration of the learning group | For co-creation to exist, the learning process should focus on higher- order thinking, not conformity | A learning process that develops higher-order thinking skills enables co-creation of work realities |
|  |  | Learning process should enable collaboration   |   | A “non-traditional” learning process should be integrative  |
|  |  |  |   | Multi-frame thinking allows for the flexibility to co-create  |

|   | <b>Cause</b>   | <b>Condition</b>   | <b>Context</b>   | <b>Consequence</b>  |
|---|--|--|--|---|
| Personal significance is a key element in co-creation of work realities   | The level of co-creation is heavily influenced by the level of personal significance | Personal significance should be the main focus of a learning process                         | Personal significance viewed within the new world of work is the backbone of the co-creation of work realities | Developing personal significance enhances the co-creation within the work system                              |
|   |  |  | Co-creation of work realities is seeded in the sense of personal significance                                  |   |
| Developing the intent to co-create work realities are locked into the learning architecture of the learning process | Co-creation of work realities can be addressed and enabled during a learning process | Intentionality to contribute and co-create must be in the learning architecture (the design) | A business impactful learning experience is geared towards co-creation of work realities                       | A business impactful learning experience leads to a higher potential for learners to co-create work realities |
|   |  | The learning process from its design should focus on the intentionality to co-create         | Co-creation occurs within a collaborative learning process that continues in the workplace                     |   |
|   |  | Learning process should be designed within the context of the new world of work              | A learning process designed within the work context allows learners to explore co-creation                     | Multi-frame thinking allows better understanding of the workplace   |

|   | <b>Cause</b>  | <b>Condition</b>   | <b>Context</b>   | <b>Consequence</b>  |
|---|---|--|--|---|
| Co-creating work realities are depended on the level of personal significance | Personal significance is used to influence and co-create work realities | For co-creation to occur, a certain level of personal significance is required | Personal significance is the backbone of co-creation of work realities | In developing higher levels of personal significance during a learning process, more opportunities to co-create are established |

In Table 4.8 above, the first grouping of codes was clustered around a learning process that focused on conformity and will not lead to co-creation of work realities. In this cluster of codes the emergent views were that a learning process must be collaborative and collective to ensure that learning will transfer into co-creation of work realities. This was highlighted by the experience that co-creation occurred within the context of collective collaboration. It is also stated in the data that for co-creation to exist, the learning process should focus on higher-order thinking and not on conformity. From this grouping, the first core category for an engaging learning process that enables the co-creation of work realities was identified. The first core category is labelled as a learning process that focuses on collective, and that collaborative thinking is required to enable co-creation of work realities.

The second core category for an engaging learning process that enables the co-creation of work realities is described in Table 4.8 above as personal significance that is a key element in co-creation of work realities. This core category is extracted from a cluster of codes that describes that the level of co-creation is heavily influenced by the level of personal significance. This is deduced from the views that personal significance within the new world of work is the backbone of co-creation of work realities. Together with this view, is also the view that co-creation of work realities is seeded within personal significance. As a consequence of this core

category, developing personal significance is seen as enhancing co-creation in the work system.

Table 4.8 above describes the third core category within this focus as developing the intent to co-create work realities are locked into the learning architecture of the learning process. This core category is clustered within the codes reflecting on the intentionality to contribute and co-create should be imbedded in the learning process. The learning process from its design should be focused on the intention to co-create work realities. The learning process should be designed within the context of the new world of work and the concept of countering VUCA. A learning process that is designed with this core category in mind allows learners to explore and experience co-creation of a new work reality.

As described in Table 4.8 above, the fourth core category for an engaging learning process that enables co-creation of work realities is co-creating work realities are depended on the level of personal significance. Although a specific cluster of codes was identified in forming this core category, many of the codes were also linked to other core categories already described earlier. This cluster of codes is centred on the notion that for co-creation to exist, a certain level of personal significance is required. In developing personal significance during a learning process, more opportunities are established to co-create work realities.

#### **4.5 Selective Coding**

Selective coding as the final phase in the data analysis is about choosing and integrating core categories as emergent themes by relating them to other categories and core categories (Jones & Alony, 2011, p. 100). In comparing the extracted core categories and the category codes of the first two phases of the data analysis, the researcher was able to select and organise three themes. The themes correlate with the aim and sub-aim of the study. The themes are also organised in such a manner that they will enable the researcher to answer the research questions. The three themes that emerged from the rich and coded data are the following:

#### **4.5.1        *Personal significance within a learning process.***

Within this theme, the researcher placed the focus on several concepts extracted from the category codes and core categories. These concepts are: Understanding the training-learning relationship; Learning is natural and transformative; Relevance of context for the development of personal significance during a learning process; Understanding learning as a choice to change behaviour or not to change behaviour, which requires higher-order thinking skills, making learning a personal choice and not a forced procedure.

#### **4.5.2        *The emergent properties of sense-making through a learning process.***

Within this theme, the researcher placed the focus on the following concepts: Sense-making is emergent within personal significance; contextualisation and multi-frame thinking within the new world of work; emergent relationships between context and knowledge, and human being and human doing; multi-frame thinking is the flexibility that is required to choose in the new world of work; contextualisation allows for emergent properties, which allows for sense-making

#### **4.5.3        *Co-creation of work realities through a learning architecture.***

In this theme the researcher focused on the concepts of the following: The learning process should be collective and collaborative; co-creation is strongly linked to the level of personal significance of the learner; the enablement of the learning process, personal significance and co-creation of work realities are in the design of the learning process – its architecture; the learning architecture should focus on the new world of work and countering the effects of VUCA, releasing the potential of personal significance, and enabling co-creation of work realities.

### **4.6            Conclusion**

In this chapter, the researcher presented the findings of the study. The method of grounded theory was applied, and a data analysis was conducted through a process of open coding, axial coding and selective coding. The data analysis was further organised through a process of extracting initial categories, identifying and

developing emerging categories from the extractions, and developing emergent themes.

By unpacking the data within the organised frame of the aim and sub-aims of the research, data integrity was preserved, and only relevant emerging concepts were identified. Where cases were identified as not relevant, they were omitted from further integration.

Three themes emerged from the data. These themes were developed through a process of synthesis and selective coding. The themes were organised through logical organisation of emerged categories. In Chapter 5 a review of current literature will be presented.

# Chapter 5:

## Literature Review

### 5.1 Introduction

This chapter provides the support for, clarification of and an academic perspective on the data gathered and analysed in the previous chapters of this dissertation through a focused review of current literature within the substantive area of the study. As discussed in Paragraphs 1.6 and 2.5, the researcher opted to delay an intensive literature review till after data collections and data analysis. Delaying the literature review up to this point allowed the researcher to specifically use the literature review for supporting the emergent properties with existing theories (Urquhart, 2012, p. 7). The subsequent review of literature is then also organised according to the categories emergent from the data, and will be discussed as reinforcement and enlightenment of these categories. The layout of the review of literature is in accordance with the three primary areas as described in Chapter 1, namely, learning as sense-making; learning as personal significance and learning as architecture for co-creating work realities.

### 5.2 Learning as sense-making

According to Brown, Colville and Pye (2015, p. 2), who also refer to Maitis (2005) and Weick (1995), there seems to be no single definition of sense-making agreed on. There is, however, an emergent consensus that sense-making generally refers to processes whereby people seek for plausible explanations for ambiguous, equivocal or confusing issues or events. Sense-making as argued by Snowden (2005) is most commonly associated with the work of Weick (1995) and Darwin (1998) with most of the literature reviewed referring to Weick. The parallel that the researcher is drawing between learning and sense-making is in the seemingly transient nature of sense-making, where sense-making is seen as playing a central role in the determination of human behaviour. Sense-making is seen as central to behaviour; it is where meaning materialises and informs, and constrains identity and

action, as argued by Mills (2003, p. 35). Cunliffe and Coupland (2012, p. 75) state that identity constriction lies at the root of sense-making and influences the way in which other aspects of sense-making processes are understood. In sense-making, when meanings materialise in behaviour it is primarily an issue of communication. Sense-making is therefore about the interplay between action and interpretation, rather than the influence of evaluation on choice (Weick & Sutcliffe, 2005).

Sense-making therefore involves not merely interpretation and the production of meaning, but also the active authoring of the situation in which reflexive actors are embedded in the process they are attempting to comprehend (Brown, et al., 2015). On the process of comprehending, Cunliffe and Coupland (2012, p. 66) refer to Chaudrey *et al.*, (2009), Grant *et al.*, (2008) and Jeong and Brower (2008), stating that sense-making is seen as a rational, intellectual process represented through cognitive schemas and models. Brown, *et al.*, (2015) refer to Maitlis and Christianson (2014) and Weick (1995) in reminding us that there is no consensus on whether sense-making is best regarded primarily as sets of individual cognitive, collective-social or specifically discursive processes. Therefore, comprehension as a process of sense-making may be triggered by rarer cues that occur most notably in time of crisis or puzzlement. There is a strand of theory and research that supports this view – including Gioia (2006), Corley and Gioia (2011) and Ybema (2010) – that insists that sense-making may be future-orientated and may occur prospectively (Brown, et al., 2015), making sense-making not about knowledge only, but also about learning.

Cunliffe and Coupland (2012) add to the overall argument of sense-making as the embodiment of an alternative perspective that focuses on the interpretive and embodied nature of sense-making within the flow of experiences. This provides a strong view of the integrative nature of sense-making and learning. From Weick's formative work on organisational learning (Weick, 1995, 2001, 2005), based on the claim that sense-making is the means by which people interact with their environment, through cognitive information-processing activities as a process by which data is translated into knowledge and understanding about the environment. Cunliffe and Coupland, however, derived an alternative view, namely, that sense-making as a representational, cognitive, information-processing or communicative

process is a disembodied cognitive activity. In this, Cunliffe and Coupland argue for an emotional, embodied sense-making process where sense-making is not separated from the body, the who we are, our thoughts, feelings, body, speech, the 'human being' in how our responses to others are interrelated and play through our lived moments in which we try to make sense of our surroundings (Cunliffe & Coupland, 2012, p. 74).

### **5.2.1        *Understanding learning***

In the context of this dissertation, the focus is specifically on understanding learning within the context of sense-making. Colcille, Hennestad and Thoner (2013, p. 3) refer to Clegg *et al.*, (2005, p. 155), and state that learning in organisations occurs in the small space between the disorganised and the organised through frames derived and retained from moments of past organising and against cues in the form of current moments of action. They further refer to Elkjaer (2004, p. 419) in defining learning as the development of experience and knowledge by inquiry or reflective thinking in the processual dynamic understanding of 'becoming'. In this understanding – learning as a process in sense-making – making sense is seen as the way that humans choose between multiple possible explanations of sensory and other inputs as they seek to combine the phenomenological with the real in order to act in such a way as to respond to the world around them (Snowden, 2005).

In furthering the understanding of learning, the researcher will examine some more traditional and ideated views on learning. Learning is one of the most studied fields in psychology, leading to many definitions of the concept of learning. The following generic definition is provided by Karban (2015): Learning is the action of acquiring new, or modifying and reinforcing existing, knowledge, behaviours, skills, values or preferences, and may involve synthesizing different types of information. Within the context of this definition, there are several learning theories or conceptual frameworks that describe how information is absorbed, processed and retained during learning, including behaviourism, constructivism, cognitive theory and transformative theory (Illeris, 2004). Behaviourists view learning as an aspect of conditioning and will advocate a system of reward and penalty within education. Constructivists believe that a learner's ability to learn relies to a large extent on what the learner already knows and understands, and the acquisition of knowledge

should be an individually tailored process of construction. Cognitive theorists advocate for the study of the learners' selves rather than their environment, and particularly the complexities of human memory. Transformative learning focuses on the necessary changes that are often required in the learner's preconceptions and world view (Ormrod, 1999).

In finding an understanding of what learning is, Illeris (2007, p. 13) notes what the concept of learning may refer to. Firstly, learning may refer to the outcomes of the learning intervention or learning process; learning here means what has been learned and what change should take place. Secondly, learning may refer to the mental processes that occur in the individual, and which may lead to change. Thirdly, learning may refer to the interaction processes between individuals, the learning material and their social environment. Fourthly, learning may refer to the official and professional context of learning, which is synonymous with the terms 'teaching' or 'training'. Knowles, Holton and Swanson (2012) argue that in any discussion regarding the definition of learning it is important that a clear distinction is made between education and learning. Education is an activity that is designed to effect change in the knowledge, skills and attitudes of individuals, groups or communities (also seen as organisations). By contrast, the term 'learning' as stated by Boyd, (1980, pp. 100-101) emphasises the person in whom the change occurs or is expected to occur. Learning is the inherent act or process of behaviour change by which knowledge, skills and attitudes are acquired (Knowles, et al., 2012).

### **5.2.2        *Learning influences and focuses***

To further understand learning within the context of learning as sense-making, the researcher will review the literature from a perspective of what influences learning and what shapes approaches to learning. Learning concepts such as experiential learning, adult learning, self-directed learning, cybernetics and learning at work will be reviewed.

#### **5.2.2.1      *Experiential learning***

Experiential learning is best defined as the process whereby knowledge is created through transformation by experience (Kolb, 1984). Experiential learning is about the application of knowledge, in contrast with cognitive learning, which is the academic knowledge such as vocabulary learning (Lam & Chan, 2013). Experiential

learning is described by specific characteristics which include promoting hands-on learning, using a problem-solving process, addressing real-world problems, encouraging student interaction with each other and the content, engaging in direct experience and using multiple subjects to enhance inter-disciplinary learning (Wurdinger & Carlson, 2010, p. 8). This definition emphasises the process of adaptation and learning as opposed to content or outcomes. It further persuades the reader that knowledge is a transformative process, being continuously created and recreated, and not an independent entity to be acquired or transmitted. It also requires that learning is understood from an epistemology (Kolb, 1984, p. 38).

According to Kolb (1984), experiential learning theory offers a fundamentally different view of the learning process from behavioural and cognitive theories based on an empirical epistemology. Whereas most of the implicit learning theories that underlie traditional education methods are for the most part based on traditional idealist epistemology, experiential learning has a different perspective. Implicit learning theory is the learning of complex information in an incidental manner, without awareness of what has been learned (Sun, 2008). According to Frensch and Rùnger (2003), the general definition of implicit learning is still subject to some controversy although the topic has had some significant developments. A prescription for the conduct of education based on the proper relationship between learning, work and other life activities emerges from this different perspective (Kolb, 1984, p. 20).

One of the key elements of Kolb's theory of experiential learning is that the focus of learning is on the *process* of learning as opposed to the traditional behavioural outcomes. This epistemology is based on the idea that consciousness is influenced through the learning process (Kolb, 1984, p. 28). Kolb (1984, p. 34) argues that learning involves the transactions between the person and the environment, making learning the major process of human adaptation. The transaction between person and event is described by Terry (2006). Episodic learning is a change in behaviour that occurs as a result of an event. For example, a fear of dogs that follows being bitten by a dog is episodic learning. Episodic learning is so named because events or episodes are recorded into episodic memory, which is one of the three forms of explicit learning and retrieval, along with perceptual memory and semantic memory,

and exists as consciousness (Baars & Gage, 2007). These events or episodes can be created or recreated within in a learning process. Kolb (1984) indicates that the concept of experiential learning is considerably broader than the classroom workplace, the management environment and the living space. Therefore, it also focuses on other, more limited, adaptive concepts such as creativity, problem-solving, decision-making and attitude changes, all of which have a direct influence on the workplace and the manner in which people cope with their world of work.

#### 5.2.2.2 *Adult leaning*

Adult learning is defined as the science and art of helping adults to learn (Spencer, 2006, p. 4) and Knowles, *et al.*, (2012, p. 11) in summarising the difficulty with defining learning within the milieu of the adult learner given the various reasons for learning displayed by adults. Smith (1982, p. 32) concurs, noting that these difficulties in defining learning, are derived from learning's many purposes. Adults have accumulated knowledge and work experience which can add to the learning experience (Bohonos, 2012). According to Knowles, *et al.*, (2012), learning refers to the mastery of what is already known about something, as the extension and clarification of the meaning of one's experience, and as an organised, intentional process of testing ideas relevant to problems within the world of products, processes or functions. Learning is focused on change, and influences the acquisition of habits, knowledge and attitudes that enable individuals to make adjustments to their personal, social and work life.

Adult learning focuses on the assumption that learning is rooted in situations rather than subjects. According to Merriam, Caffarella and Baumgartner (2007, p. 7), adult learning is affected by demographics, globalisation and technology, because it is driven by what the learner needs or wants to learn, the available opportunities and the manner in which the learner learns. It recognises and places a high value on the learner's experience in various and specific situations. Therefore, adult learning presents a challenge to the static concept of intelligence and standardised limitations of conventional learning (Knowles, *et al.*, 2013). The learnings within the adult learner realm happen in many ways and in many contexts, just as adults live different lives (Fenwick, Nesbit & Spencer, 2006, p. 17). The majority of adults are not interested in learning for the knowledge itself, and are not motivated in the

direction of continuing education. They are, however, interested in mastering the challenges within their environment. Adult education is a process through which the adult learner becomes aware of the significance of experience and of the significance of the self within that experience (Knowles, et al., 2012).

#### 5.2.2.3 *Self-directed learning*

Closely related to adult learning is self-directed learning. The concept of self-directed learning is based on the premise that adult learning is directed intrinsically, whereby the learner is at the centre of his or her own learning (Chapnick & Meloy, 2005). Earlier research suggests that being able to regulate one's own learning is something that must be modelled to students, for it is not a natural human tendency in the population at large (Asghar & Chissom, 1992). Today, self-directed learning is seen as a component of modern education (Cooper, 2003) where learners are encouraged to do more independent learning (Armstrong, 2011). Ultimately, learning is intrinsic to human living, and as humans we will continue to learn in order to survive as humans and to find our significance within society (Jarvis, 2012).

Popović (2012, p. 219) refers to the development by Knowles (1975) and Tough (1971) of a systematic approach to self-directed learning that compared the attributes of teacher-directed and self-directed learning. The notable difference between self-directed learning and teacher-directed learning is that in self-directed learning the student's (adult) experience counts for as much as the teacher's knowledge (Knowles, et al., 2012, p. 38). Popović (2012, p. 219) argues that one of the possible influences on self-directed learning can be derived from the adult learning cycles. Self-directed learning encompasses a learning cycle of identifying a problem; choosing the appropriate learning to solve the problem; deciding on the learning aim, content and resources; carrying out the learning; observing and monitoring the process and progress; and evaluating the learning experience and results.

#### 5.2.2.4 *Cybernetics and learning*

Cybernetics is a trans-disciplinary system view of control systems (Norbert, 1948) investigating the structure, constraints and possibilities of mechanical and living systems (Bateson, 1987). The essential goal of the broad field of cybernetics is to understand how anything, digital, mechanical or biological processes information,

reacts to information, and changes or can be changed to better accomplish the first two tasks (Kelly, 1994). Bateson (1987, p. 338) refers to cybernetics as a “power greater than the self” and indicates that the “self” is ordinarily understood as a small part of a much larger trial-and-error system which influences thinking, deciding and acting. In this he also recognises the individuality of the “self” in terms of any larger system and that different “selves” will have different experiences within similar systems.

Bateson (1987, p. 410) indicates that learning in living systems is encapsulated within cybernetics as a communication system which is influenced by energy. Within this communication system, the energy, when transferred, resembles a stimulus-and-response behaviour more than a cause-and-effect behaviour. The cause-and-effect behaviour can be viewed as information being constructed and reconstructed by the individual interacting with the environment (Bailey, 1994, p. 163). In learning, this means that the learner’s response to learning is more determined by himself or herself than by the teacher or the knowledge. Similar to the transfer of energy within a communication system, and specifically the learning system, is the connection and relationship between context and content. Content only exists in combination with other content, which creates context. Content only has meaning in a larger context, or has meaning in relation to other content. If a message has a meaning that refers to something else, that creates a wider context of relevance consisting of patterns of message-plus-referent, which provides individualised meaning to the messages (Tosey, 2006).

Within the paradigm of cybernetics, Bateson (1972) defined a framework for learning which appears in diverse literature, for example, Bales (1995), Bartunek and Moch (1994), Bloom (2004), Dilts and Epstein (1995), Keeney (1983), Peterson (1999) and Argyns and Schön (Tosey, 2006, p. 4). Bateson’s levels of learning describe orders of recursion as a hierarchy of logical types, and not a hierarchy of contents indicating the multi-dimensional, paradoxical and aesthetic nature of learning. As indicated by Senge (1990, p 14), the higher orders of recursion are not superior to the lower orders, but generative in positive and negative respects, both liberating and limiting. Following on the next page is a short summary of Bateson’s levels of learning as describe by Tosey (2006):

*Learning 0 is characterised by specificity of response, which is expressed in right and wrong, and is not subject to correction. It entails responding to stimuli, but making no change based on the experience or the information. The learner produces an automated response to the trainer's instruction. There is no evidence of any behavioural change after the learning process.*

*Learning I is characterised by a change in specificity of response by correction of errors of choice within a set of alternatives. It is the explicit focus of much higher education and management learning processes, involving the common notion of learning as a cognitive, conative and affective change in knowledge, skills and attitude.*

*Learning II is seen as a change in the process of Learning I, and is represented by a corrective change in the set of alternatives from which a choice is made. It is essentially about learning the pattern of the context, indicating the meaning to be given to the behaviour, and also introduces a reflexive aspect to learning. The learnt patterns guide one's actions in other, apparently similar contexts through the personal reflectivity of the learning process.*

*Learning III is seen as the change in the process of Learning II, as a corrective change in the system of sets of alternatives from which a choice is made. In essence, it is not just about learning, but at the same time learns how to learn, and simultaneously learns how to learn how to learn. The problem for which Learning III is a solution consists of systematic contradictions in experiences. Learning III is likely to be difficult and rare, so Bateson allows that one can talk about Learning II without the necessity to move to Learning III.*

*Learning IV would be a change in Learning III, but as Bateson indicates, probably does not occur in any adult living organism.*

#### 5.2.2.5 *Learning at work*

The influence of learning at the site of work continues to be central to an individual's development (Billett, 2012, p. 228). Billett refers to Lodge (1974), Greinhart (2002) and Billett (2010) in arguing that today, as across human history, the majority of learning required for adults to perform their work will be conducted at the place of

work, making the workplace as important a site of learning as any formal institution of learning. Today we have institutionalised arrangements for the development of trades and professional skills that include extensive periods of work experience such as apprenticeship systems, learnerships and internships requiring learners to spend considerable time in the workplace in combination with their formal education (Billett, 2012, p. 229).

Apart from learning through and developing of workplace capacities, the focus of learning at the site of work is that the learner also engages in the process of re-making and transforming occupational practices (Billett, 2012, p. 233). Billett further refers to Scribner (1985) and Rogoff (1990), stating that the co-occurrence between individual learning and the re-making of work practices required in occupations highlights the interdependence between human learning and human doing. Not only is individual learning developed through this process, but the engagement in the work process and the transforming of work practices are re-created and improved.

### **5.2.3        *Learning in a complexity domain***

Learning in a complex domain involves the integration of knowledge, skills and attitudes; the coordination of constituent skills; and the transfer of the learning to daily life and places of work (Van Merriënboer & Kirschner, 2012, p. 2). According to Van Merriënboer and Kirschner (2012, p. 6), which refers to Ragan and Smith (1996), and Van Merriënboer and Van Dijk (1998), the difficulties of complex learning lie in traditionally designed instruction models that made use of fragmentation and analytical processes as fundamental design principles. Typically, the traditional instructional design process will break something up into small, incomplete and isolated parts to establish distinct learning or performance objectives. Thereafter, different instructional methods are selected for reaching each separate objective, leaving the learning fragmented. Van Merriënboer and Kirschner (2012, p. 2) refer to Merrill (2002), indicating that learning in a complex domain requires an instructional design set that helps learners to integrate knowledge with skills and attitudes, stimulating the learner to learn and coordinate constituent skills into simultaneous transfers of what has been learned to new problem situations.

The traditional approach to instructional design and therefore to learning, is seeded within an ordered-systems-thinking assumption of efficiency, where the system is amenable to a reductionist view to problem-solving (Van Merriënboer & Krischner, 2013). This assumes that through the study of physical conditions general rules can be derived to create a reliable body of knowledge (Kurtz & Snowden, 2003, p. 466). Order systems are stable, require little containment and do not change much. Due to their stability, it is easy to make sense of ordered systems; once they are known and the variables within the system are understood, knowledge of the system can easily be maintained. However, ordered systems are prone to catastrophic failure, especially the human system (Snowden, 2005, p. 48). Snowden (2005, p. 48) refers to human intelligence as pattern processing rather than information processing.

These patterns, rather than information, are used in making decisions. Most traditional approaches to instructional design are then also guided by individual or collective pre-existing patterns. Improving decision-making and problem-solving then requires that a distinction is made between categorisation and sense-making. Where categorisation is used as the driver of the learning design, models and frameworks precede the data, which is retro-fitted into the framework. By contrast, when sense-making is driving the learning design, the data precedes the framework and the properties in which the solutions are seeded emerge from the data (Snowden, 2005, p. 48).

#### 5.2.3.1 *Order versus Un-order*

The concept of order versus un-order is described within the Cynefin framework. According to Hasan and Kazlauskas (2009), the framework was first defined by Snowden (2002) and later refined by Kurtz and Snowden (2003). The Cynefin framework describes two domains of order, housing four ontologies. The order domain holds the assumptions that through the study of physical conditions, general rules or hypotheses can be derived and verified, which then create a body of reliable knowledge. The domain of un-order, also referred to as emergent order, is not indicative of the lack of order, but refers to a paradoxical kind of order rather than the opposite of order. In the un-order domain, it is assumed that any order not directed or designed is invalid or unimportant. In the domain of un-order, the whole

is never the sum of its parts due to emergent order properties (Kurtz & Snowden, 2003, p. 466).

In the order domain, Snowden (2005, p. 50) describes two ontologies, namely, visible order, also referred to “simple” in the 2002 version and changed to “obvious” in 2014; and hidden order, also referred to as “complicated”. In visible order, the operant is sense-categorise-respond. In the obvious, data is gathered, it is then categorised on the basis of past experiences, after which action is taken in accordance with best practice. Brougham (2014) describes the obvious as: “here we know what we are doing and have seen it a thousand times before”. In ‘hidden’ order, the operant is sense-analyse-respond. Here, there are repeating relationships between cause and effect (Juarrero, 1999), but the relationships are not self-evident and require analysis to be understood. There is a dependency on expert knowledge. They gather the data, subject it to expert analysis and produce a response in accordance with established good practice (Snowden, 2005, p. 50). ‘Complicated’ can also be described as: “we don’t know what is going on but know that we can analyse what has happened and work it out” (Brougham, 2014).

In the un-order domain, Snowden (2005, p. 50) describes two more ontologies, namely, that of complex order or just complex, and chaotic order or chaos. In complex order, the operant is probe-sense-respond. In the complex ontology, multiple agents produce patterns and emergent order that can be understood in retrospect. In the complex, the focus is on managing the relationships between the agents and the emergent patterns, and not on managing the desired or predicted outcomes (Reynolds, 1987). Brougham (2014) summarises the complex as: “we cannot determine what will cause a particular outcome but we can run some experiments to see if they move us in the right direction so we probe, sense and respond.” This is also the domain of multi- postulation as there is no right or wrong answer, which provides for the opportunity of parallel thinking (Brougham, 2014). The researcher will refer to this as multi-frame thinking. The second ontology that Snowden (2005, p. 50) describes is that of chaotic un-order where the operant is act-sense-respond. In the chaotic, order is not retrospectively coherent. Cause-and-effect is non-existent and it is, therefore, important to act, either to impose order, or to create the conditions from which patterns can emerge. In the chaotic; “the system

is not stable but we need to do something as it is not viable to just wait, so we act”, which can also be described as ‘novel practice’ (Brougham, 2014).

#### 5.2.3.2 *Complexity and learning transfer*

The effectiveness of learning can be measured in the transferability of what was learned onto problem-solving. In addition to compartmentalisation and fragmentation created by traditional learning design methods, these traditional design approaches also create barriers to timeous learning transfer (Van Merriënboer & Kirschner, 2012, p. 7). The key to understanding the transfer of knowledge is locked within the issue of content versus context (Snowden, 2003, p. 24). In unlocking the issue of content and context, some basic concepts underpinning knowledge must be raised. Snowden (2003, p. 24) refers to Stacy (2001) stating that knowledge is not a ‘thing’ or a system, it is a short-lived active process of relating. In this view, knowledge itself cannot be stored, it cannot be measured, it cannot be owned and it cannot be managed. Stacy’s views are based on the science of complex adaptive systems and not in mainstream thinking about knowledge. From this view, Stacy (2001) summarises that most efforts at managing knowledge, including training, has been content management rather than knowledge management. The main element that is missed is that knowledge is a process of relating, and that knowledge has been managed as a ‘thing’ or content. It is suggested that knowledge should be managed as ‘flow’ and ‘thinking’, which requires more context and narrative than content (Snowden, 2003, p. 24).

According to Snowden (2003), context consists of two dimensions: abstraction and culture. Abstraction, as a process of formatting generalised ideas or concepts by extracting the common qualities from the narrative within the knowledge shared (Langer, 1953), requires that the audience, not only share the same language, but also similar levels of education, values and an understanding of a shared world. In culture, Snowden refers to Keesing and Strathern (1998), stating that context is shared through both knowledge and ideation systems where ideas, rules and meanings that underlie and express the way humans live are transferred to new members of society.

### **5.3 Learning as personal significance**

As summarised in paragraph 1.3.1 as a working definition, personal significance refers to an individual's level of confidence in his or her ability to perform a specific task at a level beyond mere chance. When the focus is placed on confidence and not just on the ability of the individual, the importance of personal significance is highlighted. Meyer and Turner (2002, p. 107) asserts that psychologists have historically adopted three components to describe human learning. These are cognition, motivation and emotion. Meyer and Turner refers to Snow, Corno and Jackson (1996, p. 243), Pintrich and Schunk (1996) and Ford (1992), indicating that theorists and researchers have tended to study these processes separately rather than by exploring their synergistic relations and complexities. For this review, the focus will be on such integrative complexities, describing an appropriate complex system of personal significance including consciousness, self-efficacy, control theory, self-worth theory and flow theory.

#### **5.3.1 *Personal significance as a sense of consciousness***

##### **5.3.1.1 *Consciousness***

According to Van Gulick (2004), consciousness is the state or quality of awareness, or, of being aware of an external object or something within oneself. Nakamura and Csikszentmihalyi (2002, p. 91) link the self to consciousness in asserting that the self emerges when consciousness comes into existence and becomes aware of itself as information about the body, subjective states, past memories and a personal future. Consciousness is seen as a complex system that encompasses all of the processes that take place when thinking. Consciousness is often referred to within four main topics. These are; knowledge in general, intentionality, introspection (and the knowledge it specifically generates) and phenomenal experience (Craig, 1998). Consciousness gives people a measure of control over complete subservience to the dictates of genes and culture by representing them in awareness. Nakamura and Csikszentmihalyi (2002, p. 91) refer to Csikszentmihalyi and Csikszentmihalyi (1988, p. 21), stating that consciousness serves as the regulating mechanism between programmed instructions and adaptive behaviour. Consciousness controls an individual's decisions.

Consciousness can be described as the individual's awareness of a 'thing' which is not the 'thing' itself, but a representation of the 'thing'. Yet, in making decisions, and in demonstrating adaptive behaviour, the individual will use or refer to the awareness of, or consciousness of the 'thing' (Farthing, 1998). Malloy, Jensen and Song (2005, p. 39) refer to Bateson (2002, p. 27) in distinguishing between map and territory, indicating that a map of a specific territory is not the territory, yet the map is used to navigate the territory. Bateson asserts that knowledge of a 'thing' is not the 'thing' itself. The relationship between the territory itself and what is on the map of the territory is described as difference. Knowledge emerges from the relationship between two or more descriptions of the territory and the map (Malloy, et al., 2005). Tying consciousness to Bateson's view of maps is clarified in Bateson's (1979, p. 242) description of epistemology as a study of how particular organisms or aggregates of organisms know, think and decide as noted by Tosey (2006, p. 1).

#### 5.3.1.2 *Self-efficacy*

Self-efficacy is defined by Lunenburg (2011, p. 1) as a person's belief that he or she is capable of performing a particular task successfully. Lunenburg further refers to Kanter (2006) in describing self-efficacy as a kind of self-confidence, or task specific version of self-esteem as argued by Brockner (1988). In this, self-efficacy refers to the individual's sense of capability as influenced by his or her perception, motivation and performance of a specific task (Bandura, 1977, p. 193). Lunenburg (2011, p. 2) refers to Bandura (1982) in stipulating the following three ways that self-efficacy affects learning and performance: 1) Self-efficacy influences the goals that people choose for themselves 2) Self-efficacy influences learning as well as the effort that people exert in learning and performance 3) Self-efficacy influences the persistence with which people attempt new and difficult learning and performance tasks.

Bandura (2006, p. 4) asserts that among the mechanisms of human agency, none is more central than beliefs of personal efficacy as the core belief of human motivation, well-being and accomplishment. Foundationally, Bandura asserts that if people don't believe they can produce a desired result through their actions, they have little incentive to act or persevere in the face of difficulty. Self-efficacy, or the belief in one's efficacy, affects whether or not an individual think optimistically or

pessimistically about self-development, adaptation and change. It impacts on cognitive, motivational affective and decisional processes required for goal-setting, aspiration, motivation and perseverance in performing a particular action with a view to a specific result and predicting behaviour (Weinberg & Gould, 2007). According to Pajares, Prestin, Chen and Nabi (2009), there are three modes in which self-efficacy affects cognitive development and accomplishment. These are, firstly, individual agency, within the learner's beliefs in regulating their learning activities and to master their field of learning; secondly, proxy agency, the belief behind a learning programme through its design and facilitation or delivery, in the self-efficacy to motivate and promote learning in the learners; and thirdly, collective agency, the collective sense of efficacy of a learning provider or facility that their institution can accomplish significance through academic progress (Bandura, 2006, p. 10).

Shea and Bidjerano (2010, p. 1724) refer to compelling evidence – such as Pajares (1996), Pajares and Valiante (2001), Wigfield and Eccles (1992), and Zimmerman and Kitsantas (2005) – emphasising the mediating role of self-efficacy across the content areas of mathematics, reading and writing, explaining the relationship between prior ability (aptitude) and academic performance. Learners with higher self-efficacy beliefs, not only set higher, more productive goals to master, but they also choose to engage in more challenging tasks. Self-efficacy also has a direct influence on occupational aspirations and career goals, even more so than actual achievement in subject areas related to future mastery (Shea & Bidjerano, 2010).

Lunenburg (2011, p. 2) refers to Bandura (1982) indicating three ways that self-efficacy affects learning and performance. These influences are integral to the human sense of personal significance. Firstly, self-efficacy influences the goals that employees of organisations choose for themselves. It is highly likely that a person with high levels of self-efficacy will set high personal goals (Zimmerman, 2000). Secondly, self-efficacy influences learning in organisations, as well as the effort that people exert in their role in the organisation. People with high levels of self-efficacy generally work harder to learn how to perform new tasks because they are confident that their efforts will be successful (Gist, 1987). Thirdly, self-efficacy influences the persistence with which people attempt new and difficult tasks. People with high self-

efficacy display more confidence in their efforts to learn and perform new tasks. They are more likely to persist in their efforts with new tasks even when problems surface or they experience resistance from other people or levels of authority in the organisation. It is specifically the third influence, namely, that of higher levels of confidence that is influential in the development of personal significance.

#### 5.3.1.3 *Locus of control*

Locus of control is the internal and external control of reinforcement, and is one of the most studied phenomena in the field of psychology (Rotter, 1989). Briefly described, it refers to the degree to which a person expects that an outcome of their behaviour is contingent on their own behaviour or character versus the outcome being a degree of chance, luck or fated, or in the control of others (Rotter, 1990, p. 489). Any links between locus of control and self-efficacy within the independent variable of personal significance are important to the researcher. Judge, Erez, Bono and Thoresen (2002, p. 706) confirmed that self-esteem, neuroticism, locus of control and generalised self-efficacy should not be seen as isolated traits. Phillips and Gully (1997) also assert that there is a strong link between locus of control and self-efficacy, linking locus of control to personal significance. Phillips and Gully (1997, p. 797) were, from an expectancy viewpoint, specifically interested in the impact of locus of control on goal-setting in learning. They found a correlation between the level of self-efficacy, learning goal-setting and learning performance (Phillips & Gully, 1997).

#### 5.3.1.4 *Self-worth*

Regarding self-worth as a contributor to personal significance within the construct of learning, the researcher referred to Eccles and Wigfield (2002, p. 122), who referenced Covington (1992, 1998), defining the motive for self-worth as the tendency to establish and maintain a positive self-image. Self-worth reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgement of oneself, as well as an attitude toward the self (Hewitt, 2009). Eccles and Wigfield argue that people need to believe that they are academically competent in order to succeed in learning activities. As a dependent variable, self-worth becomes important within the learning situation for the building of a sense of

personal significance of learners, as argued by Convington and Omelich (1979), and as indicated by Eccles and Wigfield (2002).

#### 5.3.1.5 *Flow theory*

The original concept of flow is defined by Csikszentmihalyi and LeFever (1989) and Csikszentmihalyi (1990) as the holistic sensation that people experience when they act with total involvement. The state of flow exists when an individual is partaking in an activity for its own gain, and the state of satisfaction is the point that the individual wishes to continue with the activity, as referred to by Choi, Kim and Kim (2007, p. 226). Shernoff, Csikszentmihalyi, Shneider and Shernoff (2003, p. 132) argue that flow theory is inherently related to learning, in that during the process of learning a new skill, the challenge of the learning may exceed the learner's beginning level of ability, and so provides the learner with the experience of flow. To reach the state of flow, the learning process or the level of skill increases to match the challenge of learning. The specific interest in flow theory as a depended variable of personal significance is in the reference being made to flow theory and consciousness by Nakamura and Csikszentmihaly (2002, p. 91).

One of the conditions for flow to exist within individual learners is the learners perceiving challenges or opportunities that stretch their existing skills, which provides a sense of engaging the challenge at a level appropriate to their capabilities. It also includes a clear proximal goal and immediate feedback about the progress that is being made within the learning process (Nakamura & Csikszentmihalyi, 2002, p. 90). According to Nakamura and Csikszentmihalyi (2002, p. 90), the characteristics of the flow state are observed as an intense and focused concentration on the present moment and what is being done at that moment; a merged focus on action and awareness; loss of reflexive self-consciousness as a social actor; distortion of temporal experience and the sensation that time has passed faster than normal; and experience of the activity as intrinsically rewarding. Nakamura and Csikszentmihalyi (2002, p. 90) reference Berlyne (1960) and Hunt (1965), indicating that the state of flow is intrinsically fragile. If the challenge begins to exceed the skill level, the learner first becomes vigilant and then anxious; if the skill level begins to exceed the challenge, the learner first relaxes, but then disengages.

### **5.3.2        *Personal significance as a sense of higher-order thinking***

With personal significance being considered as indicative of an individual's level of confidence in performing a task beyond mere change, that confidence within the world of learning is linked to the cognitive ability of the individual (Hunt, 2003). Through shifts in technology – the ambiguity of modern society with the use of social media and the Internet – the global market economy has altered the view and function of education. This alteration requires a new series of skills, often referred to as higher-order thinking (Resnick, 1987), that are distinct from traditional academic focuses of fact-based learning, and may be more predictive of high-quality learning and employability in the current market economy (Richland & Simms, 2015). Developing confidence in a modern society, requires a non-traditional approach to learning, where traditional fact recall-based teaching methods are substituted by thinking skills that are focussed on succeeding in the new world of work.

#### **5.3.2.1        *Higher-order Thinking Skills***

Higher-order thinking skills, also referred to as HOTs, as described by Barak, Ben-Chaim and Zoller (2007, p. 354), relate to cognitive skills such as critical system thinking, decision-making and problem-solving. Airasian, Cruikshank, Mayer, Pintrich, Raths and Wittrock (2001), Richland and Simms (2015) and Miri *et al.* (2007) refer to the Bloom, Englehart, Furst, Hill and Krathwohl's (1956) taxonomy of educational objectives to distinguish between higher-order and lower-order thinking skills. Higher-order thinking skills can be conceptualised as a non-algorithmic, non-procedural, complex mode of thinking that often generates multiple solutions. These cognitive skills include analysis, evaluation and synthesis or creation at the higher end of Bloom's taxonomy. Lower-order thinking skills will be associated with algorithmic, procedural and static modes of thinking that relate more to the lower levels on Bloom's taxonomy, such as the recalling, explaining and using information.

The development of higher-order thinking is essentially the development of expert-like disciplinary knowledge in which concepts are understood to be cognitive systems of relationships between information that can be connected and manipulated (Meyer, 2003). Within higher-order thinking, cognitive skills support the

capacity to categorise, generalise and draw inferences in order to transform existing knowledge to be compared, constructed and combined in novel ways depending on the contextual goal (Richland & Simms, 2015, p. 2). Higher-order thinking is therefore seen as an essential part of the confidence level of the individual (Barak, et al., 2007) for high-quality educational and employment goals in the current market economy.

Richland and Simms (2015, p. 3) refer to Lewis and Smith (1993, p. 28) and Bartlett (1958) who suggest that higher-order thinking occurs when people interrelate and rearrange new information and information stored in memory to extend current information to achieve a purpose or to find answers in perplexing situations. According to this view, it is advised that knowledge should be something that is refined, manipulated and connected to other information, and used across contexts to serve the learner's goals (Richland & Simms, 2015, p. 4). To achieve this view requires the learning design and delivery to develop learners' capacities for critical thinking, which is necessary for the analysis of unfamiliar situations, their questioning skills to improve problem-solving, and their decision-making capabilities, which must be based on rational thinking (Barak, et al., 2007, p. 354).

#### 5.3.2.2 *Multi-frame thinking*

Multi-frame thinking refers to the cognitive ability to process more than one thought at a given moment (Resnick, 1987). All humans are capable of that, and it is quite a natural process. However, in the field of traditional training, it often stands to reason that the approach towards thinking is that of single-frame thinking, where a learner is required to have one viewpoint that is either right or wrong. This correlates with lower-order thinking and is found in procedural thinking approaches (Richland & Simms, 2015).

Colville, Hennestad and Thoner, (2013, p. 4) refer to Groffman (1974) and Schutz (1960), asserting that frames of thinking represent the organisation of past experiences as culturally based recipes that function as schemes of interpretation and guides to future action. Colville, *et al.*, (2013) also refer to Bruner (1990), stating that frames of thinking chase experience into memory and serve as the retention system for images of past organisational learning that becomes more ingrained with age. Learning occurs in the small moments of disturbing the balance between order

and un-order in the form of frames derived during and retained from moments in the past and cues in the form of current moments. Viewed from a sense-making perspective, the significance of the moment of realisation within the learning process resides in the relationship between frames and cues (Colville, et al., 2013, p. 3), therefore it is suggested that learning or sense-making is to be found in multi-frame thinking.

Multi-frame thinking is not only frames and cues for reference, but encompasses the general concept of thinking, as well as learning how to think, as a very important application in learning. Learning how to think in a learning process is one of the most discussed topics in the educational space (Fink, 2013). Within the concept of general thinking, Fink (2013) refers to three types of thinking, namely, critical thinking, creative thinking and practical thinking; all of which are important in the application of learning. In critical thinking, the thinking process is focused on analysing, evaluating or judging something (Glaser, 2015). Creative thinking occurs when new schemes are formed in the creation of new ideas through imagination (Sternburg & Sternburg, 2011). In practical thinking, the individual learns how to apply something under the pressures of solving problems or making decisions. Practical thinking is the way in which the person adapts to an environment, both people and circumstances, or the manner in which the person changes his or her environment in adapting it to pursue their important goals (Gladden, 2015).

The researcher would like to introduce a fourth type of thinking within the concept of multi-frame thinking, that of contextual thinking. Contextual thinking refers to the relationship between context and content (Bateson, 1987, p. 410). According to Allen, Kilvington and Horn (2002, p. 17), in behaviourist learning theories knowledge is viewed as nothing more than passive, largely automatic responses to external factors in the environment. Cognitive theories view knowledge as abstract symbolic representations in the head of the individual. Constructivist learning theories view knowledge as non-transmittable from one person to another, seeing knowledge as a constructed entity made by each and every learner through a learning process whereby knowledge is re-constructed based on the information that is shared. In behaviourist and cognitivist approaches to thinking, the focus is on the promotion of pre-determined options for change, whereas within the constructivist approaches

there is more reliance on the contextual world of the individual re-constructing the knowledge. Allen, Kilvington and Horn, (2002, p. 24) refer to Parnell and Benton (1999), asserting that contextual thinking within a learning programme should focus on increasing knowledge through awareness and reflection, and the way in which the person contributes to the specific problem situation. Furthermore, the focus ought to be on the relations between options or relevance of the enabling environment in developing a consensus on the different options available within a specific situation wherein the knowledge is reconstructed.

#### **5.4 Learning as an architecture for co-creating work realities**

Within his review of the literature, the researcher discovered that current literature regarding this specific line of thinking is limited. There is some literature regarding adjacent topics to this line of thinking and relevant to inform this thinking. The researcher therefore attempts to draw on these divergent literatures within the structure of this thinking to establish a single view of the concept of a learning architecture for co-creating work realities.

##### **5.4.1 *Co-creating work reality***

Although conventionally considered to be separated and conflicting activities, working and learning are closely related forms of human activity within an organisation. Work practice is generally seen as conservative and restrained within the set standards of the work output, making it resistant to change. Learning is generally seen as distinct from working and problematic in the face of change (Brown & Duguid, 1991, p. 40). Brown and Duguid further assert that the source of the opposition between working and learning lies primarily in the description of work as office procedures and learning as subject matter. In this, education, training and development generally focus on abstract representations of work standards to determine knowledge, excluding the actual practice of workplace realities.

Therefore, Brown and Duguid (1991, p. 41) suggest that the intricacies of work practice are often not described in the work standards as central in understanding work. Detached from practice, that abstraction distorts the work or obscures the role training plays to engender through learning and enhance through innovation. Brown and Duguid refer to Orr's (1990, 1987) detailed ethnographic studies of service technicians, illustrating how the organisation's view of work through a standard job

description overlooks, and even opposes what and who it takes to get the job done. From this, they argued that utilising the standard operating procedures as described in the organisation job description as the source for designing a training programme are futile, leaving the learners with the conundrum of solving the gap between learned information and work reality.

Learning, then, as is often the case, becomes a matter of learner motivation, not just to learn, but also to use the learning afterwards. Co-ownership is required to motivate learners to utilise the learning in the workplace. According to Gray, Stein, Osborne and Aitken (2013, p. 38), who also refer to Wood (2003), improving student motivations to adopt a deeper approach to learning requires the encouragement of psychological ownership of activities such as workplace challenges and work group projects. This will affect the learner's attitude through providing greater perceived influence and control, allowing learners to make choices about ideas and practices that will influence their real work environments. When learners own their learning, and the practice that the learning informs, learning is seen as a co-created value that extends beyond the classroom and also has a commercial concern. Learning then takes on an intrinsic motivation that is more likely to lead to deep cognitive and meta-cognitive processing as described by Young (2005) in Gray, *et al.*, (2013, p. 37).

#### **5.4.2 A co-creating architecture**

In a VUCA world, organisations are moving away from learning as a static individual process where the learner gains input for work, to learning as a dynamic collaborative way to work (Long, 2013, p. 8). Wilson (2009), asserts that collaborative learning as the co-creating of something new requires a different, dynamic learning approach with a different mind-set to be effective. Boix-Mansilla (2013), argues that if learning is to create the opportunity for learners to collaborate with other colleagues in the workplace it will require a shift in focus. Learning will have to move away from teaching for testing information, to the nurturing of individual thinking. Learning will have to involve spending less time in the teaching of facts and more time on the complex skills of problem-solving processes. In view of a complex world in which learners find themselves, Parkins (2013), indicates that

‘thinking’ will be the most important skill required for coping with the challenges of the modern organisation.

In considering a learning architecture that will enable the co-creating of, and collaboration within, work realities, Bateson’s (1987) learning framework as described in Paragraph 5.2.2.4 is considered. Learning zero and learning II are specifically of interest. In ordinary, non-technical phrasing, the word ‘learn’ is often applied to what is referred to as ‘zero learning’, the receipt of information from an external event in such a way that a similar event at a later stage will indicate the same information (Bateson, 1987, p. 289). This implies that no thinking or decision is required. Learning zero entails responding to stimuli without any change being required (Tosey, 2006, p. 6). In learning II, the focus is not just on learning a new skill, but more on learning to learn. The essence of learning II is learning the patterns of the context in which activities take place. The learned patterns guide the learner’s action in other, apparently similar contexts, making the learning more significant (Tosey, 2006, p. 7).

The central issue in learning within the concept of co-creating work realities concerns the learner becoming a practitioner, and not learning about a practice. This view draws attention away from abstract knowledge, and situates it in the practice and the communities in which knowledge takes on significance (Brown & Duguid, 1991, p. 48). The co-creation of learning value should extend beyond the classroom through the use of collaborative and experiential learning techniques and processes. This is achieved by allowing learners to make choices and provide their own inputs on learning outcomes (Gray, et al., 2013). Karns (2005) argues that a learning process should be positioned as a “personal trainer” who guides and challenges learners to improve their performance in the areas of commitment, improvement and reflection in the completion and co-creation of work tasks.

## **5.5 Conclusion**

This chapter provided an overview of relevant literature regarding the emergent themes from the researched. Utilising a principle of grounded theory, the literature review was delayed till after the data analysis to prevent pre-conceptions from

influencing the data and the data analysis, as well as not to waste time on undue topics.

The literature review was guided by the main themes of the data findings, and was clearly organised in three focuses: learning as sense-making, higher-order thinking and learning architecture for co-creation of work realities. Although these themes were the organising principle, all of the literature reviewed was within the milieu of learning. With all the literature having a focus on learning, in the end it was about personal significance.

The review of literature is not seen as all-inclusive, but rather focused on themes that emerged in grounded theory as indicated by Martins, Martins and Viljoen (2017). Of most interest to the researcher is that, although the literature reviewed provided adequate insights into the themes of study, it seems to be corralled within fields of learning. There is no literature that describes the concept of personal significance per se, and there is no literature that describes personal significance as a fundamental element of a learning architecture that will enable the co-creation of work realities. Limited literature was found regarding learning architecture utilising personal significance to co-create work realities

Given this specific gap in the current literature, in the following chapter the researcher aims to discuss the findings of the research with a view to tying the findings and the current literature into a coherent view of personal significance as a foundational element of a learning architecture that enables the co-creation of work realities. In Chapter 6 the analysed data and literature review will be evaluated and discussed.

# Chapter 6:

## Evaluation and Discussion

### 6.1 Introduction

In the previous chapter a review was presented of current literature as the academic voice to the relevant categories and themes that emerged from the data analysed in Chapter 4. In this chapter the research data and the literature review will be compared in an attempt to recognise the gaps in the current literature or to confirm the relevance of the current literature within the field as a grounded theory study and captured within the data collected and described in Chapters 3 and 4. The comparison is conducted through an evaluation and discussion of compared data and literature to organise and crystallise the primary elements within the research aim as described in Paragraphs 1.5 and 1.5.1.

In this chapter, the researcher will present and discuss the research findings. The discussion is structured according to the selective coding as described in Paragraph 4.5. The three themes as identified during selective coding are personal significance within a learning process, the emergent properties of sense-making through a learning process, and co-creation of work realities through a learning architecture, which will each be discussed below. The presentation is structured in data representation, literature representation and the researcher's comparison.

### 6.2 Personal Significance within a learning process

#### 6.2.1 *In the data*

Starting the comparison of personal significance within a learning process with the findings during open coding, the concept of personal significance was found to be deeply integrated and related to the learning experience. It was indicated that learning, during a training intervention or otherwise, is a personal experience. Each person learns differently, on an emotional level as well as a physiological level. It is recognised that the physiological meta-process of learning is the same for all human beings. It is also described as different for each individual learner. This is due to individuals having different physiological make-ups. The difference was also described from a point that different individuals have different experience levels and different knowledge levels. In that, the current learning experience, given that as

individuals, learners are continuous at a meta-cognition level, integrating new information with old knowledge. What was clear from the open coding was that the learning experience was unique to each person, and that learning was seen as a personal experience. Given that learning is seen as a personal and unique experience open coding indicates that this uniqueness and personal experience should be recognised within the learning process and should be designed into the training intervention. Defining and describing the components of personal significance were not possible through open coding.

Through the axial coding process, the personal experience of the learner was linked to the thinking process of an individual as it was linked to the learning process of the individual. It was more specifically linked to the higher-order thinking skills of the individual. It was suggested through open coding that individuals should, specifically with in a disruptive VUCA world, have multi-frames of reference when applying their higher-order thinking, and making decisions. During axial coding, multi-frames of reference were described as multi-frame thinking and integrated with higher-order thinking, as an element of higher-order thinking. The personal experience of the learner was further linked to a deeper understanding of the Being of the individual as opposed to the individual's Doing. In this sense the learning process was more than just gathering new information. It influenced the existence of the individual. This interpretation in the axial coding can be linked to the development of the "vision" as described in the VUCA prime. The being is influenced through the discovery and unpacking of beliefs and myths of the individual regarding a specific situation, knowledge, information or procedure during the learning process. In developing or influencing the being, the personal learning experience was also linked to the level or even capability of the individual to co-create the work reality. The axial coding suggests that in most current traditional training interventions, there is a low focus on higher-order thinking and multi-frame thinking. The focus is also predominately on the Doing, rather than the Being.

During axial coding, the interest was also placed on what personal significance did for the individual during the learning process. The following results were noted from a higher sense of personal significance:

- It allowed for natural synthesis of new information with old knowledge.
- It assisted in making sense of work context.
- It assisted in integrative and contextualised problem-solving.

- It allowed for more options of knowledge from the presented information.
- It deepened the purpose of learning.
- It allowed for more than procedural thinking.
- It allows for deeper insights into work context.

The coding process also indicated that the development or activation of a higher sense of personal significance is the responsibility of the learning designer, and the learning architecture itself. Through the learning architecture, the learning process must provide more than just comprehension and procedure. The learning process must activate higher-order thinking and multi-frame thinking, and must increase learner confidence, and a higher consciousness of the being and the doing. These elements as development focus areas of a higher personal significance become the design elements of the learning architecture.

### **6.2.2 *In the literature***

No literature was found that described personal significance as a concept or the importance of personal significance during a learning process. The literature did show that learning could not be described as a singular event or moment. As argued by Meyer and Turner (2002), learning and the learning process is a complex system; a system of being. They further indicate that human learning is traditionally described by psychologists within three components, that of cognition, motivation and emotion. These three components are also treated separately as individually unique and individually influential. The collective of the three components and their unique manifestation within an individual learner or person in a learning process is not that well noted.

From the literature, it is inferred that learning and the learning process develop personal confidence (Collins English Dictionary, 2003). It is also deduced that the complex system of 'being' that is influenced by a learning process can comprise of several components. Through the literature review, the researcher was also able to describe these components which include, but is not necessarily limited to, consciousness, self-efficacy, locus of control, self-worth and flow (flow theory).

Consciousness as a complex system and a regulating mechanism between programmed instructions and adaptive behaviour controls the decisions people make (Nakamura & Csikszentmihalyi, 2002). Tying consciousness to Bateson's epistemology of know, think, decide and act, consciousness becomes a strong

component of learning, and more directly the concept of significance. The learner becomes aware of the self, what the self is thinking, influencing the decisions the self makes. This forms the base for Bateson's triple-loop learning model as described by Tosey (2006).

Self-efficacy as a person's belief that he or she is capable of performing a particular task successfully becomes the driver for developing a sense of self-confidence. Confidence being one of the primary outputs of a learning process links self-efficacy as a primary contributor to personal significance. Bandura (2006) asserts that among the mechanisms of people none is more central than beliefs of personal efficacy. Bandura further asserts that if people don't believe that they can produce a desired result through their actions, they have little incentive to act or persevere in the face of difficulty. There are three pathways in which self-efficacy affects cognitive development and accomplishment. Firstly, it lies within the learner's beliefs in regulating their learning activities, and to master their field of learning. Secondly, the belief is behind a learning programme, through its design and facilitation or delivery, in the self-efficacy to motivate and promote learning in the learners. Thirdly is the collective sense of efficacy of a learning provider, or facility that their institution can accomplish significance through academic progress (Bandura, 2006, p. 10)? The development of personal significance is deeply linked to the beliefs held about a specific or general situation or knowledge. If a learning process can influence these beliefs, a change in the confidence of the person, a stronger sense of purpose or significance occurs.

Locus of control as the internal and external control of reinforcement of a person's behaviour contingent on their own behaviour versus the outcome of their efforts being a degree of luck, or fate, or in the control of others as described by Rotter (1990), becomes a sense of personal achievement or contribution. As asserted by Phillips and Gully (1997), a strong link can be made between locus of control and self-efficacy. When a learning process is focused on helping the learner to develop a healthy locus of control, a positive influence can be established between the learner's self-efficacy, setting of learning goals and learning performance.

Self-worth as the tendency to establish and maintain a positive self-image as argued by Covington (1992, 1998) and described by Eccles and Wigfield (2002) can be

linked to the individual immediate sense of confidence through their own consciousness of themselves. Eccles and Wigfield argued that people needed to believe that they were academically competent in order to succeed in learning activities. It is this belief of being academically competent that bolsters the confidence of the individual, creating a sense of personal significance.

Flow theory as a concept of the holistic sensation that people experience when they act with total involvement is the foundation for an individual learner having a positive learning experience. Csikszentmihalyi and LeFever (1989) describe flow as a state of mind that the individual experiences when partaking in an activity for its own gain, and the sense of satisfaction to the point where the individual wishes to continue with the activity. This sense or need to continue with the activity becomes important when learners are expected to go back to the workplace and co-create the new work reality. The stronger the flow during the learning process, the stronger the urge to continue with the co-creation that stems from the learning process, and the strong sense of purpose or personal significance is experienced by the learner.

The ability of higher-order thinking and multi-frame thinking is strongly related to personal significance, although it is not described in any literature as part of personal significance. Higher-order thinking, as well as multi-frame thinking, serves as cognitive locks, regulating critical systems-thinking, decision-making and problem-solving. They are essential skills in the development of an individual's level of confidence, as they unlock these essential capabilities which are crucial within a VUCA world. Higher-order thinking skills are the non-algorithmic, non-procedural, complex mode of thinking that often generates multiple solutions. Higher-order thinking is associated with the higher-order levels of the Bloom's taxonomy. According to the literature, and specifically the work of Richland and Simms (2015), higher-order thinking occurs when people interrelate and rearrange new information with information stored in memory. It is about the manipulation and connectedness of information to form a use of information across context to serve the learner's goals. Multi-frame thinking, as the other lock, refers to the cognitive process of holding more than one viewpoint, or reference regarding the same information. Colville, et al., (2013) lead the literature, asserting that frames of thinking represent the organised past experiences as recipes that function of schemas to navigate the future with. Fink (2013) refers to various types of thinking including critical thinking, creative thinking and practical thinking. Although not described by Fink as multi-frame thinking, it does indicate the "multi-faceted" nature of thinking.

Regarding the human being and the human doing within the learning environment, there is limited current literature. The main contributors are Viljoen-Terblanche (2008) within the context of transformation strategy and Jarvis (2006) who contextualised learning as essential to the Being. As referred to in Paragraph 1.3.5, human being and human doing may be key contributors in unlocking effective learning processes. Considering the VUCA prime as described in Paragraph 1.3.7, a primary reliance is placed on the being through the elements of understanding, clarity and agility. This indicates that a learning process should be balanced and even slant towards the being rather than just focus on the doing.

### **6.2.3        *The researcher's comparison***

The researcher found that there was no a clear and obvious comparison between the empirical data and the current literature. Both the empirical data and the literature indicate specific elements of what personal significance is or can be, and what personal significance can do. However, the empirical data suggests a much more integrated and specific view of personal significance and its role within a learning process, where the literature indicates more specific areas of learning that, when pulled together, will provide an indication of the role that personal significance can play within a learning process. Neither the empirical date nor the literature defines personal significance or the role that personal significance plays within a learning process. The empirical data does provide a frame of thinking about personal significance within the learning process, and the literature does provide definitions and descriptors for the areas within the frame suggested by the empirical data.

Referring to the researcher's memos as captured in Paragraph 3.5.1, the learning process must guard against becoming the conformation of the "teacher's" knowledge, and must keep its focus on the learner. The learning process must allow for learners to find their being during the learning process and not just the doing based on what the teacher knows and does. This can happen when the focus of the learning process is not centred around the thinking and deciding, but only on the knowing and acting. The learning process then does not allow for personal significance to be established. Also, reflected in the researcher's memos is the importance of personal significance as an indicator of personal consciousness, where consciousness becomes the determinant of choice to change behaviour or not to do so. It is a personal and significant choice enabled through the learning process. Further on in the memos the importance of connecting the dots during a learning process is described. The dots are connected during a learning process on a very personal level, and each person will have to connect his or her own dots.

Integration, not only of content, but also of context and world views, as well as learning concepts and variables, is required within the development of personal significance.

Therefore, in the next chapter, the researcher will address the current fragmented view of the role personal significance plays within a learning process. Personal significance will be described as a single concept, influenced by a number of variables, which as a collective integrated concept develops and influences the learner's personal sense of significance as an activator of personal confidence. Drawing from the empirical data, various places in literature and the researcher's meta-learning the researcher will contextualise the sense of personal significance within a learning process as an integrated personal capability required within the effective delivery of the VUCA prime as a counter to the VUCA world.

### **6.3 The emergent properties of sense-making through a learning process**

#### **6.3.1 *In the data***

Early on during the open coding, the participants indicated training and learning as separate concepts and not mutually inclusive. This separation of the concepts was confirmed by the participants, and most importantly it was indicated not just that they are separate concepts but that they are not mutually inclusive. Open coding also suggested that in general, current traditional training interventions do not focus on the individual learner in terms of changing his or her performance. It is more focused on the process of training, in covering all the prescribed learning outcomes. This was identified as one of the problems of the current training practice. Another problem that was identified was that training, in the traditional teaching or lecturing style, is heavily focused on conveying content through large volume of information. This information is often viewed as knowledge. It makes knowledge extrinsic to the learner. To the point that knowledge was extrinsic to the learner, it was further indicated that training was more orientated towards the organisation and the knowledge or information that the organisation needed to be shared, than the learner's individual performance.

Open coding also indicated that learning and the learning process, being separate from training, could occur during a training intervention, but it was not a guaranteed. Training interventions must actively seek or strive to create learning, or structure learning opportunities, and create a learning process. Open coding recognises that

learning is intrinsic to the individual learner, and acknowledges that learning is therefore unique to the individual learner. Learning is personal, and an effective learning process must enable that personal learning experience. It further indicates that learning, being intrinsic, is less about the contents of information and knowledge, and more about the context with which that information relates. The information, combined with contexts, provides the opportunity for the learner to broaden the application and relevance of the information, creating more aha moments or insights for the learner. During open coding, learning was also described as a complex process, with rhythmic flow between known, knowable ordered states of information and complex relationships of context. It was indicated that the learning process could be seen as a search for meaning or sense-making of the world of information and context.

During the axial coding, it was indicated that learning must not be mistaken for the recall of information, seen as knowledge. Learning should rather be pursued within the context and indeed various contexts that exist within the VUCA world. The learning process actively seeks to make sense of the uncertainty, complexities and ambiguity within the information and through the information. New knowledge is created through the active process of sense-making, which is linked to learning and enabled through the learning process. In the axial coding, it was indicated that the learning process should allow for the emergent properties of learning to be explored within the relationships between context and relevance of context and information. The learning process should create the opportunity for flow between the order and un-order, the knowable and the complex.

In the selective coding, learning and knowledge production was synthesised to indicate that a learning process had to enable the emergent properties of sense-making through a learning process. It is recognised that effective training intervention can be created when these interventions are more focused on the sense-making process and less focused on the content of information. Information becomes a tool within the training, and not the training itself. An effective training intervention, therefore, is a training intervention that is focused on making sense of the new world of work, and that is flexible, allowing contextualisation and emergent properties of learning.

### **6.3.2        *In the literature***

The learning process as a sense-making process can be described as a search for plausible explanations for ambiguous, equivocal or confusing issues or events (Weick, 1995). This statement by Weick has a strong relevance to the volatility,

uncertainty and ambiguity of the VUCA world. Within the process of sense-making there is a tacit need for comprehension. According to Cunliffe and Coupland (2012), comprehending as a process of sense-making is a rational and intellectual process represented through cognitive schemas and models. Brown (2015) reminds us that sense-making is also future-orientated, and can occur prospectively, making sense-making not just a cognitive process, but more about learning. Learning, when seen as a sense-making process, occurs in the spaces between the disorganised and the organised through frames derived and retained from moments of the past organised and against cues in the form of current moments of action (Colcille, 2013). Learning is the development of experiences and knowledge by inquiry or reflective thinking as a process of being, through understanding the processual dynamic of the world (Elkjaer, 2004), in an effort to respond to the world around them.

The importance of a learning process that is forged in sense-making is seeded in the VUCA descriptor of the world being complex. According to Van Merriënboer and Kirschner (2012), learning in a complex world involves the integration of knowledge, skill and attitude, simultaneously with coordination of constituent skills and the transfer of the learning to the daily life and place of work. Merriënboer and Van Dijk (1998), mention that the difficulty with learning within a complex world is that traditional learning and instructional design make use of fragmentation and analytical processes as fundamental learning designs and learning delivery principles. What they are advocating is that learning in a complex domain requires a learning design that helps the learner to integrate knowledge with skills and attitudes within the contextual collective of the learning experience. According to Kurtz and Snowden (2003), the traditional approach to instructional design is seeded in the ordered-system thinking assumption, where the system is amenable to a reductionist view of problem-solving. However, within the complexity of a VUCA world learning through a reductionist approach to problems solving is not enough. In this, Snowden urges that although learning in the order domain is stable it is prone to a catastrophic failure. Snowden (2002), suggests that traditional training is founded within the order domain with a reductionist problem-solving approach, whereas learning is found more within the domain of un-order and the ontology of complexity. He refers to learning as pattern processing rather than information processing. Within a complex learning world, patterns, rather than information are used in decision-making. In most traditional learning processes, the learning design is guided by pre-existing patterns, and the act of learning is seen as categorising the patterns. When the learning process is driven by sense-making, the data (information and context) precedes the pattern. The properties in which the

solutions are found (sense is made) are seeded in the emergent properties from the data.

Having indicated the importance of personal significance within the learning process, sense-making through a learning process all becomes about relevance and context. For people to make sense of their world, that world must be relevant to them. There should be a personal connection to the importance of the problems within that world to the person. The context of the learning process should be closely related or linked to the reality of the person. According not Snowden (2003), context consists of two dimensions, abstraction and culture. Within a sense-making process, abstraction is about the level of personal relevance extracted from, and personal connection made to the narrative. Culture within a sense-making process can be closely associated with the socialisation of the narrative. Snowden (2003) argues that in a learning process within the order domain, from where most traditional training is approached, content rather than context is the primary denominator. This requires a high level of abstraction with a low focus on relevance. When a learning process is founded within the un-order domain with the focus on the emergent properties of the learning, through its relationships of various context, context becomes the primary denominator and not content. Here, low abstraction is required, with more focus on relevance and sense-making.

### **6.3.3        *The researcher's comparison***

In the comparison of the empirical data and the current literature, there is a strong correlation between the data and the literature. The literature confirms that a learning process is a sense-making process. It also confirms that emergent properties within a sense-making process are active during a learning process.

The empirical data and the literature can be aligned, reflecting that learning is mostly about the context. This is more so within the new world of work, given the uncertainty and complexity of the world of work today. Content has become less important and context more critical within the learning process. When the learning process is founded within a sense-making process, it allows for learners to apply the VUCA prime of clarity to counter the complexity of the world. Content is then co-created in and through the learning process, and the learning process becomes content neutral.

## **6.4 Co-creation of work realities through a learning architecture**

### **6.4.1 *In the data***

During open coding, it emerged from the data that learning should be integrative. It was indicated that this was not always the case in traditional training sessions where learning was not the focus, but that the focus was rather on a set of predetermined learning outcomes. The integrative nature of learning was seen as a natural sense-making process as referred to in Paragraph 4.4.3. Open coding also indicated that for learning to be integrative and to permit the natural sense-making process, the integrative nature of learning had to be attended to within the learning architecture and the structure of the training intervention. Open coding revealed that the integrative nature of learning was achieved when training was the starting point of learning, with the end-point was co-creation of workplace realities. When the learning architecture focuses on the journey, starting with the training experience, leading into co-creation in the workplace, it provides an opportunity for challenging the beliefs and myths within the paradigms about the work reality of the learner. The architecture should illuminate the integrative nature of learning through the contextualisation on the work reality. It should create and maintain a consistent line of sight to the work realities. The architecture should further create and maintain the opportunity to integrate the personal and problem systems of the learner.

During axial coding, four categories emerged. These were the following: A learning process must be collaborative and collective to ensure that learning will transfer into co-creation of work realities; personal significance is a key element in co-creation of work realities; developing the intent to co-create work realities are locked into the learning architecture of the learning process; and co-creating work realities depends on the level of personal significance. Axial coding suggests that an effective learning architecture should focus on the development of insight into the personal system of value. It should also challenge the insights and mind-sets within the problem system. Through this focus on the personal and problem systems, the meta-system of significance can emerge. Axial coding further suggests that through an effective learning architecture, the learning process must be incorporative of the value system and the work system. These systems should be contextualised to form a new world of work perspective. Incorporating the value and work systems within the context of VUCA allows the learner the opportunity to explore alternatives to co-creating the future.

Therefore, the main focus of a learning process should be to challenge the current work realities and to co-create the most effective future, and not to capture a perfect

pre-determined future described in learning outcomes. Axial coding also indicates the importance of personal significance within co-creation of future work realities. The data strongly indicated a direct comparison between the level of personal significance and the level of co-creation of workplace realities. The higher the level to which personal significance was developed, the higher the sense of responsibility to engage with the realities of the workplace. The enablement of this link between developing a stronger sense of personal significance and the responsibility to engage with the future workplace should be founded within the learning architecture.

In the selective coding, the integration of the workplace complexity was considered within the dynamics of a VUCA reality. Co-creation was viewed as one of the more effective approaches to counter the new world of work reality. In enabling such co-creation, a learning architecture to this effect should focus on the personal significant contribution of the learner to the collaborative and collective context of learning.

#### **6.4.2        *In the literature***

No current literature was found that described a learning architecture that enabled the co-creation of work realities. In an attempt to establish a single view of the concept of a learning architecture that enabled the co-creation of work realities the researcher focused on the two variables within the concept separately, but also saw the whole or the collective of the concept.

Considering the co-creation of work realities first, the conventional thought is that working and learning are closely related forms of human activity within an organisation as argued by Brown and Duguid (1991). Work realities are seen as a set of standards of work outputs, restrained to change. Learning is seen distinct from work, but necessary for work. However, learning is seen distinct from work and is prone to change. The source of this opposition between working and learning lies primarily in the description of work as office procedures and learning as subject matter. The learning process generally focuses on the abstract representation of the work reality. Further, except for work being described as the procedural practice, the work reality, or environment of work, is crystallised through the description of VUCA. Current traditional training mostly addresses the procedural, but does not directly focus on the contra of the VUCA reality. Although the VUCA-prime is a good counter description, it is seldom used explicitly in the design of a learning process to develop a counter for the restraint of the work reality. In focusing on the VUCA-prime, the learning process becomes more than an abstract of the work reality, it

also becomes a matter of learner motivation as described by Gray, et al., (2013). Gray suggests that a learning process requires the encouragement of psychological ownership of activities such as workplace challenges and work projects to create a deeper motivation. This deeper motivation will allow learners with a greater sense of preserved influence and control about the choices they make regarding ideas and practices that will influence the real work environment. These influences and choices, which may lead to adapting the procedural of the workplace to fit or enhance the workplace, moment to moment, are seen by the researcher as the co-creation of work realities.

The learning architecture to enable the co-creation of work realities must reflect the learning process as a dynamic collaborative way of work as described by Long (2013). The learning architecture as the structure of design, holding the design principles, the learning principles and the work reality focus, should therefore be collaborative and dynamic, and should create the opportunity for learners to collaborate within the workplace. The learning process should move away from a traditional teaching to test information, to the nurturing of individual thinking within a fast-changing world. As Boix-Mansilla (2013) argues, the learning process must spend less time on teaching fact and more time on the complex skills of problem-solving. If a learning architecture is focused on countering the work reality of VUCA, by incorporating the VUCA-prime as a design principle, a shift from Learning Zero to learning II or even learning III is required (Nicolaidis & McCallum, 2013).

#### **6.4.3        *The researcher's comparison***

Although this concept proved to be the most difficult to find exact literature to the specific topic, the separate literature as described above, does confirm the empirical data. For a learning architecture, holding the principles to design a tailored yet flexible learning process is required. To allow for the flexibility to learn within a new world of work architecture is more appropriate than a traditional instructional design such as ADDIE, which is too structured and procedural. The architecture should be able to allow for the enablement of flexible, dynamic, work reality problem-solving and co-creation through decisions and thinking, rather than following specific procedural outcomes.

As reflected in the researcher's memos, the learning architecture must be held responsible to allow the learning process to achieve the purpose of training or learning. That is to improve the individual's performance. That performance should be linked to the individual's level of confidence to operate within the turmoil world of VUCA. An effective training design therefore should be learning-centric and not just

a means for the trainer to recognise that specific relevant or irrelevant content has been covered. The main purpose of learning architecture is to articulate the contextualisation of information within the realities of the learner. This allows for the development of personal significance through the emergent properties of the learning process.

## **6.5 Discussion of overall research findings**

The overall research focuses on creating an understanding of the concept of personal significance within learning. Specifically focusing on insights gained into what makes personal significance a foundational element of a learning architecture. It further focuses on the enablement of learners to co-create work realities within a challenging new world of work.

### **6.5.1 *Personal significance as a foundational element of a learning architecture***

The researcher posits that personal significance plays a key role in the learning process. Personal significance provides the energy for making problems personal, which leads to the need for a deeper understanding and awareness of the problem. That, in turn, leads to the need to change or adapt current behaviour in order to solve the given problem. In that, it is suggested that learning should be based on personal relevance to the learner. Educators and learning programmes ought to do more to develop or establish personal significance through relevance of context rather than through alignment of content. Furthermore, personal significance plays the role of integrating the workplace and learning, making the workplace personal and important. Personal significance gives meaning, personal meaning, and provides a sense of self-worth and importance, reflecting a need for collaboration and a contribution to the co-creating of work realities.

Given the data collected and literature reviewed, the researcher sees personal significance as a complex integrative and collaborative human system, incorporating cognitive readiness and motivating and emotional connectedness. Personal significance is responsible for an individual's sense of confidence in his or her ability and competence to perform a specific task. A high level of personal significance will allow individuals not just to perform the task with confidence, but to have the confidence to innovate and co-create within the task at hand and their role within the workplace.

From this the researcher describes personal significance as a state of being, encapsulating a high sense of five collaborative attributes. These are: a sense of higher consciousness; a sense of higher self-efficacy; a sense of a stronger internal locus of control; a sense of higher self-worth and a sense of flow. Personal significance is integral to learning. It is at the centre of the synergistic human learning process, encompassing cognition, motivation and emotion.

When personal significance is considered as indicative of an individual's level of confidence in performing a task beyond mere change, that confidence in the world of learning is linked to the cognitive ability of the individual. Confidence within a modern society requires more attention to higher-order thinking and the more frequent use of it. Developing confidence in a modern society requires a non-traditional approach to learning, where traditional fact recall-based teaching methods are substituted by thinking skills that are focused on succeeding in the new world of work. In establishing personal significance and enabling higher-order thinking skills, the focus of learning moves from accomplished procedural thinking, and mastered behaviour to an increase of the consciousness of the learner. An enhanced level of consciousness in the learner will allow for dynamisms in a multi-dimensional work environment with dynamic contexts.

By focusing on developing personal significance during training interventions, the training becomes transformative. Learners' higher sense of confidence in their cognitive abilities, and the transformative nature of learning, will allow them to collaborate, and innovate real solutions for real problems within the workplace. The application of learning becomes much more than the recall of past extrinsic experiences; learning becomes co-creative within the reality of the world of work. To allow the learning process to enable the development of personal significance, the learning process has to be engineered to accomplish this. The traditional instructional design practice that guides the development of training programmes does not focus on this link between the learning process and personal significance. In most traditional training programmes the focus is on the organisational, or specific pre-determined learning outcomes, rather than on the learning. A learning architecture expressed as a spiral of iterative decisions and sense-making creating loops of learning might be more appropriate to enable the development of personal significance.

Also, designing for a co-created learning event that is centred by personal significance, requires a bit more complexity. This is achieved by layering the design with possibilities where the specific concepts are captured through options. It is advisable that learners are provided with the opportunity of creating their own learning paths. They ought to be allowed to explore their own learning according to their unique value systems – in which they need to build confidence – and the unique problems they need to solve from the learning. These options or paths of learning should be built into the learning; the learning should be engineered to do this. It can be explicitly made known to the learners that they are co-creating their learning according to their unique learning needs, and that they should find and link their learning to their personal systems and problem systems. This may also enable the learner to go back into the workplace and, with the learning gained, co-create the work reality. It is advisable that the learning architecture allows for the learning process and the co-creation process to be a collaborative event. In the data, it was evident that learning was a collaborative contextualisation process, especially when linked to workplace context and the future co-creating of workplace realities.

Given the above, that the learning experience should be collaborative, clarifying and agile, the learning architecture should be focused on the learning process at all time, more so than on the learning outcome alone as prescribed by the organisation of the unit standards of learning. As described by Nicolaidis and McCullum (2013, p. 250) there is a much stronger need for double- and triple-loop learning today than for only a single-loop learning process to create a transformative learning engagement. A learning architecture that is aimed at transformative learning, and the development of personal significance should aim at bringing together interconnected conceptual frameworks and educational theories of adult learning as described by Knowles (1976), and Kolb (1984). Its aim is to engage learning practices that simultaneously promote growth in cognitive capacity and levels of learning, reflecting and adapting in the moment.

The learning architecture that focuses on the enablement of co-creating work realities within a VUCA world, should consistently seek to promote double-loop and triple-loop learning as described by Bateson (1973, 1988) and Tosey (2012). In this architecture double-loop learning would be seen as inquiries into the assumptions

that guide the development of learning strategies and learning design plans that require greater awareness and more challenging degrees of learning to surface understanding of specific and isolated information. Triple-loop learning involves unpredictable and uncontrolled learning, governed at first by the unconscious and aesthetic dimensions of out-being, on how we think and how we decide to act. In triple-loop learning, the adaptation of behaviour (thinking and deciding) is at the ontological level, through a disruptive deepening of understanding of the nature of our doing (Nicolaidis & McCallum, 2013).

### **6.5.2        *The enablement of learners to co-create***

Enablement of learners to co-create work realities within a challenging new world of work requires first of all an understanding of learning as a sense-making process, and secondly the co-creation of workplace realities. The researcher posits that the enablement of learners to co-create work realities is seen as the output of a learning process that focuses on the development of personal significance through a learning process of sense-making.

The researcher agrees with current literature that the process of sense-making is a predisposition for learning (Weick & Sutcliffe, 2005). Sense-making is seen as a natural evolutionary process of the human 'being'. Sense-making involves cognitive information processing and communication processes through the interpretive and embodied nature of the human 'being'. When learning is viewed from the traditional behaviourist, constructivist and cognitivist theories, learning seems to become static, with a narrow base of understanding and sense-making, and the means of evolving getting lost further within the learning process. The researcher does not by any means disagree with traditional learning theories, but is of the opinion that they are not suited to a modern social environment where social consciousness is at its highest ever in human history, and where corporate survival and success are dependent on an agility of mind. From this view, the researcher is more aligned with learning as an emergent process of sense-making though learning concepts such as experiential learning, adult learning, self-directed learning and cybernetics as a learning epistemology.

The indication is that learning is not in the knowing of information, but in the relevance of the information. Relevance of information can only be judged within the context of the application of the information. From this it can be deduced that learning is not about the content but in the context. Functioning in a world where

context has never been so diverse and so interchangeable, learning ought to be seeded in a sense-making process where learning emerges from a variety of adjacent contexts. In a modern society, learning is emergent in the complex, not the complicated. When learning is viewed from the domain of complexity (Snowden, 2003), it relies on the relationships between various contexts. When learning is viewed from the domain of complexity, learning becomes integrative, collaborative and transformative.

Learning, by its very nature, is about the way in which the individual as a 'being' utilises the opportunity of learning to make sense of his or her world. It is the researcher's view that learning is trans-disciplinary by nature. Learning is an essential part of life; built into the human DNA is the ability to learn from any and every situation – to use that learning in every, and any appropriate situation, or for any problem that can be solved with that learning or knowledge. Once a human has mastered a language it is used in any situation where communication is required, and where that specific language is the preferred medium of that specific society. Yet, there is a tendency in education today to apply learning to a heterogeneous process, system or practice. More so in a Mode 1 learning environment, where learning and, specifically, the assessment of learning, is largely used to confirm the knowledge or learning of the 'teacher'. Assessments are created, conducted and assessed based on the field of learning of the specific residing professor, and are measured against the standard or level of knowledge that exists within that institution. This is evidence of learning being viewed as static and order-domain driven. In the field of producing Mode 2 knowledge (Gibbons, 2000) is learning recognised as being trans-disciplinary, where knowledge is seen to exist in any field and is allowed to be obtained and applied from any field into any other field. This is recognising the natural nature of learning, not limiting learning to the world of teaching.

Co-creation does mean to jointly produce a mutually valued outcome (Prahalad & Ramaswamy, 2004) in the workplace, where the learner is able to be personalised by his or her experience by using the knowledge, insights and context that were gained during the learning process. This expression of personalised value in its use within the workplace to the best suitable output of his or her tasks will provide the learners with a sense of accomplishment and confidence, as well as allow the organisation to derive greater value in its products, services or efficiencies in the form of new knowledge, higher revenues, profitability or superior brand value. In jointly producing mutual value for the organisation, the learner will most likely

experience a sense of personal significance. This sense of personal significance through the co-creation of work realities is then not just beneficial to the learner in heightening his or her confidence, but also beneficial to the organisation in increasing the organisational output.

To enable the commitment to co-create work realities, it is therefore imperative that a learning process focuses on the learner's ability to find confidence and personal significance within an ever-changing, volatile and uncertain world. If the impact of volatility and uncertainty is not overcome, the probability of the learner co-creating work realities after the learning experience is limited. Applying the principles of the VUCA-prime (Johansen, 2012) in countering volatility with vision and uncertainty with understanding provides a structure for presenting information during a learning process. Contextualising the information and new creation of knowledge within a personalised vision of the future, or "could be" world, provides not just vision, but confidence in the vision. Incorporating relevant application discussions during the learning process will develop sense-making and understanding, not just of the information but the application of the information, new knowledge within the uncertainty of an ever- changing, form moment-to-moment, work environment.

In summary, the researcher puts forward a systemic framework of the elements of a learning architecture that enables learners to co-create work realities, where personal significance is the centre of the framework. Figure 6.1 on the next page is an illustration of the systemic personal significance framework.

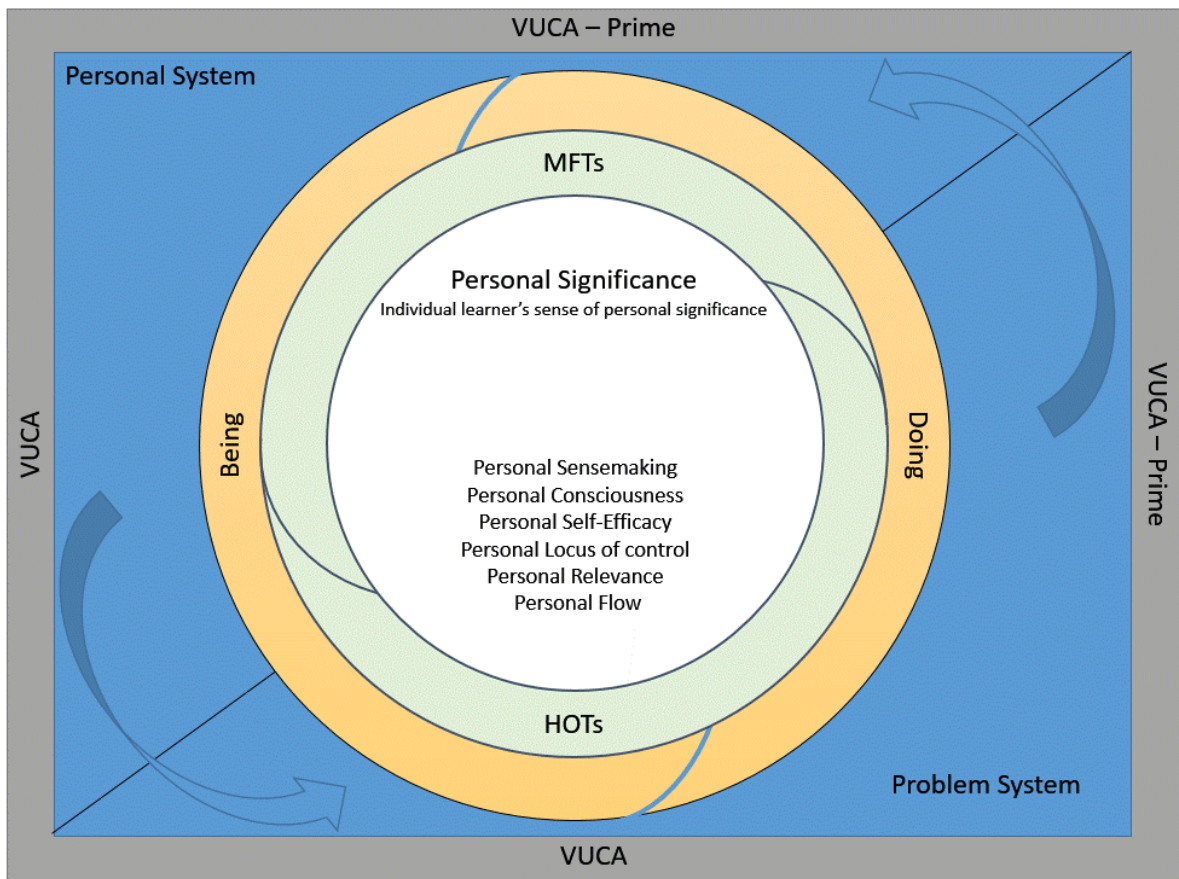


Figure 6.1 Systemic Personal Significance Framework

As used by Viljoen-Terblanche (2008, p. 345), the framework in Figure 6.1 above is not intended to provide specific sets definitions for the various parts of the framework. Rather, to introduce the framework to provide meta-themes, open for interpretation by the reader based on the concepts presented through this dissertation.

The framework can be seen as an iterative framework illustrating the integrative and interrelated nature of a learning process. The framework accentuates the dynamic nature of learning, with no starting or end point. It is a framework that exists in whole and at the same time, and allows for flow between its components. The outer perimeter of the framework represents the current work reality, and the interplay of VUCA and the counter of the VUCA-prime as described in Paragraph 1.3.7. The first inner layer indicates the interrelationship between the personal system and the problem system. The first outer circle represents the ontological area of learning, that of the human being and human doing. McCullum (2013) described this as where the change of behaviour occurs. The middle circle is the thinking circle where the thought processes are illustrated. The iterative interplay between higher-order thinking, multi-frame thinking and the development of the capability to think

creatively, innovatively and critically is one of the key elements of the framework and indeed of the modern world of work. The centre of the framework is personal significance as described in Paragraph 7.3.1. Personal significance as the centre of the framework is representative of the centre or balance of the learner's personal ontology, but also the centre of the learning process. It is built around the individual learner's sense of personal significance, as a contributor to the world in which it functions. Although it is seeded in the centre of the framework, personal significance is influential, and is influenced by all the parts of the framework.

## **6.6 Conclusion**

In this chapter, the research findings were discussed. The research finding was presented as discussions represented by three voices, that of the expert practitioners, representing the imperial data, the academic voice represented by current literature and the researcher's voice, representing the correlation between the empirical data and the current literature. Gaps and matches were indicated. The themes and the concepts identified during coding were contextualised within the turbulent and uncertainty within a VUCA world and were focused on the VUCA prime elements of vision, understanding and clarity.

In the next chapter, these gaps and matches will be consolidated into recommendations. The recommendations will be discussed, and a framework for thinking about the importance of personal significance of a learning architecture to enable learners to co-create work realities within a new world of work will be introduced. Further in Chapter 7, the research questions, aim and sub-aims of the study will be discussed. The researcher's meta-insights together with the limitations of the study and further research possibilities will also be presented.

# Chapter 7:

## Result and Conclusion

### 7.1 Introduction

In this chapter, the researcher will attempt to bridge the gaps of fragmentation dealt with in the previous chapter by discussing the research question and sub-questions, and sharing the meta-insights gained during the study. Drawing from the evaluation and discussion of the empirical evidence and literature review, the researcher will summarise the key concepts as articulated in the research questions. This is done to construct the primary concept of the research, namely, that of understanding and describing personal significance within a learning architecture to enable learners to co-create work realities within a new world of work. The chapter is concluded with a review of the research aims and objectives and a critique of the study by assessing its delimitations, and recommendations are made in terms of further research in this field.

### 7.2 Meta-insights

#### 7.2.1 *Meta-insight 1: Relationship between training and learning*

Early on in the data-collection process, after the second interview, it became apparent that a clear definition of the concepts of training and learning would be required. At this stage of the data analysis, it appeared that the research participants, all being specialists in the area of learning design, had specific but inherent mental models of the relationship between training and learning. Towards the end of the data collection and coding process it was apparent that a baseline view of the variables of training and learning was required. The researcher established a defined relationship between training and learning by comparing various viewpoints, therein describing a baseline view for the training/learning relationship, which is also referred to as the learning process within the context of this dissertation.

For the concept of training, the researcher established the following a baseline view: Training is the deliberate event that provides a person or group with the opportunity

of acquiring specific knowledge, skills and competencies for the purpose of improving the performance of the person or the group.

For learning, the researcher established a baseline view or label as follows: Learning is the process of synthesis of different information within the context of what the individual already knows and understands, and experiences new knowledge as an inherently individual process. Learning is the process whereby different strands of information are synthesised within a new context, of what an individual already knows and understands creating a new knowledge experience. This is an inherently individual process. Learning leads to a heightened conscious awareness that allows individuals to decide to change or not to change their behaviour within a specific context of relevance.

From the baseline views or label for training and learning, the researcher posits that there is a strong relationship between training and learning. Given this relationship, these two concepts are often used interchangeably without assigning a specific view or identity to each of the concepts. Consequently, the concepts are often incorrectly used, which leads to misinformation during general conversations on the topics of training and learning. For the purpose of following research results and conclusion discussion, it is imperative to distinguish between the two concepts, but also to recognise their interrelationship and bond.

Using the two baselines views, the interrelationship can be described as a symbiosis of an event in time and a cognition or fusion of ideation in space with the purpose of improving an individual's performance or existence. Taking this symbiotic view, it is almost impossible to separate the two concepts. Even so, because the baseline views of the two concepts are only loosely applied, more often than not these concepts remain separate. Training becomes an event where the focus is on achieving specific outcomes driven by the organisation with no consideration of the definition of learning. Learning becomes a hollow process after the fact of the training event. The individual is left to figure out how to integrate and internalise the information transferred during the training event, and how to sensibly apply that training within the reality of the workplace. It is therefore important for the research to establish a consistency in the relationship between training and learning. The researcher posits that training should always be incorporative of learning. The

researcher therefore further posits that the concept of learning should be more strongly incorporated within training and be described as the learning process, as a collective indicator of the relationship of training and learning as an event of learning.

### **7.2.2      *Meta-insight 2: Learning is about a higher level of consciousness***

At the start of this study it was the opinion of the researcher that learning, according to whatever definition, is about changing behaviour. This study has, however, brought about a meta-insight in the researcher, indicating that learning is not just a change in behaviour.

If learning is described as a change in behaviour, then over the past millennia societies have learned very little at a meta-social level. At a meta-behaviour level, humanity continues to behave in ways that are the same as centuries ago. Human beings are still struggling for power, killing, plundering and dominating one another. Indeed, as meta-society very little has been learned. Yet, as modern society develops, the opposite is also true. As a society, we have learnt so much. We have advanced so much at individual, industrial and personal levels, and we change our behaviour daily: the way we use technology, the way we reach across the globe, the way we communicate, and the way we care for ourselves and others. Behaviours have inherently changed over time. Such behaviours at a level of personal significance may stand in paradox to meta-social behaviours, but they are undeniable; the behaviours of people have changed. People have learnt. People have a greater knowledge of their world.

In the experience of the researcher, a mistake seemingly often made within the learning environment or training event is that learning or knowledge becomes confirmation of the 'teacher's' knowledge. Learning is evaluated as a confirmation of someone else's knowledge. Knowing is then labelled as the level of recall of what someone else knows, or the way someone else behaves. When this premise is held, learning is not required – recall, duplication without thinking is required. From this, no creation can take place. No innovation and no existence outside of the norm or the rules of others can be created.

The researcher posits that knowledge, as much as it is the indicator that behaviour has changed, knowledge can indicate that behaviour should not change. Not changing behaviour as a conscious decision based on new knowledge acquired or due to the emergent properties of knowledge is as much learning as adopting a new behaviour. Learning therefore is more about raising the level of consciousness so that people can make the decision to change, or not to change their behaviour. Selecting the most appropriate behaviour in a given situation, within an ever-changing environment, is where learning becomes most evident. A learning process, where its purpose is improving the individual's level of consciousness as the vehicle for learning, allows the learner to make a decision to change or not to change their behaviour within the context in which they are operating. In this instance, the learning that was acquired during the training event is the catalyst for the co-creation of the future.

### **7.2.3        *Meta-insight 3: Multi-frame Thinking***

From the emergent properties of the data collected, the concept of multi-frame thinking, linked to higher-order thinking skills became apparent. Multi-frame thinking is different from higher-order thinking in its application. Higher-order thinking involves the cognitive abilities of applying non-algorithmic, non-procedural thinking in areas such as creativity, innovation and problem-solving (Barak, et al., 2007). The researcher posits that multi-frame thinking involves the cognitive ability to sustain more than one thought process at any given moment. It demonstrates the human ability to think about more than one thing at a time and to utilise more than one frame of reference in devising a solution.

In multi-frame thinking the focus is on frames of thinking as representations and organisations of past experiences as functional schemes for guiding future actions. Frames of thinking as clues to future actions are specifically useful in critical thinking, creative thinking, practical thinking and contextual thinking. From the data the researcher analysed, it is clear that where contextual thinking is integrated in the learning process, the contextualisation of the learning takes information beyond procedural thinking. Context, not content, leads to deeper levels of learning or higher-order thinking. Contextualised learning can contribute directly to organisational success.

The researcher asserts that frames of reference as parallel cognition, higher-order thinking produce not just single frames of thinking, but multi-frames of thinking when

the individual is in a state of high personal significance. Therefore, to activate or enable multi-frame thinking, it is advisable that learning processes focus on the enablement of higher-order thinking and higher levels of personal significance, with specific focus on enhanced levels of consciousness. Providing multi-frame thinking allows learners to find more solutions to work problems. It provides relevance to information, which in turn generates a focusing on problem-solving and an intense drive to make sense of the complexities of the new world of work. Multi-frame thinking in parallel with higher-order thinking allows emergence to occur within the learning process. It makes the context of learning more explicit.

### **7.3 Discussion of the research questions**

The scope of this researcher centred on the concept of personal significance and its importance within a learning process, specifically where the focus of that learning process is to enable the co-creation of workplace realities. The learning process is seen as a central part of a learning architecture, which represents the design of the learning experience, and personal significance is then seen as a fundamental element of that learning architecture. The researcher set out to describe this scope of the research at the hand of a research question and three sub-questions as described in Paragraphs 1.5.2 and 1.5.3 respectively. These three sub-questions will be discussed below. The research will then draw a conclusion from them in answering the main research question.

#### **7.3.1 Research Sub-question 1**

*How does personal significance manifest during a learning process within the new world of work?*

In answering this research sub-question, it is imperative to first frame the concept of personal significance. As indicated in Paragraph 6.2.2, personal significance is a collective concept consisting of various academic concepts which are extracted from various learning theories. Figure 7.1 below is the researcher's depiction of personal significance as the centre of a possible personal significance framework, indicating the components of the collective, which is described by the researcher as personal significance.

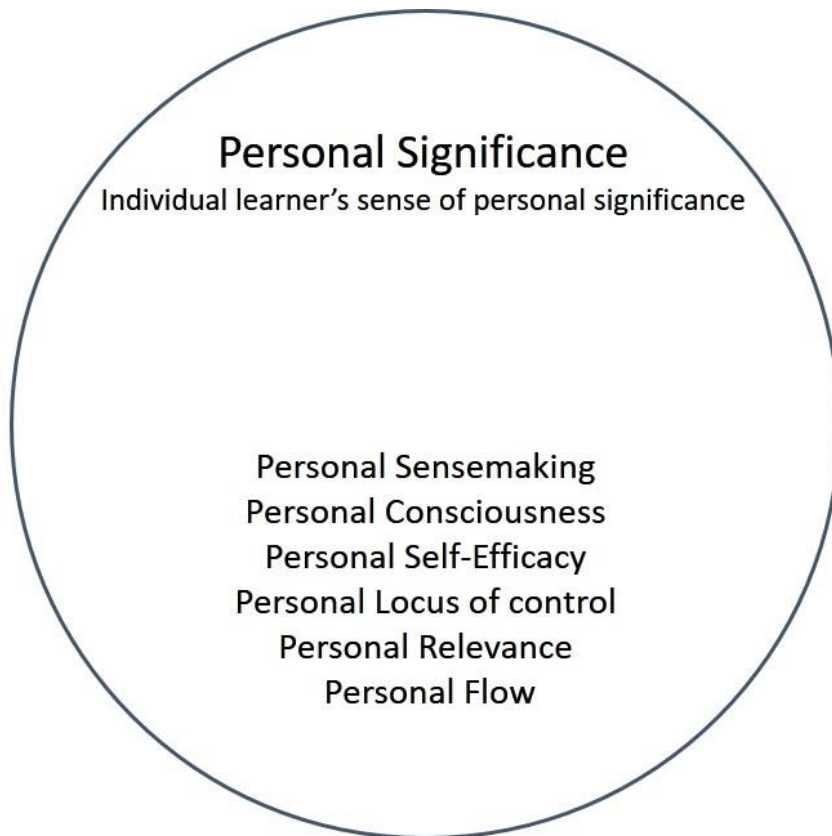


Figure 7.1 Personal Significance

Figure 7.1 above indicates that an individual learner's sense of personal significance is that individual's personal experience and awareness of the collective of sense-making, consciousness, self-efficacy locus of control, relevance and flow. As described in Chapter 6, each of these concepts and theories is individually described within its respective field as follows: Sense-making within the context of complexity theory (Snowden, 2003); consciousness as a complex system (Nakamura & Csikszentmihalyi, 2002); self-efficacy as a person's belief that (Bandura, 1977); locus of control as the internal and external control of reinforcement (Rotter, 1990); self-worth as the tendency to establish and maintain a positive self-image and relevance (Covington, 1992) and flow theory as a concept of the holistic sensation that people experience (Csikszentmihalyi & LeFever, 1989). With this description of personal significance in mind the research can now answer the first research sub-question:

Personal significance manifests within a natural and transformative learning experience. For personal significance to manifest within its natural and transformative state, an understanding of the relationship between training and learning is required. In understanding the relationship between training and learning, the labels that are generically assigned to these two concepts must be understood. These labels, as well as the relationship between them are discussed in Meta-insight 1 as described in Paragraph 7.3.1. The researcher sees personal significance within the label of 'learning'. Within this label of learning, personal significance then manifests within the construction of specific mind-sets during the learning process.

Personal significance also manifests through relevance and personal sense-making of context. Therefore, a learning process that aims at developing or contributing to the development of personal significance should challenge the relevance of the learner's beliefs, myths and frames of reference within the context of the learning experience. Through challenging, the relevance of the context is established, which builds personal significance, as the learners discover their own relevance to the context and not just the relevance of the context to the learner. In finding personal significance within the context through relevance and sense-making intentionality that is personal and unique is created within the learner.

Personal significance also manifests in the learner's ability to choose to change or not to change his or her behaviour. Learning as a choice to change or not to change behaviour is discussed in Meta-insight 2 as described in Paragraph 7.3.2. When learning is seen as the ability to choose to change and not to change, rather than just as a blanket statement that learning is a change in behaviour, allows the learning experience to focus on the process of the decision to change or not to change behaviour. This choice becomes a personal choice by each learner, and personal significance then manifests within this choice as current knowledge and new context becomes new knowledge which leads to new choices. However, for this ability to develop, the learner requires to apply higher-order thinking and multi-frame thinking. Therefore, the training intervention and the learning experience should focus on these thinking skills to develop a stronger personal significance within the individual learner. This manifestation of personal significance in choosing

different frames of thinking or different behaviours is seen as a requirement in the new world of work.

In summary, personal significance as a collective of the elements described above, manifests during a training intervention within the learning process. The learner process should be positioned and conducted as a personal sense-making process which provides a new world of work context. Therefore, the learning process must emulate the VUCA world and provide real contextual challenges to the learner whereby the learner can test his or her own context to the new world context. In challenging the context of the learner, the learner develops higher-order and multi-frame thinking skills which should be directed to the learner choosing to change or not to change behaviour, depending on the context of their new world of work rather than the context of the training event. In this, the researcher accepts his working definition of personal significance as stated in Paragraph 1.3.1 and summarised as; Personal significance is the sense of importance of an individual's contribution to his or her world of existence, and the confidence to make such a contribution. Personal significance provides a specific energy or motivation to an individual who which adds importance in what that individual contributes. Personal significance can be influenced through a learning process.

### **7.3.2        *Research Sub-question 2***

*What is required within a learning process to harness the emergent properties of the learning process as a sense-making process, contributing to a stronger sense of personal significance?*

As discussed in Paragraph 7.3.1 above, learning as a sense-making process takes place within the context of developing personal significance. Personal significance is seen as an emergent property of the sense-making process as much as sense-making is seen as an emergent property of the personal significance context. Emergent properties are described by Snowden (2003) as the relationships that are formed within the complexity between related and sometimes unrelated contexts. In the context of personal significance, emergent properties of learning are formed within the shared context of the learning process rather than in the content of the training session. For learning to become emergent, a higher level of conscious awareness about the context should be created during the learning process. A

learning process, as a sense-making process rather than a training event, leads to a level of emergence that can be linked to the level of personal significance of the learner group. The sense of personal significance of the learner group is primarily driven by the context created within the collective of the learner group.

In harnessing the emergent properties of learning, sense-making is positioned to be about making decisions within the un-order domain, and specifically with complexity (Snowden, 2003). Learning cannot be seen as static within the order domain of know and knowable. It must be dynamic in a constant movement between un-order and order, which creates new knowledge through its emergent properties. This dynamism is dependent on the learner's ability to hold multi-frames of reference simultaneously, referred to by the researcher as multi-frame thinking. Multi-frames of thinking are discussed in Meta-insight 3 as described in Paragraph 7.2.3. Multi-frame thinking allows for flexibility to choose relevant action within the new world of work. As a consequence of multi-frame thinking, more flexibility in thinking is present, allowing for more sense-making within a VUCA world. In a learning process, sense-making is applied as the contextualisation of multi-frames of thinking within the new world of work. Contextualising the learning problem within the complexities of the new world of work requires that emergent properties of learning are seen as a consequence of the contextualisation of learner context and the new world of work context, together with the contents or knowledge that each carry. Contextualisation of the emergent properties of learning leads to multi-frame thinking.

With personal significance manifesting within the learner's decision to change or not to change behaviour as described in Paragraph 7.3.1, sense-making plays an integrative role in knowledge or contents and context through its emergent properties of learning. Through the integrative properties of sense-making, the learner is enabled to choose, and in this the learner's sense of personal significance is enhanced. Sense-making plays a role in personal significance through the relevance that is created by the emergent properties of learning within the learner group.

### **7.3.3 Research Question 3**

*What insights can be derived regarding a VUCA-prime learning process that engages learning at a personal significance level to enable co-creation of the learner's work realities?*

The concept of VUCA-prime (Johansen, 2012) is described in Paragraph 1.3.7 as a leadership strategy to counter the effects of a VUCA world as a descriptor of the new world of work. The researcher posits that in a similar way that the VUCA-prime is applied to counter the leadership challenges of the new world of work, the VUCA-prime can be applied to counter the learning challenges of the new world of work. From this perspective, the following insights were derived regarding a learning process that engaged learning at a personal significance level to co-create work realities within the new world of work

In developing personal significance during a learning process, more opportunities are established to co-create work realities. In establishing more opportunities, a learning process should focus on collective and collaborative thinking to enable the co-creation of work realities. A learning process should be collaborative and collective to ensure that learning is transferred into the co-creation of the workplace. Co-creation occurs within the context of collective collaboration between the organisation, the learner and the learner-group. For co-creation to exist, the learning process should focus on the collaboration that incorporates higher-order thinking and not conformity of thinking.

As a collective collaborative process, personal significance is a key element of the co-creation process. The level of co-creation is heavily influenced by the level of personal significance that was established during the learning process. Co-creation of work realities is seen as being seeded within the level of personal significance developed through the learning process. When the training event and the learning process combine with a single objective, namely, that of the enablement of the learner to go back into the workplace and co-create a work reality to counter the VUCA world, personal significance becomes the vehicle to sustain and drive such co-creation. Deduced from this, personal significance within the new world of work is the backbone of co-creating work realities. As a consequence, developing personal significance through the learning process is seen as enhancing the

learner's ability and motivation to co-create in the work system. Developing this intent to co-create should be locked into the learning architecture of the learning process.

#### **7.4 Review of the aims of the study**

The overall aim of the study is to better understand the role that personal significance plays as a fundamental element in a learning architecture that will enable co-creation of work realities within the new world of work. This aim was achieved in answering each of the research sub-question as described in Paragraphs 7.3.1, 7.3.2 and 7.3.3 respectively. In answering the research questions, a clear understanding of the importance of the role that personal significance plays during and after a learning process, with the expected output of the learning process is innovation, collaboration and sustainable business growth, which requires the learner to co-create the work reality and the future of the organisation.

In the first sub-objective, exploring how personal significance influences learning that enables the co-creation of work realities, new insights and meta-insights were gained. These insights specifically formed around personal significance as the centre of the learning process or the anchor to it. As a collective of personal constructs, personal sense-making, personal consciousness, personal self-efficacy, personal locus of control, personal relevance and personal flow, personal significance and the sense of personal significance, is the key element to unlocking the learner's confidence.

In the second sub-objective, deriving understanding of the emergent properties of learning during a sense-making process as the foundation of a learning process within a new world of work reality, a better understanding of the learning process as a sense-making process was established. Through the research, it became clear that learning was a process of emergent properties of complexities within the context of each learner's experience. Working with adult learners, each learner's experience of their realities is different from any other.

In the third sub-objective, deriving insights into the way in which a VUCA-prime (Johansen, 2012) focused learning process utilises personal significance in its learning architecture to enable co-creating of work realities, new insights were derived. The research indicated that personal significance, complexity thinking and contextualisation of knowledge within the individual learner's experience of their own work realities were not commonly found in traditional training interventions. Although the research did not provide a clear picture of a learning architecture that would enable the co-creating of work realities, it did indicate the importance of personal significance and learning as a sense-making process in designing the learning process. The learning process should be engineered through a specific architecture, were the concept of the VUCA-prime could be a good design framework, to enable a higher sense of personal significance, which will provide the learner with the confidence to co-create work realities.

## **7.5 Quality criteria for the study**

As described in Paragraph 1.9, the researcher set out on this study with the best intentions to ensure quality data. The researcher was aware of grounded theory being open to possible error, and most probably that the researcher might misinterpret the data (Elliott & Lazenbatt, 2005). As argued by Elliott and Lazenbatt (2005), although member validation was seen as the "golden standard" in qualitative research, the researcher opted not to use member validation, as checking quality of data was built into the research process, and was seen as an integral part of constant comparative analysis and theoretical sampling.

The researcher followed a Strauss and Corbin (1998) approach to grounded theory, the researcher applied a more systemic tactic to ensure the quality of data, where data-sampling, data collection and data analysis were seen as indistinct and integrated within the study through theoretical sampling, theoretical sensitive coding and continuous comparative analysis.

Within a grounded theory study, where the research participants allow the researcher into their world, this is seen as an act of trust, and that trust must be honoured (Urquhart, 2012). Ensuring that the quality of the data that they shared

was honoured the researcher should ensure that the data quality and integrity were kept. The researcher recognises his own predisposition that most L&D practitioners in the field are focused on the predominant paradigm of training. That paradigm is a compliance-driven event whereby learning outcomes are achieved as a tick-box exercise where the prescribed content is covered, and therefore learning is seen to be achieved. This focused the researcher to strongly consider the substantive area of research for which the data was to be collected, regarding the collections, interpretation and reporting of quality data. Given the aim of the dissertation as described in Paragraph 1.5, the researcher had to ensure that there were sufficient fit and authenticity within the participants selected, as well as sufficient truth value within the data collected. To ensure this, the researcher insisted on purposive sampling and purposive data to be collected.

## **7.6 Delimitations to the study**

The aim of this dissertation was to explore the role that personal significance plays as a fundamental element in a learning architecture that will enable co-creation of work realities within a new world of work reality. Accordingly, the focus of this dissertation was on a better understanding of the personal significance and the elements that might or might not have played a role in establishing or developing personal significance. It did also take a view on a possible learning architecture that would be suitable to design and deliver such a learning process. Such a learning process, that would enable personal significance as a direct input to the confidence of the learner to choose his or her behaviour within a specific and changeable circumstance was seen as the better option for a learning intervention within a new world of work reality.

The dissertation, therefore, was confined to the phenomenon of personal significance. As was to be expected in an emerging field of study, the findings are tentative and depend on individual interpretation, including the subjective interpretation of the researcher. Therefore, some of the experiences and verbatim phrases of the participants were included in this dissertation to enable readers to draw their own conclusions.

## **7.7 Recommendations for further research**

This researcher was focused on only one aspect of an iterative learning architecture, that of personal significance and its role within such a learning architecture. The full extent of such a learning architecture was not explored, as well as the learning delivery of such an architecture. Considering the shortcomings of the study, as well as the areas not explored during the research, it is suggested that further in-depth research is conducted in the construction of an iterative learning architecture that will not just enable personal significance but that will enable a high level of business impact through the effective co-creation of work realities.

In conjunction with research into the construction of such a learning architecture, future research is recommended in the field of delivering “learning process led” training programmes within a Mode 2 knowledge production environment, the assessment of Mode 2 learning and the quality assurance practice within the Mode 2 learning environment.

## **7.8 Unique contribution of the study**

As indicated in Paragraph 1.8.3 the study aimed at making a unique contribution to body of knowledge of Cornerstone Performance Solution (Pty) Ltd specifically. Within this undertaking of the unique contribution, the insights and meta-insights of the study were included in the daily operation of the company as it emerged during the research.

Uncovering the important role that personal significance plays in the outcome of a learning process provided valuable information to the designers and facilitators within the company, and would possibly do the same for designers and facilitators of training programmes within a VUCA work reality. It provided insights to the designers and facilitators for developing and delivering training programmes where the focus was shifted away from content, towards integrating content into the contextualised realities of the learners. Having a training programme that is designed specifically with the intention of developing the personal significance of the learner, contextualised within complexity of multi-frame thinking allowed new knowledge to emerge from the learning process. This had the effect of an increased

engagement by learners during the training intervention, as well as a reported success of co-creation of work realities.

At this stage of the implementation of the research findings, the focus is merely on the understanding of the role personal significance plays. With the prospects of further studies in the field of personal significance and the structuring of a fit-for-purpose learning architecture, the researcher is of the opinion that larger-scale success can be achieved in developing and delivering learning-centric training programmes that can enhance the quality and rate of co-creating of workplace realities.

## **7.9 TIPS recommendation**

TIPS™ is the integrating framework applied by the Da Vinci Institute for Technology Management to engage, align and become agile in co-creating new workplace realities for its students and sponsors alike. TIPS™ as an organising framework sets its parameters of study within the fields of management of technology, management of innovation, management of people and management of systems (The Da Vinci Institute for Technology Management, 2016).

In the context of Technology, Innovation, People and Systems Management (TIPS™), the personal significance framework introduced in Chapter 7 is viewed as a soft technology that can improve the quality of value-learning experiences through its application. The researcher posits that value-learning experiences are achieved when a learner is able to co-create workplace realities after a training event. The personal significance framework provides the designers and facilitators with an appropriate understanding of the role personal significance plays in the learning process. Thereby, the designer or facilitator can approach the design or delivery of the training programme with enough emphasis on the development of personal significance, contextual relevance and emergent properties of new knowledge.

In the context of systems management, the personal significance framework provides a systemic understanding of learning as a sense-making process wherein learning is viewed as a complex contextual system. The elements contributing to

personal significance are a collaboration between various personal traits that are viewed as a collective system of 'being'. From a systems perspective, learning-centric training is looking at the whole of the system and not the individual elements that traditionally would describe a training intervention. The constructs of the research are all interrelated within the role personal significance plays within an architecture to co-create work realities. It is as important to understand learning as a sense-making process as it is to understand that treating learning as a sense-making process allows the learner to activate higher-order thinking skills and engage in multi-frame thinking skills. With personal significance driving the concept of 'being' to enable higher consciousness and 'doing' to enable required behaviour is a further indication of the application of systems thinking within the personal significance framework.

The researcher holds that this dissertation is in its essence about the management of people and innovation. In viewing learning as a human capability, this dissertation made an attempt to understand what role a specific capability – that of a higher sense of personal significance – plays in the co-creation of work realities. Co-creation of work realities is viewed as an implied understanding and application of innovation. Co-creation requires new thinking. In the reference to new thinking the researcher posits that higher-order thinking in combination with multi-frame thinking is required to co-create work realities.

## **7.10 Conclusion**

Chapter 7 as conclusion to this dissertation indicates a rich systemic relationship between training and learning; learning and an individual sense of personal significance; and personal significance and the ability to co-create work realities. Although this dissertation did not investigate and describe each and every variable and concept within each of these elements, it is the researcher's attempt to understand the importance of doing more with each opportunity of learning to co-create an improved future.

The personal significance framework as indicated in Figure 6.1 is the researcher's visualisation of a key understanding that is required within the field of learning

design and development and the delivery of a personal significance learning process. Personal significance as described by the researcher in this dissertation is a foundational element, not just in the learner's mind-set, but also in the thinking of the practitioner that creates a sustainable difference within the learning experience. Personal significance provides the learner with a deep sense of ownership of his or her world. It provides a sense of being, of self-efficacy and self-worth. It leads to an enhanced consciousness to contribute and co-create the future.

The researcher acknowledges that this is not a dissertation of clear answers on the dynamics of learning and the architecture of learning. It is rather a view of the multi-dimensional reality of learning and the attempt to maximise the efforts of learning providers to contribute meaningfully to the organisation they serve. The researcher recognises the vastness of the study of learning theory, which covers nine scientific disciplines, 24 learning theories, 22 learning paradigms or world views, and ten key learning concepts (Millwood, 2013). Within this extensive field of study, the researcher invites readers of this dissertation to draw on their own experiences within the field of learning and corporate training programmes to remain sceptical and be curious about making learning relevant to their world of work, making sense of the value of learning, and making a real contribution to everyday training occurrences. Furthermore, if the reader is a learning and education practitioner or professional, consider what "significant message" your training programme should carry to its participants: a messiah message of personal significance and co-creating the future.

## References

- Adamson, C., 2016. *Learning in a VUCA world - How Knowledge Workers learn to innovate / OEB News*. [Online]  
Available at: [http://www.online-educ.com/OEB\\_Newsportal/learning-in-a-vuca-world-how-knowledge-workers-learn-to-innovate/](http://www.online-educ.com/OEB_Newsportal/learning-in-a-vuca-world-how-knowledge-workers-learn-to-innovate/).  
[Accessed 20 December 2016].
- Aggestam, L., 2006. Learning Organization or Knowledge Management - Which Came First, The Chicken or the Egg?. *Information Technology and Control*, 35(3A).
- Allais, S., 2011. *What are skills? Reflections on policy in South Africa in the light of international debates*. Johannesburg, University of the Witwatersrand.
- Allen, W., Kilvington, M. & Horn, C., 2002. *Using participatory and learning-based approaches for environmental management to help achieve constructive behaviour change*, Lincoln: Landcare Research .
- Antonacopoulou, E., 2014. *Rethinking the Management of Knowledge in Organisations*, Liverpool: ResearchGate.
- Antonacopoulou, E. P., 2001. The Paradoxical Nature of the Relationship Between Training and Learning. *Journal of Management Studies*, 38(1), pp. 327-350.
- Aravamudhan, N. R. & Krishnaveni, R., 2015. Establishing and Reporting Content Validity Evidence of New Training and Development Capacity Building Scale. *Journal of Contemporary Management Issues*, 20(1), pp. 131-158.
- Ariasian, P. W. et al., 2001. *A taxonomy for learning, teaching, and assessing: a Revision of Bloom's Taxonomy of educational objectives*. New York: Longman.
- Armstrong, S., 2011. Natural learning in higher education. *Encyclopedia of the science of learning*.
- Asghar, I. & Chissom, B., 1992. Contributions of active and dynamic self-regulation to learning. *Innovative Higher Education*, 17(2), p. 125.
- ASTD South Africa, 2013. *HR Future*. [Online]  
Available at: <http://www.hrfuture.net/astd-south-africa-8th-annual-international-conference>  
[Accessed 19 11 2013].
- ASTD, 2012 State of Training and Development Industry Report, 2013. *New Direction Consulting*. [Online]  
Available at: <http://newdirectionconsulting.com>  
[Accessed 19 11 2013].
- ASTD, 2013. *2013 State of the industry*, Alexandria: ASTD Research.
- Azam, I., Afiqah, F., Madi, A. & Huda, M., 2013. A study of the correlation between training and training motivation. *Management and Marketing Challenge for the Knowledge Society*, 8(1), pp. 95-108.

- Baars, B. J. & Gage, N. M., 2007. *Cognition, brain, and consciousness: Introduction to cognitive neuroscience*. London: Elsevier Ltd..
- Babbie, E., 2008. *The Basics of Social Research*. 4th ed. Belmont: Thomas Wadsworth.
- Bailey, K. D., 1994. *Sociology and the new systems theory: Towards a theoretical synthesis*. Albany: State University of New York Press.
- Bale, L. S., 1992. *Gregory Bateson's Theory of Mind: Practical Application to Pedagogy*. s.l.:s.n.
- Bandura, A., 1977. Self-efficacy: Towards a Unifying Theory of Behavioral Change. *Psychological Review*, 84(2), pp. 191-215.
- Bandura, A., 2006. Self-efficacy Beliefs of Adolescents. In: F. Pajares & T. C. Urdan, eds. *Adolescence and education*. Greenwich: IAP Publishing, pp. 1-44.
- Barak, M., Ben-Chaim, D. & Zoller, U., 2007. Purposely teaching for the promotion of higher order thinking skills: A case of critical thinking. *Research Science Education*, Volume 37, pp. 353-369.
- Bateson, 1987. *Steps to an Ecology of Mind*. London: Jason Aronson Inc..
- Bawany, S., 2016. *Leading In A VUCA Business Environment. Leveraging on cognitive readiness and RBL for organisational success*. s.l., Leadership Excellence Essentials presented by HR.com.
- Bereiter, C. & Scardamalia, M., 1998. *Beyond Bloom's Taxonomy: Rethinking knowledge for the knowledge age*. Toronto, University of Toronto.
- Billett, S., 2012. Learning at the site of work. In: P. Jarvis & M. Watts, eds. *The Routledge International Handbook of Learning*. New York: Routledge, pp. 227-234.
- Bluff, R., 2005. Grounded theory: the methodology. In: I. Holloway, ed. *Qualitative Research in Health Care*. London: Open University Press, pp. 147-167.
- Bohonos, J., 2012. Appreciating the experiences and expertise of adult students. *Journal of college orientation and transition*, 20(2).
- Bolman, L. G. & Deal, T. E., 2013. *Reframing Organizations: Artistry, Choice, and Leadership*. 5th ed. San Fransico: Jossey-Bass.
- Bolman, L. G. & Deal, T. E., 2014. *How Great Leaders Think*. New York: Wiley and Sons.
- Boyce, C. & Palena, N., 2006. *Conducting In-Depth Interviews: A Guide for Designing and Conducting In-Depth Interviews for Evaluation Input*, s.l.: Pathfinder International.
- Brocklesby, J. & Mingers, J., 1999. *The Cognitive Limits on Organisational Reframing: A Systems Perspective Based on the Theory of Autopoiesis*, Wellington: University of Warwick Coventry.
- Brockmann, M., Clark, L. & Winch, C., 2011. *Knowledge, Skills and Competence in the European Labour Market: What's in a vocational qualification?*. First edition ed. Oxon: Routledge.

- Brougham, G., 2014. *Cynefin 101 - An Introduction*. [Online] Available at: <http://www.infoq.com/articles/cynefin-introduction> [Accessed 14 April 2016].
- Brown, A. D., Colville, I. & Pye, A., 2015. Making Sense of Sensemaking in Organizational Studies. *Organisation Studies*, 36(2), pp. 265-277.
- Brown, J. S. & Duguid, P., 1991. Organisational learning and communities of practice: Toward a unified view of working, learning, and innovation. *Organisation Science*, 2(1), pp. 40-58.
- Business Dictionary, 2016. *Business Dictionary Online*. [Online] Available at: <http://www.businessdictionary.com/definition/cocreating> [Accessed 25 July 2016].
- Chapnick, S. & Meloy, J., 2005. From Andragogy to Heutagogy. Renaissance elearning: creating dramatic and unconventional learning experiences.. *Essential resources for training and HR professionals*, pp. 36-37.
- Charmaz, K., 2006. *Constructing Grounded Theory: A practical guide through qualitative analysis*. London: SAGE Publications.
- Charmaz, K., 2008. Grounded Theory as an Emergent Method. In: S. N. Hesse-Biber & P. Leavy, eds. *Handbook of Emergent Methods*. New York: The Guilford Press, pp. 155-172.
- Charmaz, K., 2014. *Constructing Grounded Theory*. 2nd ed. London: SAGE.
- Choi, D. H., Kim, J. & Hie, K. S., 2007. ERP training with a web-based electronic learning system: The flow theory perspective. *Science Direct*, 65(1), pp. 223-243.
- Chyung, S. Y. & Stepich, D., 2003. Applying the congruence principle of Bloom's taxonomy to designing online instruction. *The Quarterly Review of Distance Education*, 4(3), pp. 317-330.
- Collins English Dictionary, 2003. *Complete and Unabridged*. 5th ed. s.l.:HarperCollins Publishers.
- Colville, I., Hennestad, B. & Thoner, K., 2013. *mlq.sagepub.com*. [Online] Available at: <http://sagepub.co.uk/journalsPermissions.nav> [Accessed 12 02 2016].
- Cooper, G., 2003. *The student's guide to learning at university*. Altona: Common Ground Publishing Pty Ltd.
- Corbin, J. & Strauss, A., 2008. *Basics of Qualitative Research: Techniques and Procedures for Developing*. 3rd ed. California: SAGE Publications.
- Craig, E., 1998. *Routledge Encyclopedia of Philosophy*. London: Routledge.
- Crenshaw, D. A. & Kenney-Noziska, S., 2014. Therapeutic Presence in Play Therapy. *International Journal of Play Therapy*, 23(1), pp. 31-43.

Creswell, J. W., 2012. *Educational research: Planning, conducting and evaluating quantitative and qualitative research*. New York: Prentice Hall.

Creswell, J. W., 2013. *Qualitative Inquiry and Research Design. Choosing among five approaches*. 3rd ed. Lincoln: SAGE Publications. Inc..

Creswell, J. W., 2014. *Research design: qualitative, quantitative and mixed methods approaches*. 4th ed. London: SAGE.

Cunliffe, A. & Coupland, C., 2012. From hero to villain to hero: making experience sensible through embodied narrative sensemaking. *Human Relations*, 65(1), pp. 63-88.

Da Vinci Institute, 2016. *Da Vinci*. [Online]  
Available at: <http://www.davinci.ac.za/how-we-do-it/>  
[Accessed 14 February 2017].

De Vaus, D. A., 2001. Research design in social research. *Research methods knowledge base*.

Definitions.net, n.d. *Definitions.net*. [Online]  
Available at: <http://www.definitions.net/definition/training>  
[Accessed 12 September 2015].

Denzin, N. K. & Lincoln, Y., 2003. *The Landscape of Qualitative Research: Theories and Issues*. London: Sage.

Drotskie, A., 2008. *Customer experience as the strategic differentiator in retail banking*. Bellville: University of Stellenbosch. Unpublished.

Duke CE, 2016. *Duke Corporate Education*. [Online]  
Available at: <http://www.dukece.com/own-work/learning-architecture>  
[Accessed 18 June 2016].

Dunne, C., 2011. The place of the literature review in grounded theory research. *International Journal of Social Research Methodology*, 14(2), pp. 111-124.

Dunne, C., 2011. The place of the literature review in grounded theory research. *International Journal of Social Research Methodology*, 14(2), pp. 111-124.

Eccles, J. S. & Wigfield, A., 2002. Motivational beliefs, values and goals. *Annual Review of Psychology*, Volume 53, pp. 109-127.

Elliott, N. & Lazenbatt, A., 2005. How to recognise a quality grounded theory research study. *Australian Journal of Advanced Nursing*, 22(3), pp. 48-52.

Farlex, 2012. *Farlex Partner Medical Dictionary*. s.l.:s.n.

Farlex, 2012. *Medical Dictionary for the Health Professions and Nursing*. s.l.:s.n.

Farthing, G. W., 1998. *The psychology of consciousness*. s.l.:Prentice Hall.

- Fink, L. D., 2013. *Creating significant learning experiences, revised and updated*. San Francisco: Jossey-Bass.
- Frensch, P. A. & Rüniger, D., 2003. Implicit learning. *Current direction in psychological science*, 12(1), pp. 13-18.
- Gibbons, M., 1998. *Higher education relevance in the 21st century*. Paris, The World Bank Education.
- Gibbons, M., 2000. Context-sensitive Science: Mode 2 society and the emergence of context-sensitive science. *Science and Public Policy*, 27(3), pp. 159-163.
- Gist, M. E., 1987. Self-Efficacy: Implications for organizational behavior and human resource management. *Academy of Management review*, 12(3), pp. 472-485.
- Gladden, A., 2015. *Critical, Creative, and Practical Thinking*. s.l.:s.n.
- Glaser, B. G., 1978. *Theoretical Sensitivity*. Mill Vally, CA: The Sociology Press.
- Glaser, B. G. & Strauss, A. L., 1967. *The discovery of grounded theory*. Chicago: Aldine.
- Glaser, E. M., 2015. *Defining Critical Thinking*. [Online] Available at: <https://www.criticalthinking.org/pages/defining-critical-thinking/766> [Accessed 19 April 2017].
- Golafshani, N., 2003. Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, 8(4), pp. 597-607.
- Gray, B., Stein, S. J., Osborne, P. & Aithen, R., 2013. Collaborative learning in a marketing strategy education context. *Practice and Evidence of Schoarship of Teaching and Learning in Higher Education*, 8(1), pp. 35-55.
- Groff, R., 2004. *Critical realism, post-positivism and the possibility of knowledge*. London: Routledge.
- Guba, E. G. & Lincoln, Y. S., 1994. Competing Paradigms in Qualitative Research. In: N. K. Denzin & Y. S. Lincoln, eds. *Handbook of Qualitative Research*. London: SAGE, pp. 105-117.
- Harper, 2016. *Online Etymology Dictionary*. [Online] Available at: <http://www.dictionary.com/browse/personal> [Accessed 18 July 2016].
- Hasan, H. & Kazlauskas, A., 2009. *Making Sense of IS with the Cynefin Framework*. Wollongong, Australia, University of Wollongong.
- Hewitt, J. P., 2009. *Oxford handbook of positive psychology*. London: Oxford University Press.
- Hinton, G. E. & Nowlan, S. J., 1987. *How Learning Can Guide Evolution*. 1 ed. s.l.:Complex Systems.
- Hofer, B. K. & Pintrich, P. R., 2002. *Personal epistemology: the psychology of beliefs about knowledge and knowing*. New Jersey: Lawrence Erlbaum Associates, Inc, Publishers.

- Holtan, J. A., 2007. The coding process and its challenges. In: A. Bryant & K. Charmaz, eds. *The SAGE handbook of grounded theory*. London: Sage Publications, pp. 265-289.
- Houghton Mifflin Company, 2000. *The American Heritage Dictionary of the English Language*. 4th ed. s.l.:Houghton Mifflin Company.
- Hunt, D. P., 2003. The concept of knowledge and how to measure it. *Journal of intellectual capital*, 4(1), pp. 100-113.
- Illeris, K., 2002. *The three dimensions of learning*. Roskilde: Roskilde University Press, 2002.
- Illeris, K., 2004. *Three Dimensions of learning*. Malabar: Krieger Publishing Company.
- Illeris, K., 2007. *How We Learn: Learning and Non-Learning in School and Beyond*. 2nd ed. London: Routledge.
- Illeris, K., 2007. What do we actually mean by experiential learning. *Human Resource Development Review*, 6(84), pp. 86-90.
- Isman, A., 2011. Instructional design in education: New Model. *The Turkish Online Journal of Educational Technology*, 10(1), pp. 136-142.
- Jaques, E., 1997. *Requisite organisation: a total system for effective managerial organisation and managerial leadership for the 21st century*. Arlington: Cason Hall.
- Jarvis, P., 2006. *Towards a Comprehensive Theory of Human Learning*. 1 ed. New York: Routledge.
- Jarvis, P., 2012. Life-long learning. In: P. Jarvis & M. Watts, eds. *The Routledge International Handbook of Learning*. New York: Routledge, pp. 103-108.
- Johansen, R., 2012. *Leaders Make the Future: Ten New Leadership Skills for an Uncertain World..* Oakland: Berrett-Koehler Publishers.
- Jonas, 2005. *Mosby's Dictionary of Complementary and Alternative Medicine*. s.l.:Elsevier.
- Jones, M. & Alony, I., 2011. Guiding the Use of Grounded Theory in Doctoral Studies - An Example from the Australian Film Industry. *International Journal of Doctoral Studies*, Volume 6, pp. 95-114.
- Juarrero, A., 1999. *Dynamics in action: Intentional behaviour as a complex system*. Cambridge: MIT Press.
- Judge, T. A., Erez, A., Bono, J. E. & Thoresen, C. J., 2002. Are measures of self-esteem, neuroticism, locus of control and generalised self-efficacy indicators of a common core construct?. *Journal of Personal and Social Psychology*, 83(3), pp. 693-710.
- Kafai, Y. & Resnick, M., 2011. *Constructionism in practice: Design, thinking and learning in a digital world*. New York: Routledge.
- Karban, R., 2015. Plant learning and memory. In: *Plant sensing and communication*. Chicago: The University of Chicago Press, pp. 31-44.

- Karban, R., 2015. Plant Learning and Memory. In: *Plant Sensing and Communication*. Chicago: The University of Chicago Press, pp. 31-44.
- Karns, G. L., 2005. An updated of marketing student perceptions of learning activities: Structure, preference and effectiveness. *Journal of Marketing Education*, 27(2), pp. 163-171.
- Kegan, R., 1994. *In over our heads: The mental demands of modern life*. Cambridge: Harvard University Press.
- Kelle, U., 2007. The development of categories: Different approaches in grounded theory. In: A. Bryant & K. Charmaz, eds. *The SAGE Handbook of Grounded Theory*. London: SAGE Publications, pp. 191-213.
- Kelly, K., 1994. *Out of control: The new biology of machines, social systems and the economic world*. Boston: Addison-Wesley.
- Kempster, S. & Parry, K. W., 2011. Grounded theory and leadership research: A critical realist perspective. *The Leadership Quarterly*, Volume 22, pp. 106-120.
- Kenner, C. & Weinerman, J., 2011. Adult learning theory: Applications to non-traditional college students. *Journal of College Reading and Learning*, 41(2), pp. 87-96.
- King, F., Goodson, L. & Rohani, F., 2002. *Higher Order Thinking Skills*. Florida: Centre for Advancement of Learning and Assessment.
- Knowles, M. S., Holton, E. F. & Swanson, R. A., 2012. *The Adult Learner*. London: Routledge.
- Knowles, M. S., Holton, E. F. & Swanson, R. A., 2013. *Adult Learner: The definitive classic in adult education and human resource development*. 7th ed. New York: Routledge .
- Kolb, D. A., 1984. *Experiential learning: Experience as the source of learning and development*. New Jersey: Prentice Hall.
- Kolb, S., 2012. Grounded theory and the constant comparative method. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(1), pp. 83-86.
- Krathwohl, D. R., 2002. A revision of Bloom's Taxonomy: An overview. *Theory into Practice*, 41(4), pp. 212-264.
- Kurtz, C. F. & Snowden, D., 2003. The new dynamics of strategy: Sense-making in a complex and complicated world. *IBM Systems Journal*, 42(3), pp. 462-483.
- Lam, B. H. & Chan, H. L., 2013. *The active classroom: The Hong Kong Institute of Education*. [Online] Available at: [www.ied.edu.hk/aclass/](http://www.ied.edu.hk/aclass/) [Accessed 14 April 2017].
- Langer, S. K., 1953. *Feeling and Form: a theory of art developed from philosophy in a new key*. New York: Charles Scribner's Sons.

Lawrence, K., 2013. *Developing Leaders in a VUCA Environment*, Chapel Hill: UNC Kenan-Flagler Business School.

Leonard, R., 2005. *East Tennessee State University*. [Online]

Available at:

[https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=0ahUKEwjYnJfjip\\_OAhUEDMAKHeyFB5kQFgg1MAU&url=https%3A%2F%2Fwww.etsu.edu%2Fapl%2FDocuments%2FAPL%2520Materials%2FResearch%2520Variables.ppt&usg=AFQjCNGoeadnItF6Wg2tWlJgH-](https://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=0ahUKEwjYnJfjip_OAhUEDMAKHeyFB5kQFgg1MAU&url=https%3A%2F%2Fwww.etsu.edu%2Fapl%2FDocuments%2FAPL%2520Materials%2FResearch%2520Variables.ppt&usg=AFQjCNGoeadnItF6Wg2tWlJgH-)

[Accessed 20 July 2016].

Lincoln, Y. S., Lynham, S. A. & Guba, E. G., 2011. *The SAGE Handbook of Qualitative Research*. California: SAGE Publications.

Locke, K., 2001. *Grounded Theory in Management Research*. London: SAGE Publications Ltd..

Long, M., 2013. *The future of learning: Harvard Graduate School of Education Future of Learning Course*, Johannesburg: St John's Preparatory School.

LoveToKnow Corporation, 2016. *Your Dictionary Definition and Usage Examples*. [Online]

Available at: <http://www.yourdictionary.com/personal#D5YA6GemjC6zWIRA.99>

[Accessed 18 July 2016].

Lunenburg, F., 2011. Self-Efficacy in the workplace: Implications for motivation and performance. *International journal of management, business and administration*, 14(1), pp. 1-6.

Maitlis, S. & Christianson, M., 2014. Sensemaking in organisations: Taking stock and moving forward. *The Academy of Management Annals*, 8(1), pp. 57-125.

Mallon, D. & Johnson, D., 2014. *Learning Architecture: How L&D Can Improve the Bottom Line*.

[Online]

Available at: <http://www.trainingindustry.com/blog/blog-entries/learning-architecture-how-ld-can-improve-the-bottom-line.aspx>

[Accessed 25 July 2016].

Malloy, T. E., Jensen, G. C. & Song, T., 2005. Mapping knowledge to Boolean dynamic systems in Bateson's epistemology. *Nonlinear Dynamics, Psychology, and Life Sciences*, Volume 9, pp. 37-60.

Marshall, C. & Rossman, G., 2011. *Designing Qualitative Research*. 5th ed. London: SAGE Publications.

Martins, Martins & Viljoen, 2017. s.l.:s.n.

McCallin, A., 2006. Grappling with the literature in a grounded theory study. *The Grounded Theory Review*, 5(2).

McGraw-Hill Concise Dictionary of Modern Medicine, 2002. *The Free Dictionary.com*. [Online]

Available at: <http://www.thefreedictionary.com/sources.htm>

[Accessed 12 September 2015].

- McNamee, S., 1988. Accepting Research as Social Intervention: Implications of a Systemic Epistemology. *Communication Quarterly*, 36(1), pp. 50-68.
- McNulty, E. J., 2015. *Leading in an Increasingly VUCA World*. [Online] Available at: <http://www.strategy-business.com/blog/Leading-in-an-Increasingly-VUCA-World?gko=5b7fc>. [Accessed 20 December 2016].
- Merriam, S. B., Caffarella, R. S. & Baumgartner, L. M., 2007. *Learning in adulthood: a comprehensive guide*. 3rd ed. San Francisco: Jossey-Bass.
- Meyer, D. K. & Turner, J. C., 2002. Discovering emotion in classroom motivation research. *Educational Psychologist*, 37(2), pp. 107-114.
- Meyer, D. K. & Turner, J. C., 2002. Discovering Emotion in Classroom Motivation Research. *Educational Psychologist*, 37(2), pp. 107-114.
- Meyer, K. A., 2003. Face-to-face versus threaded discussions: The role of time and higher-order thinking. *JALN*, 7(3), pp. 55-65.
- Meyer, M. & Blackbeard, G., 2013. *9th Annual State of the SA L&D Industry*. [Online] Available at: [http://www.slideshare.net/SABPP/marius-meyer-sabpp-ipm-namibia-12-august-2014?next\\_slideshow=1](http://www.slideshare.net/SABPP/marius-meyer-sabpp-ipm-namibia-12-august-2014?next_slideshow=1) [Accessed 02 December 2014].
- Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing and Allied Health, Seventh Edition, 2003. *The Free Dictionary.com*. [Online] Available at: <http://www.thefreedictionary.com/sources.htm> [Accessed 12 September 2015].
- Miller-Keane & O'Toole, M., 2005. *Miller-Keane Encyclopedia & Dictionary of Medicine, Nursing & Allied Health*. 7th ed. s.l.:Saunders.
- Milliken, P. J. & Schreiber, R., 2012. Examining the Nexus Between Grounded Theory and Symbolic Interactionism. *International Journal of Qualitative Methods*, 11(5).
- Mills, J. & Bonner, A., 2006. The Development of Constructive Grounded Theory. *International Journal of Qualitative Methods*, 5(1), pp. 25-35.
- Millwood, R., 2013. *Holistic Approach to Technology Enhanced Learning*. s.l.:HoTEL EU.
- Miri, B., David, B. & Uri, Z., 2007. Purposely teaching for the promotion of higher order thinking skills: A case of critical thinking. *Research Science Education*, Volume 37, pp. 353-369.
- Murray, P. A., 2011. Training, Development and Learning. In: J. Syed & R. Kramar, eds. *Resource Management in a Global Context*. Queensland: Sage.
- Nakamura, J. & Csikszentmihalyi, M., 2002. The concept of flow. In: C. R. Snyder & S. J. Lopez, eds. *Handbook of positive psychology*. New York: Oxford University Press, pp. 89-105.

- Nakamura, J. & Csikszentmihalyi, M., 2002. The Concept of Flow. In: C. R. Snyder & S. J. Lopez, eds. *Handbook of positive psychology*. New York: Oxford University Press, pp. 89-105.
- Ng, K. & Hase, S., 2008. Grounded Suggestions for Doing a Grounded Theory Business Research. *The Electronic Journal of Business Research Methods*, 6(2), pp. 155-170.
- Nicolaides, A. & McCallum, D. C., 2013. Inquiry in Action for Leadership in Turbulent Times: Exploring the Connection Between Transformative Learning and Adaptive Leadership.. *Journal of Transformative Education*, 11(4), pp. 246-260.
- Norbert, W., 1948. *Cybernetics, or control and communication in the animal and the machine*. Cambridge: MIT Press.
- Nyaruwata, L. T., 2013. Quantitative, Qualitative and Mixed Methods Approaches to Research . In: S. M. Tichapondwa, ed. *Preparing your Dissertation at a distance: A research guide*. Vancouver: Virtual University for Small States of the Commonwealth, pp. 101-112.
- Ormrod, J., 2012. *Human Learning*. 6th ed. Boston: Pearson.
- Ormrod, J. E., 1999. *Human Learning*. 3rd ed. Pennsylvania: Merrill.
- Ormston, R., Spencer, L., Barnard, M. & Snape, D., 2013. *The Foundations of Qualitative Research*. London: Sage Publishers.
- Pajares, F., Prestin, A., Chen, J. & Nabi, R. L., 2009. Social cognitive theory and media effects. In: *The Sage handbook of media processes and effects*. London: Sage, pp. 283-297.
- Phillips, J. J., 2003. *Return on Investment in Training and Performance Improvement Programs*. 2nd ed. Burlington: Butterworth Heinemann.
- Phillips, J. M. & Gully, S. M., 1997. Role of goal orientation, ability, need for achievement, locus of control in the self-efficacy and goal-setting process. *Journal of Applied Psychology*, 82(5), pp. 792-802.
- Popovic, K., 2012. Self-directed learning. In: P. Jarvis & M. Watts, eds. *The Routledge International Handbook of Learning*. New York: Routledge, p. 219.
- Prahalad, C. & Ramaswamy, V., 2004. Co-Creations Experiences: The Next Practice in Value Creation. *Journal of Interactive Marketing*, 18(3).
- Price, A. W., 2008. *Contextuality in Practical Reason*. London: Oxford University Press.
- Price, C., 2013. The problem of emotional significance. *Acta Analytica*, 28(2), pp. 189-206.
- Probart, R., 2014. *ATD*. [Online]  
Available at: <https://www.td.org/Publications/Magazines/TD/TD-Archive/2014/05/Intelligence-State-of-the-South-African-Training-Industry>  
[Accessed 16 August 2016].

- Punch, K. F., 1998. *Introduction to social reserach: qualitative and quantitative approaches*. Beverly Hills, CA: Sage.
- PwC South Africa, 2014. *Shaping the bank of the future. South African banking survey 2013*, Johannesburg: PwC.
- Ramutloa, L., 2013. *Billions spent on training but the investment has not advanced transformation: Department's Transformation Indaba told*. [Online] Available at: <http://www.labour.gov.za/DOL/media-desk/media-statements/2013/billions-spent-on-training-but-the-investment-has-not-advanced-transformation-departments-indaba-told> [Accessed 10 December 2015].
- Rankin, A., Haggis, J., Luzeckyj, A. & Gare, C., 2016. Messy design: Organic planning for blended learning. *Journal of Learning Design*, 9(2), pp. 14-29.
- Reigeluth, C., 2000. What is the new paradigm of instructional theory. *ITForum*, Volume 17.
- Resnick, L. B., 1987. *Education and learning to think*. Washington: National Academy Press.
- Reynolds, C. W., 1987. *Flocks, Herds, and Schools: A distributed behaviour model in computer graphics*. s.l., SIGGRAPH.
- Richland, L. E. & Simms, N., 2015. Analogy, higher order thinking and education. *Willey interdisciplinary reviews, cognitive science*, pp. 1-17.
- Ringer, R., 2009. *Narrative Branding*. [Online] Available at: <https://narrativebranding.wordpress.com/2009/01/12/c0-creating-meaning> [Accessed 25 July 2016].
- Rotter, J. B., 1989. *APA Award Address*. s.l., American Psychologist.
- Rotter, J. B., 1990. Internal versus External Control of Reinforcement. *American Psychologist*, 45(4), pp. 489-493.
- Santin, C. & McDaniel, H., 2013. The Implications of Shared Vision in Educational Institutions. *Journal of Online Higher Education*, 4(1).
- Saunders, 2003. *Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing and Allied Health*. 7th ed. s.l.:Elsevier Inc..
- Savchenko, A., Borges, T. & Pandeirada, J., 2014. The Survival Processing Effect with Intentional Learning of Ad Hoc Categories. *Journal of European Psychology Students*, 5(1), pp. 49-58.
- Seale, C., 1999. *The Quality of Qualitative Reserach*. 1st ed. London: SAGE Publications.
- Segen, J., 2012. *Segen's Online Medical Dictionary*, s.l.: Farlex, Inc..
- Segen's Medical Dictionary, 2012. *The Free Dictionary.com*. [Online] Available at: <http://www.thefreedictionary.com/sources.htm> [Accessed 12 September 2015].

- Senge, P. M. & Sberman, J. D., 1990. *Systems Thinking and Organizational Learning: Acting Locally and Thinking Globally in the Organization of the Future*. Cambridge, Sloan School of Management.
- Shea, P. & Bidjerano, T., 2010. Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. *Computers and Education*, Volume 55, pp. 1721-1731.
- Shernoff, D., Csikszentmihalyi, M., Shneider, B. & Shernoff, E. S., 2003. Student engagement in high school classrooms from the perspective of flow theory. *School psychology quarterly*, 18(2), pp. 131-143.
- Snowden, D., 2003. Complex Acts of Knowing: Paradox and Descriptive Self-Awareness. *Bulletin of the American Society of Information Science and Technology*, pp. 23-28.
- Snowden, D., 2005. Multi-ontiligy sense making. *Management Today*, Volume 20, pp. 1-11.
- Snowden, D., 2005. Strategy in the context of uncertainty. *Handbook of Business Strategy*, 6(1), pp. 47-54.
- Snowden, D. J., 2005. Multi-ontology sense making. *Management Today, Yearbook*, Volume 20.
- Spencer, B., 2006. *The purposes of adult education: a short introduction*. 2nd ed. Toronto: Thompson Educational Publications.
- Spencer, L., Ritchie, J., Lewis, J. & Dillon, L., 2003. *Quality in Qualitative Evaluation: A framework for assessing research evidence*, London: Crown.
- Stanley, J., 2005. *Knowledge and Practical Interests*. New York: Oxford University Press.
- Stein, M. K. & Coburn, C., 2007. *Architectures for Learning: A Comparative Analysis of Two Urban School Districts*, Washington: Center for the Study of Teaching and Policy.
- Sternburg, R. J. & Sternburg, K., 2011. *Cognitive Psychology*. 6th ed. Boston: Cengage Learning.
- Strauss, A. & Corbin, J., 1998. *Basics of Qualitative Research: Grounded theory procedures and techniques*. 2nd ed. Thousand Oaks CA: SAGE Publications.
- Sun, R., 2008. *The Cambridge handbook of coputational psychology*. Cambridge: Cambridge University Press.
- Terry, W. S., 2006. *Learning and memory: Basic principles, processes and procedures*. Boston: Pearson Education Inc..
- The American Heritage Science Dictionary, 2005. *The American Heritage Science Dictionary*. s.l.:Houghton Mifflin Company.
- Thornberg, R., 2012. Informed grounded theory. *Scandinavian Journal of Educational Research*, 56(1), pp. 243-259.
- Tosey, P., 2006. *Bateson's levels of learning: a Framework for transformative learning*. Tilburg, University of Surry.

- Urquhart, C., 2007. The evolving nature of grounded theory method: The case of the information systems discipline. In: A. Bryant & K. Charmaz, eds. *The SAGE handbook of grounded theory*. London: SAGE, pp. 339-360.
- Urquhart, C., 2012. *Grounded Theory for Qualitative Research: A Practical Guide*. London: SAGE Publications.
- Van Gulick, R., 2004. *Stanford Encyclopedia of Philosophy*. s.l.:s.n.
- Van Merriënboer, J. J. G. & Krischner, P. A., 2013. *Ten Steps to Complex Learning: a systematic approach to four-component instructional design*. 2nd ed. New York: Routledge.
- Van Rooij, S. W., 2009. Project management in instructional design: ADDIE is not enough. *British Journal of Educational Technology*, p. 4.
- Viljoen-Terblanche, R. C., 2008. *Sustainable Organisational Transformation Through Inclusivity*. Pretoria: UNISA.
- Vora, T., 2016. *Critical Competencies for Leadership in a VUCA World*. [Online] Available at: <https://www.linkedin.com/pulse> [Accessed 20 December 2016].
- Weick, K. E., Sutcliffe, K. & Obstfeld, D., 2005. Organising and the process of sensemaking. *Organization Science*, 16(4), pp. 409-421.
- Weinberg, R. S. & Gould, D., 2007. *Foundation of sport and exercise psychology*. 4th ed. Champaign, IL: Human Kinetics.
- Wilcock, A., 1999. Reflection on doing, being and becoming. *Australian Occupational Therapy Journal*, 46(1), pp. 1-11.
- Willig, C., 2001. *Introducing qualitative research in psychology Adventures in theory and method*. Philadelphia: Open University Press.
- Wimmer, R. & Dominick, J., 2011. *Mass Media Research: An Introduction*. 9 ed. Belmont: Thompson Wadsworth.
- Wurdinger, S. D. & Carlson, J. A., 2010. *Teaching for experiential learning: Five approaches that work*. Lanham: Rowman and Littlefield Publishers.
- Zimmerman, B. J., 2000. Self-Efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), pp. 82-91.

# Appendices

## Annexure A: Intensive Interview Framework

|                                 |  |
|---------------------------------|--|
| Participant Details:            |  |
| Participant Identification Code |  |
| Academic Field                  |  |
| Work Field                      |  |
| Years of Experience             |  |

### Questions:

|     |   |
|-----|---|
| Q1: | What is your understanding of the difference between training and learning?   |
|     |   |
| Q2: | Given your answer in Q1, what are the factors that influence training?  |
|     |   |
| Q3: | Given your answer in Q1, what are the factors that influence learning?  |
|     |   |
| Q4: | Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process? |
|     |   |

|      |  |
|------|--|
| Q5:  | In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emerging properties between order factors and work context?      |
| Q6:  | In your understanding of learning, should learning explore the emerging properties between un-order factors (knowledge relationship) - the relationship between old knowledge, new knowledge and work context? |
| Q7:  | In your understanding, why is providing work context during a learning intervention important for developing multiframes of thinking?  |
| Q8:  | In your understanding, what is providing different frames of reference during a learning intervention?   |
| Q9:  | What is your understanding of the concept of co-creating work reality for learners during a learning intervention?   |
| Q10: | In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?   |

## Annexure B: Interview Coding

### Interview 1

|                                 |                  |
|---------------------------------|------------------|
| Participant Details:            |                  |
| Participant Identification Code | BA02             |
| Academic Field                  | Systems Thinking |
| Work Field                      | Academic         |
| Years of Experience             | 27               |
| Date of Interview               | 21 August 2015   |

### Questions

|   |  |  |     |  |
|---|--|--|-----|--|
| Step 3  | Step 2   | Step 1   | Q1: | What is your view on learning interventions that creates or co-creates 'multivers-thinking'? a 'multivers' referring to a set of different frames of reference)  |
| <p>Training is not multi-dimensional.</p> <p>Training is not natural (forced)</p> <p>Learning requires finding personal relevance</p> | <p>Traditional training is disengaged with relevance.</p> <p>Training is one dimensional, learning is multi-referenced in its nature</p> <p>Multi-perceptions place the focus on the individual to find relevance (personal relevance)</p> | <p>Current education or traditional training is one dimensional</p> <p>Traditional training disengages with complexity and multi frames of reference.</p> <p>Multiple perceptions of reality should be introduced in a learning process to help the learning to connect with what is relevant.</p> |     | <p>To start off, I don't think people are necessarily ready for such exposure. Why? Because the modes of learning in education, both at the basic level and university level in South Africa, is very one-dimensional. So if one wants to do that, one should be aware of potential anxiety or frustration or almost disengagement, because of the potential complexity that multiple frames may bring. So in that sense, I think it's a good thing but it will have risks to it that one will have to be aware of. That doesn't mean one mustn't doing it, though – at many ways, at Da Vinci, we are almost always trying to share multiple perceptions of reality with the hope that a person will align in their own mind and connect with what is relevant.</p> |
| Step 3  | Step 2   | Step 1   | Q2: | In your view, why, if at all, is it important to develop emerging properties within the complexity domain during a learning intervention? (Emerging properties being seen as questions, insights, new understanding, new relationships between knowledge elements or new linking between knowledge and workplace.)   |
| <p>Individual learner develops emergent properties</p> <p>Complexity is about making sense of complicatedness.</p>                    | <p>Emergent properties should be allowed to develop on individual level</p> <p>Emergent properties encourage complexity, not complicatedness</p> <p>Complexity</p>   | <p>Developing emergent properties should be allowed not induced</p> <p>Challenge thinking</p> <p>Forced linking of properties are linear engagement</p>  |     | <p>Well, personally I don't think one should do it. I think you should allow the brain of the recipient to do it, so you could challenge them to do it. But I think one must be careful to make the linkages because then it becomes another linear engagement. It may be complex but it could rather become complicated. You may be either in the knowable or the known space, so the complexity may push you to either of those order spaces.</p>  |

|  |   |   |     |  |
|--|---|---|-----|--|
| Step 3   | Step 2  | Step 1  | Q3: | In your view, to what extent do traditional/mode 1 learning interventions develop these emerging properties?   |
| Emergent properties of learning are a natural occurrence.  | Emergent properties are natural and is not dictated by mode of education (traditional training or learning) Learning happens despite of training  | Emerging properties in learning is not limited to one mode of education "learning happens despite of education mode"  |     | I think whatever mode of education, I want to believe that both of them, if they are more, could have the potential to create/allow emerging properties to surface. One cannot say the development of emerging properties is specific to the domain of one methodology. I almost think of the creation or development of penicillin – that was done very 'mode 1-ish' but still came up with emerging properties of that concoction to be convincing.  |
| Step 3   | Step 2  | Step 1  | Q4: | Building on the previous question, to what extent do mode 2 learning interventions develop these emerging properties?  |
| Training enables learning<br><br>Emergent properties are about personal context<br><br>Learning is also about reframing the "now"<br><br>Different frames of reference are essential to learning | Traditional training (mode 1) is a means to learning<br><br>Emerging properties is also about contextualising existing knowledge<br><br>Learning is also about re-framing<br><br>Behaviour change/what is learning? | Emerging properties of learning are easier in Mode 2<br>Inter-relating of elements are important for properties to emerge.<br>Mode 2 cannot be argued to be more suitable to learning than mode 1<br><br>Limiting learning to only when something new emerges is not correct. Learning is also about contextualising current knowledge differently.<br>Applying newness can be experienced as learning without "it" (knowledge or experience) being new.<br><br>Learning may be very small changes in behaviour |     | I think in a mode 2 context if you play it out, the awareness of non-conformity and trans-disciplinarity and social accountability allows an easier pathway/context for new properties to emerge because it's more open-ended and inter-related. But I will be careful to say that in a number 2 context, where things are more prescribed and directed, that one may not stumble on something new. As much as we would like to argue they may be more limited they may not be not possible.<br>[Can I throw in an addition question? Would you see learning as...when something new emerges or is created, that's learning?]<br>Not necessarily. You could learn how to bake a cake, which may be new for you at that time, but you may also learn how to bake another cake, so to speak, of which the learning is not totally new but it's contextualised differently. Learning could mostly apply newness, but I don't want to think learning is necessarily new. I can also learn from an experience...what do I learn if I learn from my experience of learning? I can learn how to adjust things. I can also learn how not to do things. Or I can learn how to do things in a new or different way.<br><br>[That shift from learning to do something differently – isn't that new in itself? If you adapt your behaviour, your new behaviour hasn't been applied before.]<br>Then we have learnt very little from the past two centuries because we are still doing things the same as from the past 2000 years. We have learnt very little. |
| Step 3   | Step 2  | Step 1  | Q5: | If learning follows a natural path of sense-making, where information (knowledge) is moved from the 'un-order' to the 'order' domains, why is it important to apply workplace context to a mode 2 learning intervention?   |
| Contextualising is inherent sense making<br><br>Learning is sensemaking<br>Sense making is personal and significant  | Contextualising is important for learning to occur<br>Contextualising is personal sense making<br><br>Personal sense making with active experimenting   | Contextualising information with experimenting is important to make the learning stick.<br>Contextualising assist in making sense of information and its "use"<br>Actively experimenting (Kolb) help not to get trap in reflections and   |     | Maybe it's just the importance that things must be contextualised. If you don't contextualise things, I wonder if we again, in terms of Kolb's frame of thinking, if we don't actively experiment it tends not to stick. Work context should provide an opportunity to experiment, to make it stick like Velcro. If you don't experiment, you could be trapped in the cycle of reflection and conceptualisation and stay in that helicopter or that ivory tower. You will learn, but I'm not sure it's going to be beneficial in many respects. So to develop cement from minerals was important, but if you don't apply cement, it's got no use.  |

|   |   |  |     |   |
|---|---|--|-----|---|
| Personal significance leads or aids in co-creation  | leads to co-creation  | conceptualising – there must be creation (co-creation)<br>Learning is not beneficial without co-creation   |     |   |
| Step 3  | Step 2  | Step 1   | Q6: | In your view, would workplace context add to new insight gained by the student during a learning intervention?  |
|   |   | Assuming that learner engage with different context, new insight can be gained<br>Contextualising also limit the application of learning.  |     | It could, if the assumption is that that person will engage with different people and contexts within that system. It will depend on the level, width and breadth of exposure (horizontally and vertically). We have seen at Da Vinci that students do have a work context that may be in project management, so they learn about managerial leadership but they only take it back to their project office, they don't really apply it to the full extent. The Japanese model of what Deming (?) believed, you know that you advise them that you should move from one desk to another desk, from one set to another set...if work has that flow then you will get real meaningful results.<br>[If you can bring workplace problems maybe to the classroom or the learning situation, that will help with that application?]  |
| Step 3  | Step 2  | Step 1   | Q7: | What is your view on the following statement?<br><ul style="list-style-type: none"> <li>An individual student's workplace reality is co-created during an effective mode 2 learning intervention.</li> </ul>  |
| Co-creation is using personal significance to influence work output<br><br>Traditional training is not focused on developing personal significance<br><br>Required is a learning process that develops personal significance to influence the collective voice. Co-create | Co-creation is about finding and using your personal voice (personal significance)<br><br>Co-creation is about using your voice within the work reality<br><br>Co-creation is about influencing the collective voice<br><br>Co-creation is problematic in traditional organisation where normative behaviour is required. (traditional organisation | Co-creating is to allow your own voice, also in the work-place.<br>To co-create you must add your voice to the collective.<br>Influencing the collective is to co-create.<br><br>The created workplace requires set normative behaviour, not co-creation.<br>Teaching own voice is not allowed within the normative behaviour. (problem)<br>Workplace is constructed for only one voice (the voice of the master). |     | Well, I'm tempted to say yes but I'm not sure that's true. It could be true. But I can engage professionally, I can apply...be socially accountable, I can look at it trans-disciplinarily, I can think of it in diverse terms, I can look at it from a heterogeneous point of view, but I can still not necessarily have co-created anything. I may just look at things in a novel way, but I have not necessarily created something. Co-creation is not, in my mind, necessarily equal to mode 2 application.<br>[What would co-creation of a reality be for you?]<br>I think co-creation would be where you allow your own voice...understand your voice, respect that voice and allow your voice to enter the arena. Because the co-creation happens when your voice enters the arena. But I can look at the arena where all of those things happen but I may not have my own voice. I may take a step into the arena and I may be socially accountable...I can look at it trans-disciplinarily, I can apply all of that, but I may not have added my voice to it.<br><br>[I want to deviate on that point of having one's own voice...in organisations today, do you think that's maybe one of the problems why we're struggling with innovations, new things and learnings, because it's not allowed, especially in the lower levels?]<br>I'm not sure it's a problem for now...I think the construction of the workplace concept has in its DNA normative behaviour so in its essence the workplace has been constructed for people to be managed, therefore not to have a voice, except the |

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|   | requires renewing)<br><br>Traditional training is not set on developing “personal voice” (personal significance) | The workplace construct ebb and flow, sometimes with flooding of the construct, but tend to return with small to no altercation. (People don’t learn, to co-create, to change and to improve. Training is not set on, or aligned to help people to find their voice and add to the co-creation of a value system, a value workplace.) |     | voice of ‘the master’. And I think that’s been the problem for the past few hundred years. In many other examples, and in past eras as in the French Revolution, there are times when the voices of individuals become so frustrated that they burst out of the boundaries of the workplace and then it’s almost like a flood...it over-floods and then the river flows again. So there’s something in human behaviour that makes them get fed up and go over the boundaries and the workplace frame is so powerful that soon thereafter the ? resides and flows within this light (?) again. So I’m not sure it’s worse now than ever – I think it’s a rhythm that comes every few decades or so. In the 50s and 60s, a good example was the UK. There was huge flooding and anger among the workforces and then it just went back...and now you see the rise of that again. In the late 20s in South Africa, you had the flooding of the workplace, with anger and frustration on the mines. Now, 100 years later, the same is happening again. |
| Step 3  | Step 2   | Step 1  | Q8: | What is your view on the following statement?<br><br><ul style="list-style-type: none"> <li>An individual student's mind-set (which I describe as the insights gained through the emerging properties of knowledge plus workplace context, integrated with the intent to perform a workplace task), is a primary component in the co-created reality that was/should be formed during a learning intervention.</li> </ul>   |
| Personal significance is required to co create  | Personal significance co-creates   | Insight is providing the voice, mind-set is providing the impetus to add the voice to the collective.<br><br>If the voice is not added to the arena, there is potential but no co-creation.   |     | It’s yes, but I want to make a comment. The question’s just too complex. But the answer is yes. [How important is that mindset and intentionality from a point of learning, going back and changing behaviour in the workplace?]<br><br>It’s critical. It’s what I said earlier – if the voice isn’t there, everything can happen but nothing will happen. You can look at the arena but you’re not in the arena.   |
| Step 3  | Step 2   | Step 1  | Q9: | What is you view on the following statement?<br><br><ul style="list-style-type: none"> <li>A learning intervention where the outcome is a co-created reality for the individual student is more effective than an intervention that achieves a pre-determined specific outcome and unit standard of learning. Please elaborate on your view.</li> </ul>   |
| Training is about outcomes<br><br>Learning is about reframing,<br>Learning is about emergent properties | Allowing for emerging properties<br><br>Re-framing<br><br>Allowing for emerging properties                       | Curricular learning should be based on pre-determined learning outcomes, but should not be limiting in the source of knowledge (trans-disciplinary)<br><br>Unit standards of learning, and it set learning will frame the learning within a single-story frame. It is   |     | I think in an ideal world, the second is more powerful. And that’s how curricular learning should work. [Clock strikes, so a bit hard to hear!] So I’m aligning to the second statement. In a regulatory environment, we’re not ready for that yet. But at least we don’t have prescription in what texts (?) we must use.<br><br>[I find that, if you look at unit standards of learning, it becomes an input for the facilitator, rather than providing opportunity for people to learn and to create.]<br><br>Well, they will learn, but it will still be framed upfront. So it’s almost as if the ‘master’ says “I’ll give you a little bit of leeway but you’re nevertheless going to give me what I want at the end. And that’s   |

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|  |   | <p>the voice of the master.<br/>Pre-set learning outcomes is trapping the power of education<br/>(If the facilitator is the specialist, the same can happen)</p>  |      | <p>unfortunate for education because it traps the power of education because that's still 'his master's voice'. I've decided what outcome is good for you because I'm the specialist.</p>  |
| Step 3   | Step 2  | Step 1  | Q10: | <p>In your view, should a learning architecture (defined as the building plan for a learning intervention) aim to heighten the individual student's personal significance in the co-existence of the student (the Being) and workplace tasks, objectives and strategic goals (the Doing)?</p>  |
| <p>Multi-Frames of thinking is an emergent property</p> <p>Personal significance is defined in relevance as sense making</p> <p>Learning is not about behaviour change</p> | <p>Emerging learning Multi-frames of reference must be emergent properties of the learning</p> <p>Forcing frames of thinking is limiting to learning</p> <p>The learning process must be about personal relevance, personal frame of reference and personal significance</p> <p>Learning can only be personally significant if relevant</p> <p>Learning is in identifying</p> | <p>Focusing on not giving knowledge to students,</p> <p>Challenging the learner is important<br/>Providing too much reference or frames are detrimental to the learning / keeping the learner interested is important<br/>Providing relevant guidance / interest / context to encourage the learner to seek knowledge</p> <p>Applying one path of gaining knowledge to change is not ideal, it is a combination.<br/>Formalising and structuring learning can also be limiting to the learning,<br/>Giving rules or frames, the end is not learning but following someone else rules.</p> |      | <p>Again I would say yes but the question's too complex.<br/>[Cliff offers alternative, simpler question: How important is it for us as educators to create a personal significance through the knowledge that we're giving to students?]<br/>You see, that puts a different slant on it because I don't think we must really focus on giving students knowledge. I can't align to that statement. I can say how significant is it for me as an educator to? the significance of people through the learning which I've facilitated, but that should be minimal sharing of knowledge. It's less about my sharing as about my listening.<br/>[In that listening and maybe pure facilitation guiding them and giving them different views or framing challenges, will that help?]<br/>I think posing challenges is important – giving too much reference is detrimental. Because there's a fine balance in keeping the appetite of the learner alive, to want to know other stuff. If I give you what I think is nibblable, you won't nibble on anything else and then they'll still only get what I give them.<br/>[Is that just inherent where we are in South Africa?]<br/>No, I think it's a human trait. If you give me pawpaws fallen from the tree, why would I go and look for something else? If you give me pawpaws and apples, why would I look for something else? If you give me nothing, (??) And as soon as I've found out that, three miles from my house, that there's a pawpaw and pear (don't think it's pear, not sure) orchard, then I will ? on that, and very soon I will have pawpaw and pear. Until somebody moves my cheese.<br/><br/>[To add to this, and give it a bit...I want to end up with something that we create in a classroom or learning situation where students can go back and change their worlds, and challenge what they do every day. I almost want to ask – given everything we've talked about – is education the right pathway for that? Is learning the right pathway for that?]<br/>I think that learning is a good pathway and education can be a pathway but there can be others. Reading can be a good pathway. Experiential learning...learning by doing...is also a good way.</p> |

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| <p>Learning is about consciousness to choose</p> <p>Learning process must create personal significance</p> <p>Learning process must enhance personal consciousness</p> | <p>knowledge without action</p> <p>Behaviour change is more difficult than just gaining knowledge</p> <p>Behaviour change requires choice</p> <p>If learning is within behaviour change, learning is not sustainable</p> <p>Learning is about becoming (choice) conscious</p> <p>In a changing world (new world of work) people lose their sense of significance</p> <p>Learning must protect, develop personal significance – significance to choose and contribute</p> | <p>Rewarding inappropriately during assessment of learning</p> <p>Facilitators / assessors feel important if the student confirms what they know. Learning becomes confirming or conforming to what the “teacher” knows. For learning to be learning it must have relevance to the work reality or life reality. Confirming what someone else knows it not learning – might not be true knowledge.</p> <p>Acquiring relevant knowledge is learning, is significant. Knowledge is about connecting the dots / or connecting dots that are not normally connected.</p> <p>Knowledge / learning is not just being able to identify the emerging patterns, but what to do with them.</p> <p>Changing people might be more difficult if not impossible.</p> <p>Defaulting back is the human trait. Aa state of change is not maintained, change, therefor learning is not sustainable.</p> | <p>There’s not just one way to get that end result, it’s a combination. But what will get it to sustain itself is how open-minded we are. We like to formalise things and structure things. Even in Da Vinci, as a potential open learning space, that is what becomes so restrictive. You can create so many rules or frames that you’re actually not learning but that you’re just following what someone has already decided will be good for you.</p> <p>[If I can pick up on that session you had with the facilitators that morning, talking about being an open learning space and yet, what you see in the PMAs is not learning or it’s not that, it’s somebody’s rules...but it makes it very complex to get to that point where you can have that open, new knowledge...]</p> <p>Well, it is complex. I think we are rewarding inappropriately. We’re not putting a challenge on how we assess people, so our reward mechanism has reflected in our assessments.</p> <p>[Because what do you measure against to assess? What you know.]</p> <p>I think often facilitators are teachers, are specialists, and they believe it, and therefore they feel important if people confirm what they know as being the truth. You are learning something, but I’m not sure it opens up anything. The whole financial downturn in the late 2000s, all of those people in management positions, all of them, had MBAs. So all of them had tools in the bag – how to do a sales plan, how to do forecasting, how to manage technology, how to look at marketing, HR practices...all of them had those tool kits and yet they couldn’t see it. So they all went through education, all had learning of some kind, but they all had the same framework for what they were taught. So nobody said to all those thousands of them, what about this, and why this...and they said “We know what we’re doing.”</p> <p>[It’s almost why did they overrule their own knowledge? Surely they must have known...]</p> <p>Well, I’m not sure they actually had the knowledge. They had knowledge, but I’m not sure they had the knowledge that was required. They didn’t have the knowledge to look beyond. They obviously didn’t have it, because they didn’t look beyond. They didn’t have the knowledge how to understand the interrelationship of things. They were not able to identify those emerging patterns. It’s like in South Africa currently, there’s an emergent pattern that there’s something grossly wrong and dysfunctional in this socioeconomic system. But both government and business is stamping at the edges. “Let’s give them 5% increase. Let’s play around with immediate solutions that will put on a plaster.” But we’re not solving the core issue – we’ve passed an era where there’s a one-eyed king. ? in terms of vertical integration or segregation at a very different level to you. But I do have a basic sense and my brain is telling me there’s something wrong here. And the more you tell me “It’s just your imagination, you’re just not understanding...” the more you do that, the</p> |
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|  |  | <p>(There must be differentiated between human change and behaviour change – Learning might be more about behaviour change – learning might only be behaviour change The state of being might only be temporarily and that might be enough within the learning space. In a purposeful learning intervention are we seeking change or adaption?)</p> <p>Learning is about becoming.(different to change)<br/>         Developing curricula for change is not appropriate / not required.<br/>         Current curricula is creating non-individualised individuals.<br/>         Relevant learning must be linked to who the individual is</p> <p>Changing the world so that we can learn is dysfunctional. (but, the world is changing and we must learn in order to catch up?)<br/>         In a changing world people can lose their personal sense of significance. (they change, but they die).</p> | <p>less the possibility of solving the socioeconomic problem. And in this context, there are coaches, psychologists, auditors, general scientists, leaders with awards...</p> <p>[Do you think maybe it's a case that people don't want to learn because it will bring too much change? If they want to fix this socioeconomic problem...]<br/>         Well, you're touching on another point...I don't believe people can change. I've never seen that. And all the attempts of people wanting to change, eventually defaulted back to who they are. Because that's exactly what it would imply. If I take these keys and I take this part off, what has changed?</p> <p>[How it looks? The weight?]<br/>         So things have changed. Can you do that to a human?<br/>         [If you add to them? Give them more insight.]<br/>         Is there change?<br/>         [Yes.]<br/>         You're amazingly optimistic.<br/>         [We're educators, we add something every day.]<br/>         If ever you find that happening, please catch that individual because I would like to dissect that species. I have not, in my work as a therapist or an educationist, seen anybody change. I've seen people becoming and people developing, but change, in my mind, is a misomer. I haven't seen people changing.<br/>         The alcoholic who changed his ways because he wants to become a non-alcoholic always stays an alcoholic. He's changed his behaviour by not drinking for six years, but then he drinks... One of the key things is that you must admit you're an alcoholic.<br/>         [That's an interesting point.]<br/>         So we waste all this money on change.<br/>         [So what is learning then about?]<br/>         Well, learning's probably hopefully about becoming...and you may say it's semantics, but...becoming or developing is something different than changing. But what we've done is we've created curricula of learning to change people. So I teach you Kotter's moral of change (?) and that's why I don't think it sticks – because that's not me. I'll teach you Mandela's lessons of leadership. Well good luck. Because it won't work.<br/>         You will get eager, subservient, non-individualised individuals that will gravitate towards it as they are and they would suck it up like a sponge. But I can tell you, within a short period time, they will be caught out, because they can't change. Religion has shown this over a period of time. It's a big ? change? Go to church, pray, redeem your sins, you're a changed man... "Hello?" Then six months later, you must redeem again. You're constantly changing, but nothing is changing.<br/>         [Because the church will go out of business.]<br/>         And so will society. So the manager says you must change. We're going to show you six new values – change. We're going to show you a new strategy – change. We're now going to have a new structure – change. Good luck.</p> |
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|  |  | <p>Nurturing that personal significance is learning.<br/> Learning must create purpose / significance or a sense of significance.<br/> (Adjusting behaviour must be contributing to the reality<br/> Learning must create life not kill life. Life is to co-create.)</p> | <p>[Can we not say that that change – we require the change to learn more, rather than to learn more to change. So change comes first and because of the change we have to now go and learn – new things and new behaviours.]<br/> That’s possible, but that’s problematic. It’s saying “Screw me a bit...just whack me once more.”<br/> [Turn my world.]<br/> That sounds a little bit dysfunctional to me. So if you whack me then I’ll learn. You throw me over a cliff, you put me in a pressure cooker...then I’ll learn.<br/> Wow. For what purpose? We are playing with people like pieces on a chessboard. It’s time to move, brother. Move. But you didn’t have any need to move! So now we make pain important, so you will move so you can keep your pain. Now I’ve seen that in a biochemical corporate...they’ve laid off a lot of people in the past three years and my coaching of them...some of them survive the axe. They work, they still get the salary. But they’re dead. But they’ve changed! They sing the song of the new corporate dictum. But in those coaching sessions, they try to get energy to survive another three months until they retire...because they’re dead.<br/> They change but they’re dead – because they are not the change. Human beings can adjust – if you ask me to smile for the camera, I’ll smile, but when I go home I don’t. If you pay me, I’ll smile. Have I changed? Yes I have. But does it mean anything? No.</p> |
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## Interview 2

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| Participant Details:            |                        |
| Participant Identification Code | PC01                   |
| Academic Field                  | Learning               |
| Work Field                      | Learning & Development |
| Years of Experience             | 8 years                |
| Date of Interview               | 16 September 2015      |

## Questions:

| Step 3   | Step 2  | Step 1  | Q1: What is your understanding of the difference between training and learning?  |
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| <p>Learning is based on a collaborative relationship between teacher (learning media) and learner.</p> <p>Learning is integrative to broaden the application of information.</p> <p>Learning is constructive.</p> <p>Learning is contextualised.</p> | <p>Training is focused on the process of the trainer (facilitator) covering and repeating all predetermined points</p> <p>Learning is the process of the learner discovering the use of what the trainer repeatedly shares.</p> <p>Learning requires a broadening approach to limited or narrow information.</p> <p>For success during a training event, learning should be made constructive, contextualised and relevant.</p> | <p>Training is different from learning.</p> <p>Training is a repetitive process with set items that should be covered.</p> <p>Learning is the use of tools, knowledge and context to implement the information into a specific environment.</p> <p>Training is focusing on a narrower line of knowing than learning</p> <p>The training method is repetitive but the learning process is constructive.</p> <p>Contextualising different scenarios is what makes learning more intense.</p> <p>Information provided during training is used in different applications.</p> | <p>From my perspective, they are obviously very different.</p> <p>Training is very structured, formal and it has a set number of items that you have to go through; the purpose of training is repetitive, doing the same thing over and over. Whereas learning is different – you’re given the tools, knowledge and a context in which to apply what you’ve been taught. So whereas training focuses on a specific objective or outcome, learning would focus on a broader context to your environment, world, things you can do with what you can learn, in various scenarios, in different instances.</p> <p>[You say training has an element of repetitiveness about it...do you have that in learning as well, or not?]</p> <p>Learning can have a bit of repetitiveness – the thing is, you can use repetition to almost create consistency or a field of operation or a standard. For example, you’ll start the learning process with knowledge about something. So, we’ll start teaching you about the apple. The next step is, okay, how to eat an apple. So you still use the knowledge from the beginning, moving from a practical environment, then the next environment – taking the thing apart, and analyse it in terms of its different components, then put it back together in a different way. Then you use it in a different manner. So we’re using the repetitiveness of the knowledge, the practical and</p> |

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|   |  | <p>Training is sometimes forced onto the learner by organisational requirements rather than by individual relevance. Or, it is not made relevant but processed.</p>   | <p>the functional components as repetition – you are constantly in a loop when you’re learning and going back, using the same information but in different ways.</p> <p>[But what if you have to go onto something like computers? Your experience – would that be an experience of training, undergoing training? Or would your experience be learning?]</p> <p>I think my experience would probably be training in the world I’ve been in – I have work experience – when I look back, all of the times that I went on courses to do with computers wasn’t because I necessarily wanted to but because it was necessitated by the business, so that was training, things you have to do in order to do your job. They would send you on training on how to use the system, on how to read instructions.</p>  |
| Step 3  | Step 2   | Step 1  | Q2:  |
| <p>Training has lost its performance-improvement drive.</p> | <p>The focus of training is the organisation goals (not the individual), driven by business goals, not individual performance.</p> | <p>Training is the process of organisation to reach specific outcomes or behaviours making training outcomes driven and procedural.</p> <p>Training is business-goal driven.</p> <p>The organisation goals are determined by the procedure, which becomes the learning outcome, the learning outcomes is what should be covered. The essence of training – performance improvement – is lost.</p> | <p>Given your answer in Q1, what are the factors that influence training?</p> <p>If you look at training in terms of businesses, businesses send people on training because they want to produce a specific outcome. So, for example, in a processing centre they would send you on training on how to use the system, on how to read the procedure documents and how to process an application. The fact is that training would be: (1) outcomes driven and, (2) procedurally driven so that you can follow a certain procedure. It would be business goal driven, so whatever the business goal is they’ve now identified that in order to reach a goal; people need to do things in a certain way and therefore they need training...and they’re there to create a standard which they can potentially measure in terms of performance.</p> <p>[Do you think that the business goals lead to the procedures?]</p> <p>Definitely.</p> <p>[Do you think procedures lead to training outcomes?]</p> <p>Yes, there’s a direct correlation between them.</p> |

| Step 3   | Step 2   | Step 1  | Q3: Given your answer in Q1, what are the factors that influence learning?   |
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| <p>Learning experiences should allow for natural and neutral choice.</p> <p>Learning is a choice to change behaviour or not to change behaviour based on the insights gained during the learning experience.</p> <p>To enhance the natural and neutral choice, learning experiences should be more than just classical conditioning.</p> | <p>Learning should be allowed to be natural and learners should have an experience from which they can naturally make choices on what, how or when to use the choices.</p> <p>Learning should allow for neutrality in its outcome, allowing learners to learn or not to learn. The experience should bring the learner to the choice to change behaviour or not to change behaviour. The choice cannot be made by the training.</p> <p>To enable learning experiences, training events should allow natural and neutral learning flow. This will allow for own choice, which will lead to relevance and personal commitment to the choice made during the learning experience.</p> <p>Training events can follow a classic conditioning process, although it may leave the learner feeling like the change is forced, which might leave the learner with a</p> | <p>In a corporate training environment, learning is not always recognised as a natural ability.</p> <p>In adulthood, learning is a choice. Not just choosing to learn, but also a choice of what to learn.</p> <p>Not enough is done to guide the choice to learn and not enough is done to allow digression within the choice during most corporate training events.</p> <p>The impact of low choice is that learning intention is not created or achieved and learning is limited.</p> <p>Learning is an in-born ability to analyse, synthesise and retain what is relevant from our life experiences.</p> <p>Learning is natural and neutral, you can learn right or wrong, the mind does not distinguish between them.</p> <p>Training does not follow these rules of natural and neutral learning.</p> | <p>When you look at an individual, as you go through your learning life (I like to call it a learning life because you start learning at school and that almost falls into training because they have a set number of things you have to do), as soon as you get to a point in your school or your education to about Grade 10, they allow you the choice of subjects. That's when you really influence your first learning opportunity in terms of formal training. The factors that influence learning would be personal choice, personal significance, what it means to you, which is quite important – if you don't have buy-in in terms of what you want to go and learn, then you'll never really learn to 100%. That talks to personal interest, so if you're not interested in the thing that you want to be learning, you probably wouldn't even choose to go and learn anything along those lines. People have a desire to grow and be better than they were before, so it's one of the factors that influences learning. I've also seen it in companies I've worked for – a lot of the time the reason people choose to go and learn something is because your experience, your qualification and your knowledge equates to money, so it could be a money factor as well. That reverts back to choice.</p> <p>[You mentioned that learning is linked to life. Can you expand on that?]</p> <p>Well, from the day you're born, you're learning. Every new experience, every new thing you see, taste, touch, feel, go through...you learn something. The reason you learn and are not in training is because you either learn that it's good or bad – it comes back to the fundamental basis of right or wrong.</p> <p>[So would you say that learning is natural?]</p> <p>Learning is natural. You may not learn the right thing by doing certain...so, for example you decide you want to bungee jump. You may learn that you have a fear of falling or you may learn that you don't and you're inspired to go and jump out of a plane.</p> <p>[If learning is natural, is training natural?]</p> <p>No, I wouldn't say training is natural.</p> |

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|   | <p>lower level of personal commitment to the choice or the learning.</p> | <p>Learning as a natural and neutral phenomenon is not limited to pre-set outcomes. Having pre-set objectives in training is not natural and neutral.</p> <p>Many training sessions will follow a classic conditioning (behaviour conditioning) process with reward and punishment to force learning. It is animalistic.</p> | <p>[Why do you say that?]</p> <p>Well, learning is not formal, it's not structured, it doesn't come packaged in a box saying, "By the end of your life you will have learnt this." Training does that for you. Training says, "We're going to focus on a very specific set of skills, knowledge, things that you need to know in order to be an engineer." We're not going to tell you about agriculture if you're studying engineering.</p> <p>[So the fact that it's packaged and predetermined makes it not natural?]</p> <p>Yes, it wouldn't be the way you'd normally learn.</p> <p>[Okay. That's extremely interesting, because if we say we want people to learn something, are you saying we have to take away this unnatural structure?]</p> <p>The reason I say that is because if you look at animals, not people, and you want to teach your dog to sit, there's a method you use. So you use reinforcement or a treat or violence...there are many different ways. It's the way that the dog responds best that will allow him learn.</p> <p>[Are you saying you can apply the same training methods to people?]</p> <p>You could, and they did it in the army. So, if you look at conscripts, they use a very rigid, specific method of trying to break someone in order to get a desired [behaviour] in times of emergency or necessity. They probably never looked at a different method of getting a different response?</p> |   |
| Step 3  | Step 2   | Step 1   | Q4:   | <p>Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process?</p>                    |
| <p>It is the responsibility of the training</p> | <p>Personal significance is a</p>  | <p>A sense of personal significance is probably the most important</p>   |   | <p>It's probably the most important factor. Because at the end of the day – sorry to use this example – you could go to church and listen to a minister preach,</p> |

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| <p>programme to develop personal significance.</p> <p>Personal significance drives the sense of purpose in the learning.</p> | <p>factor for learning success</p> <p>The design of a training programme should allow for the development of personal significance in relation to what should be learned.</p>                       | <p>factor that determines the success of learning.</p> <p>A learning process can be applied to change or heighten personal significance.</p> <p>The training structure/programme should aid the development of personal significance.</p> <p>Training programmes should allow for personal significance and for individual take outs from any learning experience.</p> <p>Learning is unique to the individual.</p> | <p>and he could tell you about the Bible and about all these lovely things in the Bible that make them fact...if you don't believe and don't take that personal significance away, wholly encapsulated in your being, you will probably never believe in that teaching. Whereas you get people who have the need or the personal aspiration to say, "Yes, there's something bigger than us and I want to go to church to learn more and get closer to my God and my religion and all of these kind of things." That's why it's funny, you'll find Jews and Muslims that don't get along, but their religions are so similar. But each has a different personal significance in the way they see their religion.</p> <p>[So can learning change somebody's sense of personal significance?]</p> <p>Definitely.</p> <p>[Irrespective of training structures? Is that the natural thing that will just happen inherently?]</p> <p>You definitely need the training structure in order to aid your learning. So you want to be a fashion designer, you go and study fashion design. There are certain aspects of it. What you take away from that may be completely different to what they were teaching you. You may go there wanting to learn how to put together a t-shirt but you end up making a dress. You didn't want to make t-shirts, you wanted to make dresses, but you learnt how to sew and you learnt how to crochet and you learnt how to make patterns and do all these different things. You learnt about fashion design but you use it differently.</p> |
| <p>Step 3</p>  | <p>Step 2</p>   | <p>Step 1</p>   | <p>Q5: In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emergent properties between order factors and work context?</p>  |
| <p>Learning should be explorative and should be contextualised.</p>  | <p>Learners should be allowed to explore new possibilities and not just receive known or knowable information.</p> <p>The structuring of training should allow for learning by exploring within</p> | <p>Learning should be explorative between the known and work context.</p> <p>Learning should allow for new relationships to emerge within the context.</p> <p>Emergent properties should be allowed within</p>  | <p>I think it should be exploring the emergent properties between order factors and work context. We have different types of people who learn differently. You get the person who likes structure, who likes to follow order and have things work like that, so they build their own personal picture of how things work. In saying that, it's almost saying let's forget about those people when you start learning. That's not the truth. I think you still have a thread that ties the structure together. What you need to explore between these different factors and facets</p>   |

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|   | the frame of the context.   | the structure of frame of learning.<br><br>It is moving between the complex and the knowable.  |     | of what you're going to be covering, while providing a context to it.  |
| Step 3  | Step 2  | Step 1   | Q6: | In your understanding of learning, should learning explore the emergent properties between un-order factors (knowledge relationship) – the relationship between old knowledge, new knowledge and work context?   |
| <p>Learning should be focused on allowing new context to emerge from the training structure or design.</p> <p>Learning should aim for higher levels of conscious awareness in learners.</p> <p>Learning should focus on enabling learners to choose to change behaviour or not through a higher level of conscious awareness.</p> | <p>Adding new information, scenarios, thinking or frames of reference allows new contexts to be formed.</p> <p>There is a relationship that builds between existing knowledge or context and new context formed by adding new knowledge.</p> <p>Learning seems less effective if not built on the relationship between existing context and new context.</p> <p>Effective learning leads to choices of behaviour. (Learning does not necessarily end in new behaviour or behaviour change.)</p> <p>Emergent properties in learning lead to new or higher levels of conscious awareness.</p> | <p>Existing knowledge provides the current context.</p> <p>Context is personal and individual, based on their current knowledge.</p> <p>New information (or new/different scenarios) provides the opportunity to change the current context.</p> <p>New context then adds to the knowledge.</p> <p>New knowledge with a new context will add to new learning, a new context, new relevance and new personal significance.</p> <p>Learning is derived from the change in context; new context is added via new knowledge acquired.</p> <p>Learning leads to choice.</p> <p>With a new context there are new choices.</p> <p>Choices are either to change behaviour or not to change behaviour.</p> <p>Context and the emergent properties</p> |     | <p>This is quite an involved question. Learning should definitely look at what we know, because that provides a context to start from. Everyone has a personal context from which they can start. To delve into the unknown, or the things that you know you don't know, and explore them while creating a new context – the key point here is everyone has a personal significance around a certain topic. If they don't have enough context you need to provide a context in the learning and working environment as well as the life environment, their personal life context. You need to go from 'you know this', to 'you don't know this'; I'm going to give you this context, scenario, case study, this world of [meaning] and we're going to explore it in order for you to get to know more about it in relation to what you already know. That will drive the learning. You started here, you ended up at point B, but you have new context in the middle.</p> <p>[So what emerges from that context, from the scenario, from the situation, from the context that's created, out of that there are some emergent relationships coming which are not in that space.]</p> <p>Exactly. Definitely.</p> <p>[Would that be learning?]</p> <p>That would be learning. In that same context it could be positive or negative learning.</p> <p>[Talk to me about positive and negative learning.]</p> <p>In that context of someone who learns about perseverance, that would be a positive thing. You</p> |

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|  |  | <p>within the new context provide a new or higher level of conscious awareness.</p> <p>Conscious awareness should build personal significance, not reduce it. This is what learning should be – improved personal significance – improved performance.</p>   |     | <p>need to persevere, try hard, keep working at it in order to get to your goal. Someone who saw it differently said, "I'll never be good at anything." They haven't learnt to persevere. If it's too challenging, just give up. That's where the role of learning becomes important, because you need to build personal significance, not take away from it.</p>   |
| Step 3   | Step 2   | Step 1   | Q7: | <p>In your understanding, why is providing work context during a learning intervention important for developing multiframe thinking?</p>  |
| <p>Multiframe thinking within the context of work deepens the learning experience.</p>               | <p>Multiframe thinking allows learners to see their world of work from a 'various solutions' perspective.</p> <p>All work environments have various problems with various solutions.</p> <p>A various-solutions view provides a heightened sense of personal significance.</p> | <p>People don't always see all the angles of the work they do.</p> <p>Someone's viewpoint makes them perform to a standard. Changing their viewpoint may change their thinking about the work.</p> <p>Having different viewpoint allows for more people to experience a sense of personal significance.</p> <p>Single-frame thinking limits the learning experience whereas multiframe thinking deepens the learning experience.</p> |     | <p>Definitely. In a work context, you're providing the work context which allows the person to see the world of work and the thing that they're learning about. It also allows them, like you say, more than one way of looking at a situation, more than one way of looking at their work.</p> <p>The way they are looking may make them a top performer, it may make them a general, average performer, or it may make them think it's not exactly what they wanted to do. You will get different outcomes out of that. The work context is very important in creating that.</p> <p>The multi-faceted way of looking at a situation provides personal significance in that scenario. When someone gathers personal significance, that's where a deep learning happens; when there's a change in the way they see the world, there's a change in the way they approach the world, there's a change in behaviour and it provides another experience or dimension to the way they experience the whole learning process.</p> |
| Step 3   | Step 2   | Step 1   | Q8: | <p>In your understanding, what is providing different frames of reference during a learning intervention?</p>   |
| <p>Multiframe thinking deepens the level of knowing, it broadens context, provides more insight.</p> | <p>By introducing multiple frames of thinking, learners are afforded the opportunity to explore more than just the information or the knowledge.</p>   | <p>Multiple frames of thinking should allow for investigation of all angles of information within a context.</p> <p>Most of the time training will consider one angle, the information itself.</p>   |     | <p>Providing different frames of thinking is [like] looking at the coin from more than one angle. People will generally see two sides to the coin, the top and the bottom. What about the part in the middle? There are more than two sides to the coin, there are actually three. People generally don't see that. The frame of thinking is important because what happens when you get into a problem situation, when you are faced with a challenge, and</p>   |

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|   | <p>Multiple frames of thinking will help learners to change their approach to knowing.</p> <p>It provides depth to information.</p>   | <p>It should provide opportunities to explore problems around the information within the various contexts.</p> <p>Multiple frames of thinking should allow learners to change their approach to knowing</p>  | <p>everyone has been trained to look at it in a specific way, only one way?</p> <p>The problem persists and there's no way of fixing it. Again I revert back to the [earlier] example. We have a problem where IDs get stolen, we have a problem where fraud happens, we have a problem, and these people have been trained to look at it in one way. If we had looked at it from another perspective, we may have seen a solution to the problem. Frames are very important because they allow you to change the way you might approach a situation and the way you think about it, which changes the outcome. Isn't it Einstein who said that if you do the same thing every day and expect a different result, you're crazy?</p>   |
| Step 3  | Step 2  | Step 1   | Q9: What is your understanding of the concept of co-creating work reality for learners during a learning intervention?  |
| <p>Learning should challenge the learner's belief about the work reality.</p> <p>Work reality should be contextualised as a significant system.</p> <p>Personal significance is established within the significance of the system.</p> <p>Learners become significant in the co-creation of the system.</p> | <p>The learning focus of a training intervention should have a systemic focus and understanding.</p> <p>Learning should have a contextualised shared and multi-thinking perspective.</p> <p>Learning should challenge the current beliefs of the individual learner.</p> <p>Learning should challenge through the beliefs, the personal significance of the learner and the significance of the job.</p> <p>Everyday tasks will be viewed as significant within the system, and there will be a</p> | <p>Training interventions should be focused on the systems, not just the processes that culminate in the world of work.</p> <p>Learning should have a contextual view of what is reality within a multiple frame of thinking</p> <p>It should be about the beliefs learners have about their work reality, shaping the beliefs, changing the personal significance of the individual.</p> <p>The link in shaping current beliefs lies within multiframe thinking.</p> <p>Sharing different perspectives and different references allows for experience, which leads to more choices.</p> | <p>A work reality is a system, a world of systems and processes and all of these things that exist together in order to reach an outcome. The way you're learning helps to shape that outcome. It provides some context. It also provides a way of looking at your reality.</p> <p>Again, it's important that different learners have a view of the way they see the company going and the way they see themselves contributing to the outcomes of the company. Learning helps do that.</p> <p>It would be. They would potentially be there, what they believe about what they do. We have to shape those beliefs in order to create that significance in their lives.</p> <p>Allowing people in their learning environment to share their personal significance, to share their beliefs and have people challenge them. If we don't ask the questions and we don't share with one another, how will we ever know?</p> <p>[Can you link that back to frames of thinking?]</p> <p>Yes, you could, because everyone has a different frame. It's like at the movies, if you sit at the front the screen is huge; if you sit at the back and there's a head in front of you, the screen is not that big. So everyone has a different perspective and a different belief. Definitely, you can take that back to a frame,</p> |

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|  | <p>sense of importance in co-creating the system, the work reality.</p>   | <p>The everyday task should become more than just a task; it should have significance. It should be understood within the system and the system outputs.</p>   | <p>everyone adds their frame to the picture and you get a [moving] picture.</p> <p>[And, at the end, if that frame of thinking changes or there are more facets to this picture, would that then shape that work reality?]</p> <p>Yes, definitely, because they wouldn't just see their mundane task as just a task. It would be something more than just a task because it would have impact on the product, the next person, the business, the profits. It creates more significance and value for them. At the end of the day it's almost a value exchange, learning and seeing your world and how you impact in it.</p>  |
| Step 3   | Step 2  | Step 1   | Q10  |
| <p>Personal significance is (or should be) the main focus of learning.</p> <p>Personal significance viewed within the new world of work is the backbone of co-creating a work reality.</p> | <p>Personal significance is linked to personal contribution or the sense of contributing.</p> <p>The sense of contributing (and, indeed, contributing) is the essence of co-creating a new work reality.</p> <p>By shaping personal significance in the world of work, the individual and the contributions of the individual consistently become more relevant to the work reality.</p> <p>Learning is about/should be about the shaping, illuminating and aligning of personal significance to the contributions that are required to co-create work reality.</p> | <p>People whose belief it is that they don't have a sense of personal significance within their world of work, stagnate and cannot move forward.</p> <p>To move forward and to build the future reality, people need to contribute, or feel that what they do contributes.</p> <p>The personal significance of people should be shaped to align to that of their world of work, so that they can contribute and co-create to the work reality.</p> <p>Learning should happen all the time, Personal significance should be developed all the time. Organisational change</p> | <p>In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?</p> <p>It's very important. There are two ways of looking at it. If an individual believes they have no personal significance in the work that they do, and they felt that what they did neither contributed nor took away from the business, they remain where they were for the rest of their lives. You get that example where you have people who worked in a factory for 40 years and they do the same thing for 40 years because [they're not] doing it better. Then you have the person who believes that things will get better at the company, they will change, they will grow, they will do their part and contribute to it. It helps build that organisation. But in saying that, that personal significance needs to be shaped in such a way that their personal significance and aspirations don't overshadow that of the company or business or other individuals, that their personal significance doesn't take away from someone else's.</p> <p>[If I'm happy with the world that I'm in and I don't mind just doing this, should I learn? Should I change? My personal significance is enough for me.]</p> <p>I believe people should. The reason is that you will stand still in time while time moves forward. Even though you're still happy with that, the place that you're in, other people may not be happy with it. Their personal opinions may not matter [to you], but if you work in an organisation that wants to grow and change, unfortunately [you are a] part of the</p> |

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|  |  | <p>and growth are a part (a fundamental part) of any business system.</p> <p>It requires constant learning.</p> |  | <p>system where they want you to change, and they throw you into training.</p> |
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### Interview 3

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| Participant Details:            |                                 |
| Participant Identification Code | CP01                            |
| Academic Field                  | Industrial Psychology           |
| Work Field                      | Learning & Development (Design) |
| Years of Experience             | 15                              |
| Date of Interview               | 16 September 2015               |

### Questions:

| Step 3  | Step 2   | Step 1   |     |   |
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|   |  |  | Q1: | What is your understanding of the difference between training and learning?   |
| <p>Learning is an intrinsic process whereas training is extrinsic.</p> <p>Learning is transformative.</p> | <p>Training is narrower than learning.</p> <p>Training can be controlled within the trainer's ability to narrowly focus.</p> <p>Training is an externally driven process with external and pre-set objectives. The objectives becomes more important than the learning.</p> <p>Learning is transformative and requires a change in mindset. This is intrinsic to the learner, occurs through choice by the learner, and is not processed by the trainer.</p> | <p>Training is a demonstration of the trainer's ability: knowledge, skills, attitude, information, planning and preparation. It is therefore specific and narrow to the trainer. The trainer can train but it is not a given that the learner will learn from that process. Training is driving a process external to the learner.</p> |     | <p>Training, for me, denotes what the [trainer knows] – in the sense that it's the knowledge, the skills or the attitude that the trainer demonstrates, and for me the flow is from trainer to trainee. Whereas I define learning as a transformation in either behaviour or attitude or level of knowledge that a learner goes through, which then denotes that actually a learner has choice whether to learn or not. So, for me, a trainer can stand up and train as much as they want to but if a learner doesn't have the right openness to experience, if the learner doesn't see value in what it is that the trainer is giving, that transformation won't happen.</p> <p>[Are you saying that it's possible for a trainer to stand up in front of a classroom and train, but the audience might not learn?]</p> <p>Yes.</p> <p>[Even if the trainer is doing everything that he needs to do?]</p> <p>Yes.</p> <p>[So the learning is not prescribed or linked to training?]</p> |

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|   |  | <p>Learning is not linked or guaranteed by the objectives of the training event.</p> <p>Learning is characterised by a transformative experience that is experienced by groups of individuals, and not by the training process.</p> <p>A transformative experience is more evident when the focus is on the relationships between individuals and information, and not on pre-set objectives to be covered.</p> <p>Learning requires a focus on the mindset of the individual and not on isolated information.</p> |     | <p>No, definitely not.</p> <p>[Why do you say that?]</p> <p>Because of my experience in design, development and delivery. I have experienced what I know to be... where I've run a programme over a long enough period, the same programme using the same methodologies over a year and a half, in some classrooms I can see the learning transformation happen and in others I do not see it happening. The other variables are controlled for – it's not a study, but I know that I'm doing what I did last week and the classroom is the same. What is different is the mindset with which the learner approached or arrived.</p> <p>I've also had the privilege of having a learner sit down in my class and openly tell me that they are not going to learn, that they already know what I am going to tell them. When I have focused less on the content that I told and more on building the relationship with that person, I can sometimes influence the attitude. In essence, what I am saying is a prerequisite for learning is an attitude, a mindset. What that mindset is I haven't operationalised. I've got ideas but I haven't operationalised that.</p> |
| Step 3  | Step 2   | Step 1   | Q2: | <p>Given your answer in Q1, what are the factors that influence training?</p> <p>I would say the knowledge of the trainer, and [their] experience with the material or the subject itself, techniques for delivery, the ability to read an audience, the ability to adjust material, and a basic knowledge of adult learning principles in our world. If a trainer does that they are doing as much as they possibly can.</p> <p>[These factors are all things that the trainer has to do or has to control?]</p> <p>Has control over. They would include the venue, the – everything that I would consider.</p>   |
| <p>Training is not performance focused, but is more procedure focused/objective driven.</p> | <p>Training is a planned process of controllable factors that helps the trainer to attain predetermined objectives.</p> <p>Training is limiting to the learner due to the structure, controlling the structure and focusing on</p> | <p>Quality of training is dependent on the competence of the trainer.</p> <p>Training quality is therefore limited to</p>  |     |  |

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|   | reaching the objectives.   | what the trainer can control.<br><br>Training being a controlled process can be effective when the trainer follows the controlled process and covers everything within the plan and structure of the event.<br><br>The focus is limited to the planned process and focused on the planned process. |     | But saying that learning is a transformation that the learner chooses to do or not do, or take part in or not take part in, I'm not saying we should throw out the training side of things, for me they are two sides of the coin. But there is a limit to what a trainer can control. Should a trainer control what they can? Yes. Should we have a structure? Yes. Should we have a knowledge base, a learner guide, or should we have activities? Yes, all those principles are correct. Training will be bad if you don't have some of those things. They are the minimum requirements in my opinion. But there is a point at which the trainer needs to accept that they actually don't – I always joke with learners – they don't have a switch where I can switch them on. That switch is really theirs. I can try and influence them switching that on, but the choice is ultimately theirs.   |
| Step 3  | Step 2   | Step 1   | Q3: | Given your answer in Q1, what are the factors that influence learning?   |
| <p>Learning should allow information and knowledge to be experienced within a problem-centric reality of the work environment.</p> <p>Learning should focus on the motivation/attitude that will lead to a sustainable choice to change behaviour.</p> <p>The focus should be a persistence of mindset.</p> | <p>For learning to occur there should be an openness towards learners experiencing knowledge within a problem-solving possibility.</p> <p>Learning should harness the use of information and knowledge that is part of the problem-solving possibility.</p> <p>Problem-solving experiences are limited in corporate training interventions driven by current unit standards of learning.</p> <p>Training interventions that drive learning</p> | <p>Learning comes from an openness to experience.</p> <p>The responsibility for learning is misplaced when located away from the learner and in the trainer/facilitator/material/process.</p>  |     | <p>For me, a big one is – I think of the definition of fulfilment of potential – one of the big definitions, or self-efficacy, is an openness to experience. For me that is possibly the biggest factor.</p> <p>If you are open to experience then there's a good chance that your mindset will be something that allows you to at least open the door to learning. That for me is foundational. Then I would say there are other factors such as factors about the learner, what do they come to the classroom with in terms of knowledge and skills? What level of engagement do they bring to the classroom? Very important is how much their mindset is one of being an active learner or being a recipient. I feel that most training up to this point, except for the last few years, has really been about creating a classroom where people come in, sit down, and receive, and all the responsibility for learning stands at the front of the classroom. When Jack, here, doesn't learn, we blame this person at the front, or the book. But for me, the move needs to shift to Jack and their responsibilities to learn. If they have a sense of responsibility to learn, that also impacts how much they learn.</p> <p>[Do you think sometimes that the facilitator at the front of the class, the designer of the programme reacts to this condition of people being recipients in</p> |

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|  | <p>should focus on developing a mindset or motivation/attitude for learners to apply knowledge in an environment that opposes new thinking and procedures.</p> <p>Persistence of mindset becomes a key factor for successful learning. Persistence leads to the choice of changing behaviour.</p> | <p>Training programmes intended to stimulate learning become information driven, complying with what the organisation or the unit standard of learning dictates.</p> <p>The application of information or knowledge within a situation of problem solving is very limited.</p> <p>Learning seems to be more about mindset and changing mindset. A specific mindset will lead to the choice to change behaviour.</p> <p>Behaviour change, or the choice not to change behaviour, is driven by a motivation or a buy-in. It should be a personal mindset.</p> <p>The learning environment or experiences don't</p> | <p>classes, and we build things because that's the norm?]</p> <p>I've done that myself. You can use compliance training as a lovely example. It's really tough to turn something like compliance training into an action-learning project. There is such a need for people in compliance to make sure that learners know that this act does this, for example. So they turn it into a knowledge-based [thing] – I'm thinking of a big financial services industry company, I've done their compliance training and it is frightening to see what they consider to be compliance training. Out of all learning that is possibly the one that needs the biggest shift in behaviour, which requires a shift in mindset, yet all the training is aimed – I've seen people within this organisation sit with the knowledge base open on one side and the assessment open on another stream, and answer the assessment questions by reading the knowledge base. No learning has taken place, I can absolutely guarantee you that you walk away from that, they still can't tell you how to prevent money laundering. Yes, absolutely, we designed it and we deliver, sometimes as a result of seeing this enormous knowledge base, sometimes it's complex or detailed, and we have a fear of detail, and those are the times where I find myself starting to what I call information dump, or lecture. I've even done it. This class has got to know this so let's just set aside an hour and we just tell them.</p> <p>[Would you describe learning as something to do with behaviour change or mindset change?]</p> <p>Both. For me, behaviour change can't happen without mindset change. You have to have both components. There's got to be an attitude or mindset of an openness to learn, and then layered on that is, "So to learn this in particular what attitude do I have to take?" And then behaviour change is probably the most difficult in that once you have the attitude right it's like you have the foundations of the house right. The behaviour change, the will to change might be there with the right attitude, but that's where the environment starts to kick in. If the environment doesn't then support that behaviour change, it's far easier to revert to previous behaviours and of course then the change (cycle) also kicks in. Behaviour change, at first, is exciting, then it becomes tedious, and there's also a dip in adoption, and it's there that the context has to really support and motivate people to adopt the new behaviour.</p> |
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|  |   | necessarily address the mindset to support the behaviour change, but only the behaviour that should change and how it should change. This often leads to a learner reverting to old behaviours on return to the work environment that don't support the new or requested behaviour. |     | <p>[You talk about mindset and attitude. What's your understanding of mindset?]</p> <p>Mindset and attitude, I think, are interchangeable for me.</p>   |
| Step 3   | Step 2  | Step 1  | Q4: | <p>Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process?</p>  |
| <p>The training programme (design and delivery) is responsible for developing the sense of personal significance.</p> <p>The success of learning depends (level of sensemaking) on the sense of personal significance.</p> | <p>It is the responsibility of the training programme to lift the sense of self-worth of the individual during their learning process.</p> <p>Improving personal significance breaks down the barriers to learning as it influence attitudes and mindsets for learning.</p> <p>Learning success can be enhanced by focusing on establishing a sense of personal significance.</p> | <p>People should have a sense of self-worth to enable them to learn.</p> <p>People don't learn out of fear.</p> <p>Fear often creates a barrier to learning</p> <p>Educators, facilitators and learning designers are not doing enough during a learning session to</p>             |     | <p>If a learner does not feel worthy, important, there's no way they're going to be able to learn. None whatsoever. So, I would say that it is a prerequisite for learning. It is, in my experience...I have never seen anybody learn, for example, as a result of fear. I've never seen anyone learn if they lack self-worth or confidence. In fact, too often I've seen people with absolutely the right foundation, knowledge skills, everything in place to be able to learn, and yet a lack of success in other areas in their life creates a barrier. I don't know how to make that barrier tangible, but there seems to be a barrier to learning.</p> <p>[Do you think we as educators do enough to stimulate that (sense?) or to grow that sense of... ]</p> <p>Not at all. We spend almost no time on that in the sense that very often I will say to a client you need three days in order to train this, we can't do three days, we can't take people out of the office for three days, so let's make it one day. So, in one day they must know ABC and D, and the piece that gets cut out is the personal significance piece, the piece that allows a learner to build a sense of confidence and self-worth.</p> <p>[Is that personal significance linked to the mindset and attitude that you talked about?]</p> |

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|                            |                                  | <p>stimulate the sense of self-worth.</p> <p>This is often due to time constraints as set by the client/organisation.</p> <p>Personal significance and self-worth link to mindset and attitude towards specific topics or scenarios.</p> <p>Attitude can be changed and should be changed to improve the learning experience.</p> <p>The learning programme should do more to address the required attitude, mindset or personal significance at the start of the learning process.</p> <p>Laying the foundation by addressing personal significance will lead to learning success.</p> <p>Learning is about giving people the opportunity to change their mindset.</p> |     | <p>Very much so. For me mindset and attitude, I might have a few attitudes about different topics. A sense of self-worth or personal significance, there is a base sense of personal significance that I think comes from childhood, that is not linked to a specific topic, it's very much about how you define yourself. Then there might be a sense of personal significance about a specific area in your life. For me that's more attitude. That's how I would differentiate them, in the sense that I might have a very strong sense of personal significance overall, making me a good candidate to learn, but I might have a very poor attitude about exercise or fitness or health, meaning that I don't learn very well in that area until I change my beliefs about the importance of attitude.</p> <p>[And we probably don't do enough, in a learning environment or a training environment, to address that.]</p> <p>Almost certainly. In fact, this course that I'm doing now, it's the first time where the entire (contact) session has been dedicated to that and the knowledge piece is given in the extended learning, to the learner to take ownership of and to do. The reality is I think there will be an enormous amount of success because we've laid the foundation with the right behaviour and attitude and mindset. We've at least given the learners the opportunity to adopt that mindset, which means we should have very good success with the knowledge intake, because the attitude has been changed. I would say that's probably the first time in my ten years that we've done that.</p> |
| Step 3                     | Step 2                           | Step 1  | Q5: | In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emergent properties between order factors and work context?   |
| Successful learning cannot | Training should be about turning | The younger generation of   |     | What I have discovered, especially in the last few years, is the next generation, the younger   |

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| <p>occur in a static-order world.</p> <p>New knowledge is acquired, discovered from the context of the new world of work.</p>       | <p>information into knowledge, not giving knowledge without context.</p> <p>For learning to take place there should be exploration of new knowledge emergent from the context in which the information/knowledge will be used.</p> | <p>learners are less interested in what is known or can be known.</p> <p>Information is more readily available.</p> <p>The new generation of learners expect more from a classroom training session than information or order factors.</p> <p>They would like to see information as knowledge – move from knowable – to known.</p> <p>The danger is that learning doesn't take place.</p> <p>Face-to-face training time or any training time should be about contextualising order factors within the world of work.</p> <p>Opportunities to use knowledge should be created and practiced within the context of work problems.</p> |            | <p>generation of learners in my classrooms, if all you do is supply order factors, you get very low ratings and reviews of training. Because the world wide web and technology has made it possible for many people to search for and take on the order factors they want themselves. So they expect more from the classroom. Funnily enough, very often the previous generation, if you exclude those order factors, they somehow feel the training is less than it should have been. They came here for knowledge, they just wanted to receive it and go away. But I would say that in the second scenario no learning has taken place, all you've done has been a live Google. So to answer your question, absolutely not, none of that should be covered in the classroom.</p> <p>There should be recognition that if your learner is literate, they can read that on their own. Any face-to-face time in whatever format that takes should be about contextualizing those order factors, which would be about providing the opportunities to practice using the knowledge in some way. It should be about the practice, because the behaviour change can't happen unless I've had a chance to practice.</p> |
| <p>Step 3</p>   | <p>Step 2</p>  | <p>Step 1</p>   | <p>Q6:</p> | <p>In your understanding of learning, should learning explore the emergent properties between un-order factors (knowledge relationship) – the relationship between old knowledge, new knowledge and work context?</p>  |
| <p>Building new knowledge is dependent on the emergent properties from existing knowledge, new knowledge and workplace context.</p> | <p>Training design should allow for the connection between work context and knowledge content.</p> <p>Work context is different for different learners and personal</p>  | <p>Knowledge, existing and new, should be tested in the work context.</p> <p>Often there is disconnect between what is in the classroom and what is in the work space.</p> <p>Learning programme designers should</p>   |            | <p>Yes, absolutely. That speaks well to me. Very often we will supply learners with, here's your knowledge, here's an example of how you can apply that knowledge, and then go out into the workforce and do it. The first thing that the learner experiences is a scenario completely different to the one we've posed in the classroom and the ability then to cement and to move my new skill to a new... isn't necessarily always in place. So absolutely, if we can explore complexity and recognise complexity – because that's the other thing we do...is we often take...one of the strongest things about a designer and developer is their ability to take what's complex</p>  |

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|  | <p>significance should be considered.</p> <p>Learning design should integrate different learning approaches to accommodate learning being integrated with workplace context.</p> | <p>integrate the work context with the classroom learning.</p> <p>Complexities should be explored in building new knowledge.</p> <p>Complexity should not be avoided, complication should be removed.</p> <p>Complexities of workplaces are different for different learners, given their personal significance.</p> <p>Learning design should allow for these different contexts to be explored.</p> <p>The classroom should be the start, but the learning intervention should extend into the complex world of work.</p> | <p>and make it simple. While that's important to do to help learners learn or to take on the knowledge, that's more about the knowledge. What we should be doing in facilitation is exploring complexity. What are the potential scenarios you might see, for example.</p> <p>[Do you think sometimes as designers we tend to take the complexity out instead of taking the complication out?]</p> <p>Definitely, because it makes our lives much easier if we take the complexity out, if we handle only one scenario we've ticked the box. That's where the learning outcome is possibly bad for designers and developers as well. And helping learners to move from, I suppose, conscious competence to unconscious competence by bringing in the reflexive learning.</p> <p>[Would it help to discuss the complexities and link that to the workplace?]</p> <p>Well, in fact you cannot, as a designer and developer, cover every complexity in your material. For me, what has become a necessity is we can build the course that is great, but the only way the learner is going to handle complexity is if they are asked to apply it to their workplace. How that looks for learner 1 is going to be very different to how that looks for learner 2. That's where learning actually takes place, it doesn't have to take place necessarily as much in the classroom as it does in the extended learning after.</p> <p>[Would it help if we deal with workplace context, complexity, in the classroom – would that help with the transfer of learning and knowledge into the workplace?]</p> <p>Absolutely. If it is possible to find ways in which we can give scenarios that are real and genuinely a reflection or simulation of the workplace, without a shadow of a doubt, I would then be able to guarantee learning to a client, which I've never had to do today. If a client says to me I'll pay you based on how much more revenue I make after your sales course, I'm never taking that deal because there's just too much that isn't in my control. But if we are able to build in the classroom the true complexity, then we are coming closer, coming much closer.</p> |
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| Step 3  | Step 2   | Step 1  | Q7: | In your understanding, why is providing a work context during a learning intervention important for developing multiple frames of thinking?  |
| <p>Successful learning is designed within the work context, but allows the learner to explore within the context.</p>   | <p>Training programmes should position the learning process within the work context.</p> <p>Learning success is linked to what learners think about their work context.</p>  | <p>Learning interventions that don't provide a work context are wasting time.</p> <p>Designers and facilitators of learning events should have a working context of the learning area; this is essential for building an effective learning programme.</p> <p>Providing work context is the key factor for a successful learning event.</p>   |     | <p>I would say that if you don't provide a work context, you are wasting your and your learners' time. I would say it's the most important thing you can do, show a learner that you understand their work context. Again, when I am the facilitator and I'm designing and developing, and I don't have a good understanding of the industry that person works in or the job that they do, my success rates are much lower in hitting the mark than if I do at least have a sense of their work context. I would say it's the one factor that you do control that can help you [find] the key. The rest of the factors sit with the learner. For me it's the key factor, if you don't provide work context you are literally wasting time.</p>   |
| Step 3  | Step 2   | Step 1  | Q8: | In your understanding, what is providing different frames of reference during a learning intervention?   |
| <p>Multiframe thinking is a design principle for an effective training programme with a learning focus.</p> <p>Training programmes should concern problem solving within the context of work procedures.</p> <p>Multiframe thinking should allow for learners to choose, select and reject.</p> | <p>Multiframe thinking should be built into the design of the training programme.</p> <p>The design of the training programmes should allow learners to investigate topical problems from various angles so that they can find their own voice.</p> <p>Training programmes should not be presented as laws that indicate principles and practices that should be adhered</p> | <p>Multiple frames of thinking should allow learners to find and apply their own voice within the learning context.</p> <p>The design of a training programme should allow the learners to investigate topics from various angles.</p> <p>Learners should have the right to reject the teaching of theory or practice that is shared within a training programme.</p> <p>Multiframe thinking is not laws, principles or practices, they are</p> |     | <p>Different frames of thinking are about providing a learner with an opportunity to – let me think of an example – I would define it as the ability to give a learner quite a bit of leeway, I would say the way to do that is to give the learner both the responsibility for learning, then also the right to question and debate, the right to own their own voice and voice what they really think and feel, to disagree. For me different frames of thinking then would be about designing activities that almost get them to look at a topic from different angles and to introduce them to a theory and get them to practice or put that theory into place, and reject it if they don't like it or it somehow doesn't align with them.</p> <p>[You talk about different angles. Can you link that to complexity?]</p> <p>Yes. If I want to link it to complexity and work context, if I were to use an example, a well-designed programme would have realistic scenarios from the workplace that reflect the complexity of that person's world. For example, business banking, one</p> |

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|  | <p>to, but as opportunities to test different thinking,</p> <p>Training programmes should allow for learners to select what they will use and reject what is not appropriate for them.</p>     | <p>thought possibility, therefore can be rejected.</p> <p>A well-designed training programme should reflect realistic workplace complexities.</p> <p>Multiframe thinking through the use of contextualised scenarios aims to shift the way learners think about their job, their role, their business.</p> <p>Learning should not be about the procedure, but about the basic ability to solve problems in the workplace within a specific procedure.</p> |     | <p>of the major challenges in a cluster in banks that South Africa has, that their clients can be so different from one another, there is such complexity. So we can show them how to do a background analysis on a company, it's got to be generic enough that it can be applied... so a well-designed programme in that case would be, I am able to give them scenarios that are real scenarios from their work context that reflect the complexity of business and the simplicity of some businesses, so it reflects a continuum of complexity, and then that they are able to shift the way they think about those businesses. That's what multiframe thinking is, when you actually see them seeing the same thing as though they were seeing it for the first time.</p> <p>[Would that help them back in the workplace with problem solving?]</p> <p>It would change almost everything they do, if we were able to help them to build that as a basic skill. So not only the ability to do it in the classroom for this topic for today, but if we were able to build their ability to do that on their own, that would probably create the biggest change in behaviour.</p> |
| Step 3   | Step 2   | Step 1  | Q9: | <p>What is your understanding of the concept of co-creating work reality for learners during a learning intervention?</p>  |
| <p>Co-creation of work reality is linked to the level of personal significance that is achieved through the contextualising of work within learning.</p> | <p>Co-creation should be designed into the learning process.</p> <p>Co-creation should be linked to personal significance in the work reality.</p> <p>Co-creation should be contextualised</p> | <p>If the learner can experience the classroom training event as part of their daily work, learning will become an element that co-creates work realities.</p> <p>The training event and learning experience should therefore be linked to their significance in the workplace.</p>   |     | <p>For me it comes back to what I said earlier, if we were able to achieve that, where a learner comes into a classroom and sees that experience in the classroom as a part of their daily work, less about a separate event, then we would get closer to working with them to co-create their work context. If they were able to see the time in the classroom with as much significance as they saw seeing five clients, as an example.</p> <p>[Can it be achieved?]</p>   |

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|  | within the learning process.   |  |     | Yes. It can be achieved to a certain extent in the classroom by the design and the development, but it needs to be attacked at a far higher level. In an organisation I would say from an executive level, it needs to be part of the learning culture that we don't see.  |
| Step 3   | Step 2   | Step 1   | Q10 | In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?   |
| <p>By design the learning process should focus on building personal significance with the intentionality to contribute and co-create the work realities.</p> <p>Training interventions that are learning focused should develop responsibility and engagement.</p> <p>By design there should always be a link or line of sight to the business results that should be co-created and not just performed.</p> | <p>For learners to go back after a training event or learning process, they should have a sense of self-worth or personal significance to co-create their work realities.</p> <p>There should be a strong engagement of the learner with the learning and then with the workplace (developing or focusing on relevance) to initiate co-creation.</p> <p>An expectation of co-creation should be created during the learning process to contribute to a sense of co-creating and not just completing a task.</p> <p>The consequence of co-creating is that the being is given a voice and not just the doing.</p> | <p>Learners with low self-worth/personal significance don't contribute and don't co-create.</p> <p>Learners with low personal significance are disengaged from work reality and learning.</p> <p>Disengagement shows in their business results.</p> <p>This leads to a vicious cycle in self-efficacy/personal significance.</p> <p>Disengagement is often caused by lack of clear responsibility.</p> <p>Personal significance should be linked to self-worth and contribution.</p> <p>To develop personal significance the learner should be entrusted with making a</p> |     | <p>This is something I've also seen in reality, in the workplace. If a learner has no sense of self-worth, they don't co-create. What they do is they inhabit a workspace. They expect to receive instruction and then they either follow the instruction or they don't. They don't co-create their work reality, they are disengaged. Very often they then don't see their results, they find themselves in a cycle of being disciplined because they are not producing the results, making them feel awful. Their sense of personal significance and self-worth drops so they don't engage further. What I often say, especially to managers, is that person that you have designated as the loser in the team, the one who seems to do the worst, is often the person you should be giving the most amount of responsibility to if you want to see that change. Yet everything in you goes you can't trust that person, they don't deliver. Often it is because we haven't given them a sense of responsibility, taken a risk with them, thereby giving them the opportunity to build personal significance, to feel important. What makes us feel important? The very term 'personal significance' is self-worth. I can only be worthy if I hold a position of importance. I can only hold a position of importance if I have some sense of responsibility. I've been entrusted with something. So I would say that without a sense of personal significance, people are disengaged and are not co-creating their reality.</p> <p>[What can we do in a learning space to assist learners with this disengagement, to improve that?]</p> <p>Give them responsibility. So I would say that the techniques that work best for me are where we trust the learner to learn and show us their learning, without resorting to teach, tell. Where we actually give them an activity and we actually say to them, here's the material, here's a knowledge source, here's a question, here's a problem: solve it. I have</p> |

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|  | <p>Working, focusing on the being should be an intention of the learning process. It should be integrated with thinking.</p> <p>Facilitator/material engagement with learners should be focused on creating responsibility and engagement with learning and workplace.</p> | <p>difference/creating the future.</p> <p>Developing a sense of responsibility should be addressed in the class/training event by allowing, trusting and holding the learner responsible for learning.</p> <p>Learning techniques that are problem orientated or problem solving driven should be used more often during training events.</p> <p>A learning environment to accommodate this approach and these techniques should be created early on in the session.</p> <p>There should be a bigger focus on creating knowledge rather than sharing knowledge in the classroom.</p> | <p>seen learners do this, they will say, but you haven't presented anything, you have to present to us first. And I say I'm not going to, so do what you want to do with it in the time I've given you. And very often that's when I see the learning. That [shows] that they have a sense of openness, an attitude of openness to it. Some people resist it but that comes back to personal significance, how important they feel, how worthy they feel. For me, if we did more of that, if we spent 70 per cent of the day in a classroom environment doing that and only 10 per cent of the day talking about knowledge, we'd get closer to creating that environment. I would say that about every form of learning, even someone who is brand new to the subject. I've learnt a heck of a lot more about things on my own than I ever have from someone else teaching me. That's because I choose to learn, I choose to research a topic. That's the key.</p> <p>.</p> |
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## Interview 4

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| Participant Details:            |                          |
| Participant Identification Code | DS01                     |
| Academic Field                  | Psychology               |
| Work Field                      | Learning and Development |
| Years of Experience             | 30                       |
| Date of Interview               | 21 September 2015        |

### Questions:

| Step 3  | Step 2  | Step 1  |     |  |
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|   |   |   | Q1: | What is your understanding of the difference between training and learning?  |
| <p>Learning broadens the application of training</p> <p>Learning broadens the conceptual relevance</p> <p>Learning is intrinsic</p> | <p>Training is limited or narrow and not focused on learning</p> <p>Learning requires broader conceptualisation and relevance to individuals.</p> <p>Learning is intrinsic and transformative and can be observed as implicit cognitive change.</p> | <p>Training is confined to space, classroom, book, and computer.</p> <p>Training may or may not lead to learning</p> <p>Learning is when people grow and adapt – transform (change)</p> <p>Change through learning can be intrinsic and observed.</p> <p>Learning can be linked to behaviour change, when cognitive thinking is</p> |     | <p>Training is something that somebody stands in front of a classroom and does; or through a PC. It's the name of an activity; it's not the result of an activity. The result of the activity of training may or may not be learning.</p> <p>Learning is what happens as people grow and adapt to new circumstances.</p> <p>[That grow and adapt...would that indicate change in an individual?]</p> <p>Ja, it would. The change might not be obvious to the naked eye but it would most certainly be changed because it is changed in the cognitive system of the person, first and foremost.</p> <p>[So would you be able to say learning, if done correctly or if it does take place, equals change in someone's behaviour?]</p> <p>Yes, I would say. Learning is behaviour change because I see cognitive thinking as a kind of behaviour. It's not a visible behaviour, but it's a behaviour.</p> |

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|  |  | seen as a kind of behaviour.  |     |  |
| Step 3   | Step 2   | Step 1  | Q2: | Given your answer in Q1, specifically around what training is, what are the factors that influence training?   |
|  |  | Training often is not in reference to learning.   |     | Well, training makes no reference to learning. I think that a lot of people hope that training results in learning, but one of the factors that influences training...<br><br>[...makes it good or bad training]<br><br>Well, I would say that the thing that makes training good or bad is whether or not there's learning.   |
| Step 3   | Step 2   | Step 1  | Q3: | Given your answer in Q1, what are the factors that influence learning?   |
| <p>Learning drives personal significance of a future purpose</p> <p>Learning will occur irrespective of the lesson plan, but it might not be in line with the lesson plan objectives.</p> <p>Learning will be in line with the relevance that the learner experiences during the training event.</p> | <p>Learning is driven by personal relevance.</p> <p>When something becomes personally relevant, learning can be incidental, leading to learning that cannot be predicted, only guided.</p> <p>Learning should be guided towards cognitive change. – Change in knowledge.</p> | <p>Learning is influenced by a personal relevance element.</p> <p>Learning can also happen incidentally. Therefore, learning cannot be wholly predicted, people will learn what they need to learn, even if incidentally.</p> |     | <p>So the first thing that I think influences learning is personal relevance. I think that everything that we learn, every change... as a footnote, it's quite difficult to provide a blanket answer. My answers don't have the quality of scientific statements – they are a way of seeing things.</p> <p>[That's what I'm interested in – your experience, rather than a scientific view.]</p> <p>As far as I'm concerned, learning happens in many ways; some of it is incidental and I just want to get that out of the way, just to mention it. I know the name of that plant over there, it's a <i>Strelizia</i>. I just happen to know that because somehow I picked it up...</p> <p>[Just to check on that...the fact that you can say that you know or recall that plant...is that knowledge or is it learning?]</p> <p>Well, I had to learn the name, so there was some change in my cognitive behaviour, because the change in my cognitive behaviour is that I look at that plant and I know the name. Or I look at that plant and always try to remember the name and</p> |

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|  | <p>Information should be allowed to become knowledge through a cognitive change event.</p> <p>If not incidental, learning happens when there is a personal relevance to the learner.</p> <p>Learning happens when there is frustration with the current status of affairs and a need to change.</p> <p>There is not a linear relationship between learning and teaching. People don't learn just because they are taught. Therefore teaching does not guarantee learning.</p> <p>Learning happens when there is a personal problem to solve, or a deep need to master a different level of</p> | <p>never succeed. From a cognitive point of view, there's a bit of thinking involved.</p> <p>[So if the learning is not incidental, what would the factors be that would actually make learning happen or create learning?]</p> <p>I would say that, first and foremost, the first principle of learning is that learning happens when it's personally relevant.</p> <p>[What would the other principles be?]</p> <p>Maybe I can just elaborate on that. Learning happens when there's a situation that requires some sort of behaviour and some sort of outcome and very often there's a frustration with the current state of affairs...</p> <p>There's not a linear relationship between learning and teaching. You can be taught and fail to learn anything, and I think many people have had that experience. Where I first stumbled [on] this was we did a little survey because we started doing surveys in the business about what had made a difference and what we were interested in; I was trying to articulate an intuition so I started doing some research. I had a section with internal people and I said, "Tell me the most profound thing you've ever learnt", and nobody described a training course they'd taken in a classroom. They described a situation where they'd somehow got to some point in their life, very often a frustration or an opportunity they needed to take advantage of...so their's was a deep need to master some new domain and be able to do something different that would kind of empower them on some level. Very often, at that moment, more through coincidence than anything else, there was somebody or something or some process that enabled them to overcome this life obstacle and get to the next level through a process of learning. That was quite an important moment, because – and I've done it a few times, with a few groups – I've asked them to describe the most important thing they've learned in the past 10 years, and usually they describe to me some situation that's personal, for example at work, but it's not just somebody's changed a system and they need to learn a new skill.</p> |  |
| <p>People don't necessarily learn what is taught, indicating a non-linear relationship between teaching and learning.</p> <p>Learning is more apparent when a personal relevance exists, mostly in the form of a personal problem or a need for mastery and empowerment.</p> |  |   |  |

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|  | <p>People become receptive to new knowledge when there is a realisation of a vacuum or a future purpose for knowledge.</p> <p>Training interventions should create visibility to the vacuum or future purpose to create the dissonance in current and future mastery/empowerment.</p> | <p>empowerment. This seems to be a recurrent state.</p> <p>For learning to occur there should be a personal realisation to change a behaviour, or what is known.</p> <p>People become receptive when there is a realisation of a vacuum in their ability.</p> <p>Relevance to the future of a topic of learning results in a greater degree of commitment to the learning.</p> <p>Training interventions should</p> | <p>So when I talk about learning, I'm thinking about that kind of thing, not peripheral things that don't make a difference. Learning happens in a situation where the person kind of realises that they want to go from A to B and their current way of approaching the situation is not getting them there. There's a personal problem that creates a kind of a vacuum. People become incredibly receptive.</p> <p>[It creates a pull effect. Versus a push effect. It's not as much a push effect as a pull...]</p> <p>Exactly. So if you look at a group of students sitting in a B.Com. Accounts 101 class, why are they there? Some because they really want to be accountants and they need to master this body of knowledge. Some need a B.Com. credit, maybe they're in another degree. They all have very different degrees of personal engagement with this and in some ways I think that people who have the greatest, clearest picture of the purpose of the learning, because of this personal relevance – that's the personal relevance, the learning opportunity. There's a purpose, a future that could be creating that vacuum in which I want to learn.</p> <p>[Does it come from the learner first? So the learner must have that feeling for purpose first, before learning happens?]</p> <p>No, I don't think so. That's a precondition to learning – part of the role of education – for example, I could say to you, "Clifford you must wash your hands carefully three times a day; here are some techniques." And if I did that in a classroom of people effectively, some would do it the way I showed them, some would remember it now and then, and some would ignore it entirely. But if I said to you, "Do you know that 80% of sicknesses are caused by dirty hands, here's the research", and I do an exercise showing them bacteria growing on their hands and say, "Washing your hands properly can reduce the bacteria", and I SHOW them the techniques of hand-washing and how the bacteria are reduced, then I would have created a far more profoundly relevant learning experience for them. The first thing I've done is I've give them the problem.</p> <p>[So, you as the facilitator have now actively changed the relevance. It's not that they came in with that sense of relevance.]</p> |
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|  |   | <p>show relevance and future purpose to enrich the learning engagement. Learning should be shown within a problem environment. This develops an intention to change, solve the problem and have a purpose.</p> <p>Relevance for learning/future purpose of knowledge does not pre-exist.</p> <p>Training interventions should develop a sense of personal significance.</p> |     | <p>Yes. What I've realised is that we assumed the relevance pre-exists; the biggest challenge we encountered in this business, which we don't find any more, is the challenge that people don't get the relevance. So, part of the learning intervention is to get them to appreciate the personal significance of what they're being offered the opportunity to learn.</p>   |
| Step 3   | Step 2  | Step 1  | Q4: | <p>Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process?</p>  |
| <p>Personal significance has a direct influence on the level of learning experience.</p> <p>Creating a sense of personal significance is the responsibility of the learning programme (design and delivery).</p> <p>Personal significance is</p> | <p>Personal significance is a key element of a learning process.</p> <p>Personal significance should be established at the start of the training programme and is related to relevance of learning.</p> <p>Personal significance transforms training from the abstract to the personal, which leads to more profound engagement in the learning process</p> | <p>The facilitator of learning should start their training interventions by working with personal significance, which establishes relevance of the learning, confirms the reason for the learning.</p> <p>Relevance then assists the learner to appreciate a problem they may not have been aware of – creating a need for the learning.</p>                                |     | <p>[Is there a correlation between personal relevance as a factor that influences learning and personal significance as sort of something that the facilitator initiates?]</p> <p>For sure. I think that personal significance establishes relevance. When a facilitator works with personal significance at the kick-off of a learning experience, what they're doing is they're allowing the learner an opportunity to appreciate a problem or opportunity that they might not have been fully aware of, if at all.</p> <p>Therefore, you create a kind of desire or readiness to learn. You're enacting the realisation that learning is personal not abstract. I learn because my life and knowledge are personal to me. I don't care about bank strategy, I don't care about abstract stuff; I care about living my life. If you can show me that what you're offering me the opportunity to learn is related to my life and is significant in my life – my empowerment is another word for significance – I think we've seen quite clearly that through our experience, when we do that, we have a far more</p> |

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| <p>equal in importance to content and skills development during a learning process/training intervention.</p> | <p>Personal significance is linked to current and relevant work or life problems that should be and can be solved through learning.</p> <p>Personal significance is the measure of learning in order to solve problems.</p> | <p>Learning becomes personal and does not remain abstract.</p> <p>In establishing personal significance, depth is created for the learning.</p> <p>When personal significance is established and crystallised in the learner, a more profound engagement with learning is observed.</p> <p>When learners enter a learning session without attention being given to personal significance, the feedback at the end often indicates that learners don't understand why they were there or how the programme was meant to help them – relevance is missing.</p> <p>If the facilitator can conquer the relevance challenge, making the learning relevant and personal, the learning challenge can be conquered.</p> <p>Personal significance is linked to the problems people face in the workplace and in</p> | <p>profound engagement with learning and a far greater willingness to see the activity of learning in a more engaged and conscientious way.</p> <p>[Would you say that learners will come into a learning environment or session with that sense of personal significance, or is it something we have to create?]</p> <p>No. We have to assume that they want to and I base that on experience because I put learners in a classroom to explain to them how the banking industry works ...so, we get feedback afterwards. The most common complaint is: "Kind of interesting but how is it relevant to me, or helpful? Why was I there?" And what we realised is that what was obvious to us – the relevance of the stuff we were trying to teach – was definitely not obvious to the learners. If you conquer the relevance challenge, you conquer the learning challenge almost instantly. We've seen this repeatedly in a number of ways. For example, if you think about the world we live in now , most people have access to computers. If I don't know something, I Google it – I learn something and use it and do what I want to do. As soon as I understand that there's a problem to which learning is the solution, my learning is the most natural thing, like water flowing. As opposed to somebody trying to teach me something. The other day I got a map of different learning theories and I was quite interested because I want to locate business impact learning in a broader view of different learning theories across disciplines...so, there's this beautiful infographic that maps out this space, so I print it because it's relevant. It might be that at another point in time it would not be relevant and I would just ignore it. I don't know if I've answered your question...</p> <p>[It's cool. We have to create it; we can't just assume that the learner will have that sense of significance.]</p> <p>If my observation's correct, I would say in the minority of cases [they get the] relevance. So, the weird thing is, your challenge from the learning point of view becomes as much about the relevance issue as the kind of content/skill issue. In fact, it's probably a bigger challenge, because if you can get over that, people can learn themselves.</p> |
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|  |  | <p>life. Personal significance can be described in terms of the success of problems solved.</p> <p>Personal significance is focused on current problems. Personal significance is therefore not static and conquerable.</p> <p>Learning, to solve a current problem, is personally significant for the here and now.</p> <p>(Can it be that we only learn to solve immediate problems – that have immediate significance?)</p> <p>Creating personal significance is the responsibility of the learning programme (design and delivery).</p> <p>Creating a heightened sense of personal significance is as equal a challenge as the content and skills that should be conveyed.</p> | <p>[Learning becomes easy.]</p> <p>Yes, it's natural, rather than someone lecturing me on learning theories and I'm sitting there going, "Oh, God..."</p> |
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## Interview 5

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| Participant Details:            |                       |
| Participant Identification Code | DC02                  |
| Academic Field                  | Industrial Psychology |
| Work Field                      | Human Capital         |
| Years of Experience             | 26                    |
| Date of Interview               | 29 September 2015     |

### Questions:

| Step 3  | Step 2   | Step 1  | Q1:   |
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| <p>Learning is or should be an integrative process of space and time.</p> <p>Learning is collaborative between organisation, team and individual.</p> | <p>Training has a narrow focus, covering all the organisation's thinking and only what is required according to the organisation.</p> <p>Learning is separated from the organisation, the team and left to the individual to obtain.</p> <p>Learning is not confined to space but rather to time. Yet, organisational training is structured</p> | <p>Learning deals with a broader concept than training. Training is a narrow line of specific information. Training is confined to space. Learning is confined to time.</p> <p>Training is limited in method, learning is open to various methods.</p> <p>Training is led by a pre-set plan. Learning is open and facilitated with flow.</p> <p>Training is driven by organisations and</p> | <p>What is your understanding of the difference between training and learning?</p> <p>In my mind, learning is a much broader concept than training. Training is when you focus and zoom in on something very specific where you want to transfer knowledge. It can be a technical or a behavioural component. Training can take place in a classroom for instance or in a contained space with a specific focus. Learning happens all the time. Learning is in the work environment, it's extending to conversations, coaching, it can also be formal, but the difference would be that with the learning environment there's more interactive participation and workshopping. Training is led and the learning piece is almost facilitated, people get to the solutions in a group. There's not necessarily a right and a wrong answer.</p> <p>[If you say training is led, is it also led by the organisation, so it addresses organisation needs?]</p> <p>Yes.</p> <p>[Not necessarily individual needs?]</p> <p>Yes. Definitely. When I think a person joins an organisation, the immediate thing that they expect is training, formal training that they're going to attend to equip them to do whatever the organisation is expecting of them. Training would be more prescriptive because it would be aligned to how the</p> |

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|   | to space rather than to time.  | according to organisation thinking, making training more prescriptive instead of allowing intuitive learning to be explored and developed.   |     | business wants the operating model to be delivered, whereas learning is more intuitive and more about experiences that are not necessarily prescriptive. There's no right and wrong answer.  |
| Step 3  | Step 2   | Step 1   | Q2: | Given your answer in Q1, what are the factors that influence training?   |
| Training should be performance improvement focused.   | Training is specific to job requirements and business goals.   | Keeping training focused and simple for it to succeed.<br><br>Training is focusing on specific job requirements.<br><br>Training should not be vague, it should be direct and clear.   |     | My opinion, I believe that one must keep your training focused and simple. So it must be specific to the requirements of a job or a role, and an individual must be very clear on what is expected of them from a training perspective, for them to be successful in the job. It mustn't be vague, the person mustn't try and look for it and find it, it must be in their face, as in 'this is what you have to go through'.  |
| Step 3  | Step 2   | Step 1   | Q3: | Given your answer in Q1, what are the factors that influence learning?   |
| Opportunity to learn, engage with learning, should be openly created during a training intervention.<br><br>Learning should be activated and not concluded during a training event. | Training and learning should not be separated, it should always be a combination where learning experiences are planned during the training event.<br><br>Learning experiences should be created so that it can continue and exist in an environment with non-professional educators to guide the learning experience. | Learning is in combination with training, where learning is the experience factor.<br><br>Learning experience is ongoing and not time and space bound.<br><br>Learning extends into the workplace, not as a continuation of training, but as learning.<br><br>The learning experience is often reliant on non-professional trainers to conclude the learning process in the workplace (outside of the training space). |     | You basically have to combine the two. The training piece is the formal piece, often, where you assimilate the rules or procedures, and the learning piece is when you go and experience it. You actually apply and practice it. So, you may learn a big portion of what is required in a job through training but the rest is learning all the time. So, you have to create a learning environment. For example, in your work environment, a line manager has to understand what his role is in terms of learning. He may not be training the topic but he is a part, and so is everybody else, of the learning environment. Because there will be many events that happen, for example in a customer-centric culture, which we want to create, we want people not necessarily just to be ruled out, but to think of an innovative way to give the customer a solution that is still within the boundaries. So I know that there is a bank in America where they teach their people to never say no to a customer. They may not give the customer what he asks for, but they are giving it to him in a different form, which is aligned to the business offering, which makes the customer feel that he actually sorted the solution out.<br><br>[Would you say it can happen when you organise a training session, so you get people in the classroom and train them on something that the corporation or the organisation requires, the learning that happens |

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|  | <p>If less classic conditioning is present, a more natural learning will occur with higher levels of commitment. This will allow open learning experiences that can continue into non-training environments.</p> <p>Learners should be provided with the opportunity to engage (connect the content with others and the self within an experience) learning.</p> <p>This should be planned as an open experience.</p> | <p>Corporate training should carry an element of consequence management – making it classical conditioning.</p> <p>In the same process, there may be learning that is not within the pre-set or specific outcomes that is uncontrolled and not from the training event. This is a natural learning process inherent to the learner.</p> <p>There is a great need in most training events for time to reflect, where learners can review and reflect on their experiences. There is a need to connect with the training content, other experiences and the self.</p> <p>Training events don't always allow for time to close the learning loop and leave the learning open. This is then left for non-professionals or the learners them-selves to close at some</p> | <p>may be different from the training for an individual learner.]</p> <p>Definitely. I just want to refer back to the success of training. So the training must require a very specific outcome, and there must be consequence management to make it successful. So, people must know this is serious, I'm going on the training, I have to get a pass mark, I have to concentrate, understand it, etc., whereas learning is those pieces that you learn by doing it, you're learning it from others. That is why learning happens in an open environment where you observe how others do it. Just get back to your question?</p> <p>[In a training class, where you're actually conducting training, learning is separate, learning is less formal]</p> <p>Yes. So there's a specific outcome. Learning is separate, learning is more informal. Ideally you want people to sometimes formalize learning more – so this is where mentoring and coaching comes in – so that a person can reflect, this is what happened in the past month, typical things I battle with, these are things I find easier, that there's a discussion around it. In that session, further learning takes place. You almost want to close the loop on learning and not just leave it open-ended, the person is isolated. That is why we believe in connect sessions.</p> <p>We believe if you structure an environment where people get together and they discuss a certain topic, it may be the sales numbers for the month or the customer complaints, in finding solutions for what is working and what is not working, they learn from each other so you create a formal learning bubble.</p> <p>[The connect sessions that you drive, is the purpose of that learning, or something else?]</p> <p>It has multiple purposes. The primary reason why we do it is its method of engagement. It almost forces line managers and employees – it creates a habit of meeting and engaging in a distinct manner, but at the same time it's aimed at continuous improvement. Because it's aimed at continuous improvement, it does reflect back on learning and teaching. So, for example, if the sales numbers are down and one of the reasons when they have a discussion or connect session is that they don't understand the products, or the products are complex, then they know, okay, we</p> |
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|  |  | <p>uncontrolled time and space.</p> <p>Effective training sessions should allow or should incorporate experiences for learners to connect.</p> <p>Connecting with the content, others and the self is an opportunity to engage with various realities that allow for learning to emerge from the shared experiences.</p> <p>More learning will take place when there is scheduled time to reflect and choose during the training intervention, in the moment.</p> <p>The training event (classroom) is the start, not the conclusion, of</p> | <p>need to have a training session on the products and then see how that improves the sales of the products. It's just an example. So, it can address both but it's very much around continuously raising the bar, it's about creating an open environment where everybody can participate. It's not just the manager that talks; everybody can put an idea down. It's also to create innovative thinking, because often people who are quite junior sit with the solution to a problem and the other people don't see it because they're not in the trenches, they don't experience it on a day-to-day basis.</p> <p>[What do you think would happen if you incorporate something similar to that in a training session, in the classroom, where you allow that kind of connect session to happen?]</p> <p>I think it is definitely an excellent method of engaging people. I've often seen, when people attend pure training, listening to a lecturer or a trainer, that they don't really engage and participate, you don't know if they're learning. Their minds may be drifting, and that's why consequence management is so important in training, because you have to create the pull, [so] that people realise there's going to be an assessment or something, I better concentrate and pay attention. To create an environment where you almost force people to participate, I think more learning takes place. Connect sessions are designed in a way that everybody's voice can be heard.</p> <p>[Would you say that training is the starting point of learning? So learning doesn't necessarily end when the training session is over, but it needs to continue.]</p> <p>I believe it is a start because I think if I reflect back on my career in human capital, I always find that where we battle and we don't get things right, it's because we haven't been disciplined in doing the training up front. So if you can have a model where there's certain on-board things that happen that involve training, it's non-negotiable, you create a discipline that will define your outputs that you require, so we should not let anybody loose on the customer if they haven't at least done certain training. So I do strongly believe that training is a start.</p> |
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|   |  | learning. Learning should be allowed to continue and new choices allowed to form after the training event.   |     |  |
| Step 3  | Step 2   | Step 1   | Q4: | Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process?  |
| <p>Establishing a higher sense of personal significance is the responsibility of the training programme.</p> <p>Personal significance has a direct influence on learning success.</p> | <p>Personal significance provides the purpose for a training programme and makes the learning sustainable.</p> <p>Personal significance is established by connecting relevance to the training session or learning event.</p> <p>The training programme in its design and delivery should develop a sense of personal significance at the start of the learning journey.</p> | <p>Personal significance is important and provides the learner with a sense of why he or she needs this learning (purpose). If training is something that 'should be done' (forced) the learning experience is low and not sustainable.</p> <p>If training becomes relevant and usable, the learning experience is high and learning becomes more sustainable.</p> <p>Traditional corporate training programmes should do more to develop a sense of personal significance early in the programme.</p> <p>It is known that line management doesn't assist in establishing the context for training.</p> <p>The training programme should do this at the start of the training.</p> |     | <p>It's of critical importance, because the person must want to learn, they must want to be there, so they must be hooked in a way. I see it with my son, he wrote Matric last year and I [said] it was something that he had to do; he had to learn because he has to pass and he has to go to university. Now he's first year university and it's a totally different thing because he actually enjoys it and finds what he is learning interesting, he can see the application of it. So it's almost a no-brainer. I never ask him anymore – he is writing tests this week – have you learnt, because I can see that he did.</p> <p>[There's a personal relevance.]</p> <p>Yes.</p> <p>[Do you think we do enough in traditional training programmes to create that relevance?]</p> <p>No, we don't. We don't do enough context. It's not necessarily a default of the people who facilitate the training, it's often the line managers. It happens so often that people go and attend a programme and they don't even know why they're there. So context in my mind is everything. If you don't create context around why it's important, you have halved the effectiveness.</p> <p>[Isn't that something that the facilitators, trainers, or even the designers of programmes should do more of, creating context?]</p> <p>Absolutely. So many of the programmes that I have attended lately, I noticed that there was a lot of pre-work to be done and reading, which helps because it creates context, but people are busy, the reality is that they don't always do that. So, I think before you</p> |

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|  |   |   |  | <p>start with any training you have to almost check in, a facilitator has to check in whether the people understand why they're there, why is the context, and to set the scene before the learning starts.</p> <p>[I agree with those check-in sessions. That's crucial.]</p> |
| Step 3   | Step 2  | Step 1  | Q5:  | <p>In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emergent properties between order factors and work-context?</p>   |
| <p>Learning should be provided as a combination of order and complexity.</p> <p>Context should be created to allow for new learning to form.</p> | <p>Information can be shared within the order domain, and will be relevant to a specific audience.</p> <p>Stimulating learning and linking to personal significance, there should be a reasonable level of context.</p> <p>Context will allow for appropriate learning properties to emerge through the learning process.</p> | <p>Functioning in the information era or post information era: there is too much information, and information itself is not as important as where to find information.</p> <p>Providing training is relevant to certain roles where emergent properties are not that important.</p> <p>The ideal is where a combination of training and learning (order and emergent properties) are used for creating a learning experience.</p> | <p>It's a bit of both, I believe. We live in a knowledge age. There's too much information to allow the proper order in how you learn. You need to know where to find solutions and where to use solutions, but you're not necessarily going to memorise what all the orders are. If you need to know how to explore it and use it just in time. To use an example of our relationship managers or our business bankers, if they go and visit a client that is involved in mining, they're going to make sure that they are prepared prior to the visit and have accessed learning around certain components of the business but they won't necessarily do that in the beginning of occupying the role. They'll pick certain pieces as necessary. But the underlying things of, for example, what are the basic principles and [main] tasks of segments, of customers and pricing, that stuff is the basics you need to know. To me it's a combination.</p> <p>[If you have limited time with these guys, you can take them in a classroom for one day, which would be more important to deal with, these emergent properties and how worlds can be different, or the standard, this is what you have to know, things?]</p> <p>I think there is a place for both. We have to define in a very clean way what the order requirements for a specific job are. To drive a car that's manual you need to understand how the gears work and there are certain principles. Those are things you want them to do in the beginning to understand how to occupy the role. The other emergent stuff as part of the learning is actually explored. So in my mind you have to use a combination of both. The more relevant it becomes in our world today that the emerging [happens], how you go and find and explore, because there's just too much information.</p> <p>[That's my thinking as well. In the old traditional sense you were supposed to know, have and carry the</p> |  |

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|   |   |   |     | <p>knowledge and information. But now there's so much, you can actually go anywhere with it.]</p> <p>Yes.</p>  |
| Step 3  | Step 2  | Step 1  | Q6: | <p>In your understanding of learning, should learning explore the emergent properties between un-order factors (knowledge relationship) – the relationship between old knowledge, new knowledge and work context?</p>  |
| <p>The design of a training programme should allow for the building of emergent properties within context of existing and new work realities.</p> | <p>A training programme should develop the emergent properties between existing knowledge and old knowledge.</p> <p>Providing differentiated context will allow for emergent properties between existing and new knowledge.</p> | <p>Un-order factors allow for differentiation.</p> <p>When a new context is added, new thinking emerges.</p> <p>A big part of competence should be differentiation in thinking.</p> |     | <p>Definitely, because that is what will differentiate. If you think about a business, the only way we can differentiate ourselves from our competitors is with the non-order type of things. You want people to start thinking differently and doing different things and not just be like robots doing it in a certain way. There are certain (hygiene) factors that you have to say, this is always part of the role, you always do this first, but a big component of it is how the person differentiates that service that they are giving the customer, or they are making the job their own.</p> <p>[From a human capital manager point of view, who is the one that acquires a training programme, if you have two training programmes and you have to judge which one would be best for your people – one is covering all the basics, all the knowledge, all the information, while the other one is very light in knowledge but it's got this emergent...exploring the emergent (properties) – which do you choose?]</p> <p>It will be the second one because it's more difficult to sustain the first one. It may become irrelevant overnight, especially in a world where the orders and structures also change all the time. So you almost have to teach a person first how to navigate their environment with a premise that things will change. So, the way we do things might change from today to tomorrow, so yesterday there was an upgrade on my iPhone and suddenly I could see certain features were different and I had to adjust to that. Therefore the latter part is more important.</p> <p>[That makes sense. We probably have to teach people more to think than to remember knowledge.]</p> |
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|  |   |  |     | Yes.   |
| Step 3   | Step 2  | Step 1   | Q7: | In your understanding, why is providing work context during a learning intervention important for developing multiframe thinking?  |
| <p>Multiple frames of thinking within the work context help in understanding the complexities of the work space.</p> | <p>Training programmes should provide multiple views of work complexities so that the learner can have a deepened understanding of work dynamics.</p> <p>Providing work context from multiframe thinking creates meaning for real impact on organisational performance.</p> | <p>People should have a strong sense of contribution to the success of the organisation.</p> <p>Work context should create meaningful work with a real impact on organisational performance.</p> <p>Context should provide a view of the complexities of the world of work.</p> <p>Work context should focus on the relationships within the multiple-work process.</p> <p>Multiple frames of thinking should deepen the understanding of work dynamics.</p> <p>Training should simplify or assist in making sense of the complexities of the way work is organised.</p> |     | <p>Very important. That's also one of the reasons why we strongly believe in the connect methodology. We want an individual to have a sense of how they in their specific role contribute to the success of the organisation. Even if they are a temp, that if they're a teller and they cause losses it obviously has an impact on the profitability of the organisation. That context is critical to create meaningful work, so that everybody knows, whatever I do on a daily basis is going to have an impact, it's a lever on how successful the organisation is or not.</p> <p>[So you can't just provide the guy with one frame, saying these are your rules, these are the steps that you follow.]</p> <p>Yes. Also, the other reason why it's so important to create the context is we operate in value chains. So, you as an individual are one piece of the puzzle and if your piece is missing it impacts the whole puzzle. It's the (hand-offs) and how we operate in a system and especially in matrix organisations. Why is it necessary that some people are accountable, others are just informed, some take decisions, others don't. You have to understand that context as well. This is where training is important, because you have to simplify it all so that they understand why it is necessary, why do we organise ourselves like we do? Because it is necessary for order that having traffic rules, for example, is critical, because if it's not there it will be chaos. But it also still doesn't say that if the traffic rules are there that everybody is going to be effective, because it's how you participate.</p> |
| Step 3   | Step 2  | Step 1   | Q8: | In your understanding, what is providing different frames of reference during a learning intervention?   |
| <p>Multiframe thinking allows for effective navigation through</p>   | <p>The focus of learning is not right or wrong, or agreement to best practice.</p>  | <p>Training should not focus on right and wrong.</p>   |     | <p>I think this is what I said in the beginning, with learning there's not a right and a wrong answer. Two people may get to the same outcome by navigating differently. So you're seeing different frames of reference in a learning environment to allow people</p>  |

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| <p>relevant problems.</p> <p>Relevant problem solving is a key integrated skill required for the new world of work</p>                                | <p>Effective training programmes should develop the capability to navigate various and changeable problems.</p> <p>Multiframe thinking allows for people to navigate with a broader perspective of relevance.</p>                               | <p>Learners should be allowed to navigate the best solution for them, the individual learner.</p> <p>The workplace today is situational solution driven. Different frame of reference or thinking is a requirement for today's workplace.</p> <p>Multiframe thinking (or different frames of reference) provides a broader perspective of relevance.</p> <p>Frames of reference should include obstacles that might influence decisions.</p> | <p>to say there are a couple of ways to skin a cat. Also, in our environment we often require situational solutions. So if this solution today is not working, what are the other solutions? We want people to have different frames of reference to be able to find the right solution.</p> <p>[That's where the connect sessions come into play, to help to create those different frames.]</p> <p>Yes. When we roll out the connect methodology it starts with providing that strategic alignment map. Where is this organisation going, what do you want to achieve, what are you going to expect of your people? Then they do climate-creation workshops, because then, in those workshops, you can understand the obstacles that people see to get into this main direction. It often has to do about the manager's leadership style, or it's not an open environment to voice options, or whatever. So, post the climate-creation workshop there's a process where leaders have to become proficient, it's leader proficiency on how to manage people, how to communicate, etc. There's also the measurement (pieces). We continually do leadership index surveys and employee satisfaction surveys to see our biggest alignment and how we can improve.</p> <p>[If an organisation does not have that culture, that connect session or process or culture in place, would learning or training be as effective in an organisation without that?]</p> |
| <p>Step 3</p>   | <p>Step 2</p>   | <p>Step 1</p>  | <p>Q9: What is your understanding of the concept of co-creating work reality for learners during a learning intervention?</p>  |
| <p>To have a business-impactful learning experience, learning should be designed to be an open, incorporative system.</p> <p>A business-impactful</p> | <p>The conditions of learning should be designed to incorporate the world of work, including how people (the learners) are managed as part of the context of the learning.</p> <p>This will allow for learning not to happen in an isolated</p> | <p>Training intervention should allow for reflection on and confirm for themselves what they have learnt.</p> <p>Learners should have the opportunity to articulate and crystallize their individual experiences.</p>  | <p>I think you have to design it in a sense that you almost navigate that people reflect back after the learning session on the outcomes, or what did they learn in the process. If they don't get an opportunity to articulate what they experienced through whatever session you had, the real learning may not take place. This is where it's also important that it's interactive learning, because what I experience might be different to what somebody else experiences and as they articulate their experience, I actually also think, well, yes, that's also –</p> <p>[Do you think that in organisations, if the classroom session is over and they go back to the work reality,</p>   |

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| <p>learning experience is geared to co-create work realities.</p>                            | <p>system, but an open integrated reality of learning environment, work environment and learning content, all as the context.</p> <p>During the learning process, learners should have the opportunity to reflect and articulate their learning within the ideation of co-creating an impactful business result.</p> | <p>Learning should not be seen in an isolated system. It should include or at least consider the learning environment and the work environment.</p> <p>It is therefore important to incorporate all aspects of the world of work in the learning intervention.</p> <p>Work realities, including how the learners are managed should be incorporated by design in the thinking processes during the learning intervention.</p> | <p>do we allow people to co-create their work reality based on what they've gained or learnt?]</p> <p>Not necessarily, and this is where it's so important that you can't just look at the individual in isolation. You also need to look at the environment they operate in. For example, if we train business bankers but we don't train the person that leads them, its futile training them because they will go back and they will [say], no, don't do it this way, do it this way. So you have to make sure they link up with one another – and we often hear that as post-assessment, that people were quite excited, but when they got back into their environment – and that's where discipline comes in. We can't assume that because you've been in a role for 20 years you don't require any training, because you may have been doing it wrong.</p> <p>[I hear that, but I just want to challenge and ask, might it be that we don't do enough with [the] individual learner, that we are not strengthening them enough in their thinking to challenge that back in the workplace?]</p> <p>It's possible, because I believe that if you only have a top-down approach, people will never see how they need to adapt. For example, you can't always choose your bosses and you may have a boss that's very different in terms of leadership style than what you appreciate, but the reality is you will have to learn how to manage up as well. You have to learn to navigate, especially as you progress to more complex roles.</p> |
| <p>Step 3</p>  | <p>Step 2</p>  | <p>Step 1</p>   | <p>Q10 In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?</p>  |
| <p>Personal significance should be developed within the individual's sense of a personal</p> | <p>Training intervention should do more to enable the importance of co-creation using the knowledge gained during a learning process.</p>  | <p>The importance of co-creation is not iterated enough during most training events. The context for using the learning is not strong enough. What the individual can change is not the</p>   | <p>It's very important and I don't think we do enough by creating the context again, to say, what now? Now that I've been here, what am I going to focus on, what am I going to change? What is my sphere of influence? What is the stuff that I can influence? What is the stuff I can't influence? And linking that – and this is where I think it's critical once again for people to understand their whole employee value chain. So now you've been on training, how do you translate that into performance, or into talent</p>   |

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| <p>sphere of influence.</p> | <p>By design, training intervention should connect learning with performance.</p> <p>Personal significance will be discovered when learning processes are aligned with work realities and personal contribution is required.</p> | <p>focus point of training events.</p> <p>There is a disconnect between content and performance of duties.</p> <p>Learning should be integrated with the workplace and the changing role of each individual.</p> <p>Not enough is done in traditional training intervention to develop the sphere of influence or personal significance of individual learners.</p> | <p>management or career progression? Linking your reward to your outputs. It's that whole integrated human capital system.</p> <p>[So learning is not isolated. It has to be integrated into all of that?]</p> <p>Yes.</p> <p>[What's your view of this? Do we do enough in training interventions to highlight somebody's sphere of influence?]</p> <p>We don't. One of the things that we want to build into our business banking training is that your accreditation is actually linked to your response. So, post-training, were you able to up your volume on sales or acquire new customers? Because that means that you've made the connection.</p> <p>[From a behavioural point, would you then measure, with somebody's sphere of influence, their ability to influence their own results change?]</p> <p>Yes.</p> |
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## Interview 6

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| Participant Details:            |  |
| Participant Identification Code | CM01                                       |
| Academic Field                  | Coaching                                   |
| Work Field                      | Learning and Development – Learning Design |
| Years of Experience             | 12   |
| Date of Interview               | 29 September 2015                          |

### Questions:

| Step 3   | Step 2  | Step 1   | Q1: | What is your understanding of the difference between training and learning?   |
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| <p>Learning is integrative.</p> <p>Learning is transformative.</p>                                 | <p>Training is narrower than learning.</p> <p>Learning is transformative, with integration and relevance.</p>                                       | <p>Training is traditional with set outcomes and narrow, shared information.</p> <p>Learning is transformative with new insights and broader relevance. New context is not just provided, but created during learning.</p> |     | <p>I view training as a more traditional approach to teaching people new skills and knowledge. For me, learning has a more transformational nature because it is about gaining new insights, sometimes into new subjects, and sometimes subjects known to one, but it's about processing what is known and what is learnt new and then internalising it and processing it in such a way that it makes it relevant for that person. Through that process they learn something new because it's provided within a new context and they also apply it to how it's relevant to what they need to do and how they view things.</p> |
| Step 3   | Step 2  | Step 1   | Q2: | Given your answer in Q1, what are the factors that influence training?  |
| <p>Training is non-integrative.</p> <p>Training is not focused on performance, but on content.</p> | <p>Training is not integrative, but singularly objective focused, making training limiting to objectives.</p> <p>Content becomes more important</p> | <p>Training is objective driven, pre-set objectives.</p> <p>Content is clustered around the pre-set objectives.</p> <p>Content around the objectives are</p>   |     | <p>In terms of the design of it or in terms of people actually learning something?</p> <p>[Success of training.]</p> <p>Training is, here are the five outcomes that you want to achieve, we design content around it, we bring the best research in that space, and we literally share this with them in class. That's what training does. We assess them afterwards, whether there's been a knowledge transfer or not, and that's pretty much what training is, but it's also up to the individual in terms of how they apply it back in the workplace.</p>   |

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|  | than ability or behaviour.  | assessed to confirm that objectives are met.<br><br>Relevance of training is based on the objectives being covered.<br><br>There is no focus on the change in performance of the individual.   |     | <p>[So when you talk about relevance, do you find that you have relevance of content to the student or participant in a training intervention?]</p> <p>You could. You could literally ask the client what the outcome is, what they would like to achieve. Here it is, I can tick off the five boxes, these are the five things that you wanted to achieve, and I've provided the training. Whether somebody's going to change their behaviour around what they know about the content you've provided or whether somebody's going to find relevance back in the workplace, it's up to the individual.</p>   |
| Step 3   | Step 2  | Step 1   | Q3: | <p>Given your answer in Q1, what are the factors that influence learning?</p> <p>[So how would you describe the differentiation between learning and training?]</p> <p>I think the key thing is that training stops at knowledge transfer. Learning stops at behavioural change.</p> <p>A typical training intervention, for it to be successful, it needs to be relevant, firstly. There needs to be some urgency around why we need to have this. That's a lot of the stuff that's created prior to that learning experience. There is a lot of context that you need to provide. There's a lot of strategic alignment in terms of what is the end in mind, what would we like to do, what does the picture of success look like? So, there's that pre-learning intervention experience, factors that you have to take into consideration. Then we look at the intervention itself, what are the components that would actually make it successful? So, this is where the right fit for facilitator fits in in terms of how they see their role in this learning intervention, how they approach the engagement, how they approach the learning content. Then you have the post phase of the learning intervention, where the success is. It's partially what you create during the learning intervention itself and so the post learning is where the real drivers of success lie, in terms of how the people take their new insight and actually apply it, and make it more relevant for what they need to do, what their expectations are and how they need to perform.</p> |
| <p>Training interventions should be used as the starting point of learning, influencing the relevance of change within a specific context.</p> | <p>Learning starts during the training intervention; it is not concluded during the training intervention.</p> <p>Training interventions should focus on a mindset that is created through context and relevance.</p> | <p>Training intervention is the start of the learning process with the transfer of information.</p> <p>For learning to continue, relevance and context are required.</p> <p>There is a mindset element required that is created through the context and relevance.</p> |     |  |
| Step 3   | Step 2  | Step 1   | Q4: | <p>Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process?</p>   |
| <p>It is the responsibility of</p>   | Learning as the improvement of  | People learn by understanding  |     | <p>Well, it is very important because how people learn is, firstly they need to understand what they need to</p>   |

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| <p>the training programme (design and delivery) to allow learners to find their sense of contribution – personal significance.</p> <p>Personal significance is the basis of understanding what should be learned, and why.</p> | <p>personal capacity is dependent on the learners understanding what they should learn and why they should learn it – what is relevant to them.</p> <p>Learning is therefore activated by a sense of personal significance as the purpose for the learning.</p> <p>The training programme should allow for the establishment of or development of personal significance at the start of the learning process.</p> <p>Personal significance is linked to the learner's sense of contribution.</p> | <p>what they should learn and how that is relevant to what they need to do.</p> <p>This provides the sense of personal significance required to capacitate through learning</p> <p>The learning is completed in the application of the process.</p> <p>Insight into their significance is a driver of learning.</p> <p>Personal significance sets a purpose for the learning, the need to learn.</p> <p>If the training programme is not linked to personal performance, learning will only be to the extent of achieving the minimum immediate outcome.</p> <p>Without personal significance learning is not sustainable over time.</p> <p>Focusing on personal significance allows learners to find their sense of contribution to the end game – solving a performance problem.</p> | <p>learn. Secondly, you need to show them how that is relevant to what they need to do and what they're expected to do. And then thirdly you need to give them the skills and you need to build capacity for them to be able to do that. Once they have an opportunity to apply it then they've basically completed their learning experience. So, you've got to apply those four things, [give them the] opportunity to apply it, and give them the building capacity or capability, but let's start with understanding. So, within the understanding piece is actually where insight into significance is driven. It also brings a sense of urgency in terms of why I need to do it, because I understand this better.</p> <p>[If the learner [has] a low sense of personal significance, and not really in touch with their own significance as a person, would that impact on the learning process? And how?]</p> <p>To some extent yes, and also no. if it's purely a training programme then people will just learn what they need to learn and basically just take whatever they can take out of it, and they apply it or [don't] apply it. So, irrespective of how they feel, whether this can be a real contribution or not. But the most impact that you can get from any learning experience is when people get buy-in right in the beginning in terms of whether they can actually contribute to the end in mind, whether they can actually... (Interruption). To pick up on the question of whether personal significance is important, whether it might have a lower impact on somebody with a low personal significance...changing behaviour or mind set around it.</p> |
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| Step 3  | Step 2  | Step 1   | Q5: In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emergent properties between order factors and work-context?  |
| <p>For learning to succeed new knowledge should be allowed to emerge from work context.</p> | <p>Learning experience should be combined in order and un-order and should be relevant to the learner.</p>  | <p>Creating a learning experience should consist of order and un-order factors.</p> <p>Creating a learning experience should be relevant or learners won't learn.</p>  | <p>Because you have such different learning types in class, you've got to have a combination of order and chaos or emergent properties coming out of it, but I think the most important thing in any learning experience is probably the context and the relevance. For different types of audiences and different types of roles, you could play around with the balance in terms of order versus chaos. But the context and the relevance are even more important. So you could have a very structured approach to your learning design but if it's not relevant to anyone it's not going to have any impact.</p> <p>[Relevance must be towards the work context?]</p> <p>Yes.</p>   |
| Step 3  | Step 2  | Step 1   | Q6: In your understanding of learning, should learning explore the emergent properties between un-order factors (knowledge relationship) – the relationship between old knowledge, new knowledge and work context?   |
| <p>Contextualisation allows for new knowledge to emerge during a learning process.</p>      | <p>Learning should be allowed to emerge from existing knowledge through the relationship with new knowledge.</p> <p>Learning should allow for individuals to build their sense of personal significance through the contextualisation of old and new knowledge.</p> | <p>Learning is based on the principle of base knowledge integrated with new knowledge.</p> <p>Building new knowledge should be linked to personal significance.</p> <p>Context and personal significance optimise learning.</p> <p>Emergent properties should be explored through contextualising of</p> | <p>Yes. That's quite interesting. I think, because this is how we learn, isn't it? We all learn from a base of knowledge that we have and a context from where we've gained that knowledge. Adding that personal significance to the new knowledge that we get, giving them an opportunity to process and combine the two would then give you the optimal learning environment and it would also be safe to operate in that un-order space. Because it's not coming from a place where everything is foreign.</p> <p>[How do you explore those emergent properties? How would you deal with those things in a classroom or learning space?]</p> <p>Questioning is one of the tools that I use all the time to do this, but I think there's also value in really contextualizing things for people, whether it's a group activity, a technique that you use, models that you use. I've also seen that the more practical those platforms are, the easier it is for people to explore those emergent properties. There's method to keeping it simple, that's what I've seen work. If you keep it simple it allows for the richness of emergent</p> |

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|  |  | old and new knowledge.<br><br>Contextualising should remove complications and allow for complexity of thinking.   |     | properties. If it's too complex then it stays in this order.   |
| Step 3   | Step 2   | Step 1  | Q7: | In your understanding, why is providing work context during a learning intervention important for developing multiple frames of thinking?  |
| Knowledge can be shifted through various frames of thinking in a process of making sense of the world of work.   | Multiframe thinking leads to transdisciplinary use of knowledge.   | Providing multiple frames of thinking, or different frames of reference, encourages transdisciplinary thinking and the use of knowledge. (It makes learning Mode 2.)                  |     | That's a difficult one. Sometimes you want to break down frames and just rebuild frames. Sometimes you actually don't want people to think about work, to find personal significance in something. It all depends on the dynamic of the target audience itself, and I also think it depends on how that processing is structured and when it's structured and when it happens during the learning experience and how you apply it into the learning experience. Sometimes I would want to do a course on ethics and find relevance to how this works in growing customer satisfaction, how this works in staying credible in my job, things like that, or a non-related topic like gardening. So, sometimes you want people to not think about work, to find the relevance in what you're trying to teach them. My key thing is, as long as it's simple and not complicated. |
| Step 3   | Step 2   | Step 1  | Q8: | In your understanding, what is providing different frames of reference during a learning intervention?   |
| Training programmes should be designed for the learner group to discover different frames of reference emerging from the learning process.<br><br>Different frames of reference are the building blocks for multiframe thinking.<br><br>Multiple frames of thinking can be | The learning process should focus on uncovering different mindsets within the learner group.<br><br>Different mindsets are views to different frames of reference.<br><br>Uncovering the frames of reference, the mindset is the function of the facilitator working with the learner group as per the designed expert view of the work reality. | Different frames of reference are about uncovering different mindsets within a team, work function, learning community.<br><br>Uncovering the frames of thinking of the learners is a |     | Different frames of reference are really just uncovering current mindsets and views of how a particular thing works, how a particular topic works. Working with those multiple frames could be as easy as taking a core team and working with that, but it could also be working with interrelated roles and interrelated things but focusing them on a particular topic and uncovering those frames and mindsets around that topic.<br><br>[Would it be different frames provided by the facilitator or the leader of that session? Or would it be different frames of thinking coming from the participants?]<br><br>It's always the participants. Why you actually do it is to uncover current mindsets, and what also helps in terms of this learning process is to have some point of   |

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| <p>purposively used to build aligned mindsets.</p> <p>Constructed mindsets build stronger personal significance.</p>   | <p>Uncovered frames of reference are then used in reconstructing directed mindsets of learners.</p> <p>Constructing aligned mindsets within multiframe thinking develops a stronger personal significance and collective significance of a learner group.</p> | <p>specific focus of the facilitator, within a designed, focused frame.</p> <p>Uncovering the mindset of the learners should be shaped towards an end state of an aligned mindset of the group.</p> <p>Mindset construction is purposive.</p> <p>The purposive focus of a mindset should not eliminate multiframe thinking, it should be built on multiple frames of reference.</p> <p>Building multiframe thinking should be linked with developing personal significance.</p> | <p>view as a facilitator in terms of this topic that you want to uncover. So if we talk about sales versus profit or sales versus service, what is more important? Your whole purpose of working with those multiple frames and mindsets is actually to uncover where the group is but then there needs to be an end in mind, whether it's the research, whether there's a mindset you want to move them to. I think that's effective, if it doesn't hang in the air, but there's some view, whether you agree with it or not, there's some view of what the research is telling you or how we would explore this topic. There needs to be some direction in terms of working with multiple frames.</p> <p>[Should learners have multiple frames of thinking? Or should there be one frame of how things should be done?]</p> <p>No. They should have multiple frames of thinking because – and it is about contextualisation of that frame – in terms of how does it work in what I need to do, how does it work in how I can be more successful? It's also about going back to that significance, why is this relevant to me and how I can be more significant? It changes all the time as well.</p> |
| <p>Step 3</p>  | <p>Step 2</p>   | <p>Step 1</p>   | <p>Q9: What is your understanding of the concept of co-creating work reality for learners during a learning intervention?</p>  |
| <p>Co-creation of work realities is at a level of business impact, where the line of sight is linked to the learning.</p> <p>Co creation requires the collective and collaborative epistemology of</p> | <p>The focus of a learning intervention should be the collective common understanding of the world of work.</p> <p>It should allow for conformed or synergised knowing, thinking, deciding and acting.</p> <p>This leads to an organisation where</p>         | <p>The results of a training intervention should be to get the learners to implement their learning.</p> <p>After training learners should have a better common understanding.</p> <p>There should be a common view of</p>  | <p>It goes back to direction, in terms of – and it's not to say that this is the only way of thinking about this particular knowledge of topic – but it goes back to guidance from a learning facilitator around a particular topic but getting guys centred around that view and getting guys to actually implement that but at least there's a common understanding of what it is that we need to do or what could be a better approach to something. So it is about uncluttering things and it also is about getting some form of order. The only way they could really implement what they've learnt if they (?) and co-create what they've learnt is about having a common view on what it is.</p>  |

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| <p>Know-Think-<br/>Decide-Act</p>  | <p>the co-creation of work realities are commonplace. Organisations as collective systems that think and decide differently will consistently co-create their reality.</p> <p>Co-creation should be focused not on procedures, or even behaviours, but on the impact on business results.</p> | <p>what the learning is.</p> <p>Co-creation should be focused on where business impact can be created.</p> <p>It is more than implementation.</p> <p>It is how business results are impacted. This is personal significance.</p> <p>Learning should create more than conformity.</p> <p>Learning should allow learners to take more ownership of their work and life on a cognitive level; they should know, think, decide and act differently.</p> <p>Co-creation should be about thinking and deciding differently as a collective.</p> | <p>[How would you describe co-creating of a work reality? What does it mean?]</p> <p>Co-creating of a work reality is the implementation (?) where collectively we could actually impact the business, we could impact the teamwork, and we could also drive significant changes for ourselves personally.</p> <p>[Are you saying that learning must be more than just getting people to conform to a specific expectation?]</p> <p>For sure, because more and more, people are being asked to think entrepreneurially about their work, to take ownership and accountability of their work and to be individuals in what they do and how they go about it. So you are asking them on a cognitive level to actually take more ownership of how they learn and process, but on the other hand you want to conform them and force them not to think about any other way than the way I've described or defined upfront in those five learning outcomes. That's not how adults learn.</p> |
| <p>Step 3</p>  | <p>Step 2</p>   | <p>Step 1</p>   | <p>Q10 In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?</p>  |
| <p>Learning should develop the human being.</p> <p>A strong being or personal significance is focused on the exchange of value</p> | <p>Training programmes should focus on learning.</p> <p>Learning should focus more on the human being than the human doing.</p>   | <p>Personal significance is more important than it is given credit for.</p> <p>Personal significance and performance results should be</p>  | <p>Yes. Because the being would drive the energy, the motivation, and even just that sense of purpose. It could mean individual results for me, it could mean team results. But if I don't see how what I do and the decision that I make every day has an impact on my own performance – I don't like the word performance – on my own results and my team' results, it becomes very difficult to stay energised and try different things and engage with people around this particular structure.</p>  |

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| <p>within the interrelationship of co-creation.</p> <p>For co-creation to exist, the learning focus should be on higher-order thinking and not conformity.</p> | <p>If training is focused on the doing it becomes focused on conformity.</p> <p>Conformity leads to lower order thinking and limited decision making.</p> <p>The human being should be developed as the key to personal significance.</p> <p>Personal significance leads to higher-order thinking and engagement.</p> <p>Engagement leads to decision making and the exchange of value.</p> <p>Exchange of value is the basis for interrelationships in the co-creation of work realities.</p> | <p>linked to initiate co-creation.</p> <p>Changing the workplace in spite of leadership requires a strong sense of personal significance, thinking differently about your work realities.</p> <p>Strong personal significance linked to the work place is not common in today's organisation. Many people in organisations today don't see above the darkness of their everyday tasks which adds to a low level of self-empowerment.</p> <p>This leave big gaps in thinking about what we can do and should do.</p> | <p>[Are you saying that it might be possible, that if you create enough personal significance in a learning environment, changes in the business or work reality will occur, irrespective of leadership? And sometimes leadership stonewalling the change?]</p> <p>Yes. Because what personal significance gives you is the ability to think differently about this topic, because you are very sure about how you fit in that topic. So your engagement levels are different, you share differently when there is a very strong personal significance component in how you collaborate and co-create.</p> <p>[Given your work experience in working with clients as a consultant, do you think the average staff member or employee has got a strong enough sense of personal significance?]</p> <p>No. One of the main reasons why I've decided to become a certified coach [is because] I've worked with these managers and it's tough because their day's realities are so big that they don't see above that darkness and they don't see above the actual (?) that they need to perform on. One of the most important things that any individual needs to do is really empower themselves around how they see themselves, in the context of personal life and family life, because there is an interplay with that as well, their spiritual life and all of that. We come into the workplace needing to conform to a certain set and a certain profile around what a typical manager – I'm using the bank now – should do. Yes, we have these big gaps in our own thinking and frames around what it is that we can do and can't do. So the average manager, yes.</p> <p>[Are you saying then, going right back to the first question, training might have something in around conformity? I'll train you to conform?]</p> <p>Yes. That is another characteristic of training, it is about structuring your thinking. Think about a typical topic like compliance management. How do you take something as practical, as factual, as compliance training, and bring that into a learning experience?</p> <p>[Do you want to?]</p> |
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|  |  | <p>Often training programmes are focused on conformity and not learning or thinking.</p> <p>Conformity is not sustainable and leads to disengagement.</p> <p>Modern workplaces are too dynamic for conformed behaviour.</p> <p>Training with a conformity focus cannot change thinking or</p> | <p>Yes.</p> <p>[Don't you just want people to conform to the set of rules so that they can comply?]</p> <p>No. Because that's not sustainable. They will not be able to contextualise what their training is. They will not be able to apply it in different situations. In the end, I don't know whether planning has a future in terms of how businesses operate. On the other hand, training is also repetitive, that's the other thing. Training only works if it's done exactly the same way, exactly under the same circumstances, exactly in the way you can anticipate it would be. Training works in that sense. In other words, a helicopter pilot needs to train a certain amount of hours on a helicopter because that's a subconscious skill that needs to be trained on in terms of how cognitively he needs to function as well as psychically he need to function, but it's always more or less the same circumstances and more or less the same situation that they apply themselves. When you get into a role when you face clients, where you work with multiple service providers, multiple products and all of that, it becomes very difficult for training to survive or have an impact.</p> <p>[Are you saying that training does not have the capacity to challenge and change the system, whereas learning, if done correctly and achieved, can actually change or challenge a system?]</p> <p>Yes.</p> <p>[Irrespective of the control mechanisms and the management system?]</p> <p>Yes. So there's a fine balance. Training for me is more instructional in nature, whereas learning is more around focusing you in a certain way and then allowing you to explore what we show you. You think about a model. A model basically provides context in terms of how to look at a particular topic and learning happens if people start applying their minds to it. It's not going to change the (?) process or the FICA checklist, but learning happens when you start to apply it to different situations. It needs to be relevant to you. Without that, learning still doesn't happen.</p> |
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|  |  | <p>challenge behaviour.<br/>Training with a learning focus challenges thinking and personal significance.</p> <p>Training with a learning focus should allow learners to explore rather than training with a conformity focus that only allows you to recall.</p> <p>There is not personal significance in recall.</p> <p>Training with a conformity focus is concerned with human doing.</p> <p>Training with a learning focus is concerned with human being.</p> <p>Engagement with the learning and the workplace is dependent on a high sense of being.</p> <p>Engagement should be about the exchange: see, do, get back (receive).</p> <p>(Exchange can be seen in the light of building and creating or co-creation).</p> <p>Learning focus more on being</p> | <p>[I just want to explore something, with being and doing. Is it the being that engages with the job or is it the doing that engages with the job?]</p> <p>It's always the being. The doing is actually just doing the job. I don't think that you're engaging – you only engage with the job if you start to think differently about that job. Engagement for me is really about exchange. It's about what do I see, what do I try, what do I get back?</p> <p>[If you exchange, you co-create. So you can't co-create unless you are strong in being?]</p> <p>I think so, yes.</p> <p>[Does learning address being or doing?]</p> <p>Being.</p> <p>[More than doing?]</p> <p>More than doing. Because there's a component in terms of building capacity and capability for that individual. People are in different phases of their learning journey. Some of them are new to this. Some of them are just reframing things, some of them are revisiting some of the concepts. So the being focusses more on learning. Learning focusses more on being.</p> |
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|  |  | than doing,<br>whereas<br>traditional training<br>programmes focus<br>on doing more<br>than being. |  |  |
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## Interview 7

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| Participant Details:            |   |
| Participant Identification Code | GL02                                    |
| Academic Field                  | MBA (Banking & Business Management)     |
| Work Field                      | Learning and Development (Facilitation) |
| Years of Experience             | 20                                      |
| Date of Interview               | 30 September 2015                       |

### Questions:

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| Step 3   | Step 2  | Step 1  | Q1: | What is your understanding of the difference between training and learning?  |
| Learning is about integrative actions.         | Training is the process of giving the information whereas learning is the process of eliciting required behaviour, not as information, but as action. | <p>Training is channelling existing information.</p> <p>Training is not focusing on the use of information, only the delivery of information.</p> <p>Learning requires more planning towards the change that is required.</p>       |     | <p>Training is a conduit, a means of getting information to people, whereas learning is a deeper form of planning. Learning is showing people how to use the information they're getting, training to do things differently or change their behaviour in the work environment. If I had to [sum up], training is giving information and learning is teaching people how to change the way they do things.</p>      |
| Step 3   | Step 2  | Step 1  | Q2: | Given your answer in Q1, what are the factors that influence training?   |
| Training is not performance improvement based. | Training is described as a time-based project, but not a performance-improvement process.   | <p>Training is confined to content that should be covered in specified time.</p> <p>Training can be compared to a project; it is a once-off event with a start and an end time.</p> <p>Content is the objective of the project.</p> |     | <p>Content, time.</p> <p>[That time that you mentioned, is that time in a training session, or a time period back in work? Where does it fit in?]</p> <p>Training time, it's a once off. Training for me is very once off. So, you need a period of time to spend with people training them. So, it would be either short sessions over an extended period of time or it would be an allocated period of time.</p> |

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|  |  |  | <p>[Are you linking the success of the training to the amount of time that you invest?]</p> <p>Not necessarily. What I'm trying to say is you need a time frame, it's a once-off thing, not an ongoing process. Training is a once off, it's not an ongoing process. Learning on the other hand...</p> <p>[So it's an event?]</p> <p>Exactly, that's it. It's an event.</p>   |
| Step 3   | Step 2   | Step 1   | Q3: Given your answer in Q1, what are the factors that influence learning?  |
| <p>Training is the starting point of learning, not the conclusion.</p> <p>For learning to exist there should be a framework that demonstrates the relevance of knowledge, to show how knowledge becomes learning.</p> <p>For learning to be relevant there should be a change in outcomes or behaviour in the workplace.</p> | <p>Learning is a process that starts in the training session and continues back in the workplace.</p> <p>Training should be designed to provide a framework that will allow the learning to continue in the workplace.</p> <p>Training should have a learning focus and not just provide information or even knowledge. (Knowledge is seen as the use of information.)</p> | <p>Learning is an ongoing process and cannot end at the end of the training intervention or classroom session.</p> <p>Learning starts in the classroom but can and should continue thereafter.</p> <p>The training event should provide a framework whereby learning can be explored after the training event and back in the workplace.</p> <p>Training should have a learning focus, providing not just information, not just a dumping of knowledge, but an establishing of opportunities to extract learning, even after the training.</p> | <p>For me, the biggest differentiator between learning and training is that learning is an ongoing process, we never stop learning. What happens in the learning space is people's minds are poked or prodded, and insights gained could happen two weeks after the learning has taken place, it could happen three weeks later. So there's an ongoing process.</p> <p>[You're describing this ongoing process in terms of [time], but it's from this point, the same thing can emerge as learning, or some piece of information over time only becomes relevant and suddenly pops out as learning?]</p> <p>If there's a connection between the framework that was introduced and what I'm doing in the workplace, learning will happen.</p> <p>What I'm trying to say is that training and learning can actually work very well together if the training has a learning focus, because they can be given the information and be taught – because when they start using the information they've been given, they will learn. So the two can work together, but training on its own doesn't work in my opinion because you are dumping knowledge, you're dumping information, you're not teaching people how to use the information.</p> |

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|  | <p>Training should provide a sense of relevance of information or knowledge so that learning can lead to a change in outcomes/behaviour.</p> | <p>Training can be measured as being successful when the objectives have been met, despite learning not occurring because the training was not used after the training session.</p> <p>Learning should be designed into the training by providing relevance to learners and to the situation that needs to be addressed.</p> <p>Training should be relevant to the audience and the audience should be relevant to the training.</p> | <p>[Yes, after a training session you will have more information.]</p> <p>But that doesn't necessarily mean you are using the information. Learning is about how you use it.</p> <p>[Training might be successful, yet no learning has taken place.]</p> <p>Precisely. So you can say, here is the knowledge, but what do you do when you get back to the work? You carry on doing the same thing you were doing before you went on the training. So therefore, for me, there is no learning.</p> <p>[Do you link that to learning that has happened in the training process or during the training process?]</p> <p>Correct, yes. If they are not applying what they have learnt, then no learning happens. Then learning hasn't happened. If they are applying what they learnt in the training, then learning has taken place. Then it's not a training intervention, it's a learning intervention. Did I clarify that?</p> <p>[Yes, and we'll come back to that in asking the question, can you plan or develop a learning intervention where the focus is for that to happen? Or can you only develop a training intervention and hope that the learning happens?]</p> <p>In my experience, a pure training approach, and what I mean by that is pure information dumping, has no learning effect. If you do activity-based learning in training you stand more of a chance of getting impact in the workplace, or learning happening in the workplace. If you are giving skills or something to the learners to practice while they're in class then you stand a better chance of them actually learning something, because they can connect the information with what they do in the workplace. There's a high level of relevance that is required in that. If you have the wrong audience attending your training or learning it's not going to hit the mark either. It's a risky approach.</p> |
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|  |   | <p>Learners should experience a level of relevance, there should be something in it for them.</p> <p>Learners will not buy into the learning if there is no value for them in attending the training or the learning.</p>   | <p>[You mentioned that the learners or the audience must buy [into] the learning. What is it that you meant?]</p> <p>What I mean is, anything that you are putting in front of the learners must have a high level of relevance and context to what they are doing. So there has to be something in it for them. They must walk away feeling this is improving, this has the potential to improve what I do. If you can't sell it to them on the basis of 'this is going to be of benefit to you', they're not going to buy it. So, therefore, they're not going to use it.</p>  |
| Step 3   | Step 2  | Step 1  | Q4:  |
| <p>Personal significance has a direct influence on the level of learning experience.</p> <p>Creating a sense of personal significance is the responsibility of the learning programme (design and delivery).</p> | <p>Learning programmes in their design and delivery should first of all establish a sense of personal significance in the learners at the start of a learning journey.</p> <p>Learners with a sense of personal significance perform better during and gain more from learning interventions.</p> <p>Actively and intentionally heightening the sense of personal significance at the start and during the learning process will improve the learning experience.</p> | <p>It is critical that a learner believes that he or she can learn.</p> <p>In school learning was difficult due to the belief that learning is not possible.</p> <p>Having changed the belief that learning is possible, learning success has grown.</p> <p>To assist learners, every learning programme should start with linking the learning process to their personal significance. Their ability to gain from the programme.</p> | <p>Given the factors influencing learning, how important is the individual learner's sense of personal significance in the learning process?</p> <p>I think that it's critical in the sense that it's a belief that they can learn. I speak from a personal perspective, from coming from a very poor academic background at school, not believing that I was clever, carrying that belief for many years, and therefore having this massive barrier to anything academic, then personally changing my belief three years ago, saying, "Hang on a sec, I can actually do this." So, for me, this has personally happened to me and I believed then that I could actually take on an academic challenge – if I hadn't believed it, it wouldn't have been possible, I would never have done it. I'm Cum Laude in my PGDip and I'm on the verge of Cum Laude in my MBA, so that just shows you, coming from having an average of 55 at school, to a Cum Laude average now. And it's all about how I believed in my own ability. So, for learners, every programme needs to start with something about their significance in this learning, because if they don't believe it, you are not going to get the message across.</p> <p>[Does this link to what you were saying about buy-in from the learner? Or is this more than just buy-in from the learner?]</p> <p>The buy-in is a superficial thing. So it's, "Yes, it's cool, I [know], this is how I can do this at work". But the actual belief that I have the capacity – because that's where I think a lot of people fall short.</p> <p>They don't believe that they have the capacity to learn, and therefore they are mediocre. So, it's</p> |

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|  |  | <p>Personal significance is more than 'buy-in'. It should be a deep belief that changes can and should be made. This is a current shortfall in many learning programmes.</p> <p>Learning should be about the true performance of the learner, how that can be improved, and to what ends.</p> <p>It should be the responsibility of the educator (designer &amp; facilitator) to create a heightened sense of personal significance at the start of the learning journey (in the classroom).</p> | <p>about...getting the true performance out of people is from within, it doesn't come from the outside. It's deeper than just buying a concept; it's more about believing that I have the capacity or the capability to actually absorb this knowledge or information.</p> <p>[But we can presume that there will be people coming into a classroom or learning space with a low sense of personal significance. Should educators do something about that and can they do something?]</p> <p>When you say educators?</p> <p>[Facilitators, teachers...]</p> <p>Across all fields, from school kids to...</p> <p>[Maybe just an adult space, let's say...]</p> <p>Definitely in an adult space. The reason I asked you to clarify that, I think in the school-kid space, I don't think it's that critical because in that space we are literally dumping information, there's no need for insight or...</p> <p>[The significance doesn't exist yet.]</p> <p>That also. They haven't even built that yet. But definitely in the adult space, it's our responsibility in the adult-learning environment to shift people off their rightness of being insignificant and mediocre. So, I believe it's critical, we definitely have to do it, because when we are in that space with those people we are literally giving them an opportunity to reframe themselves, to start afresh so to speak, in whatever field we might be teaching them. So I think it's criminal if we don't, it's an absolute must.</p> <p>[You're probably just going to end up with doing training, if you don't.]</p> <p>If you don't, exactly.</p> |
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|  |  |   |     | [If you don't show them significance.]  |
| Step 3   | Step 2   | Step 1  | Q5: | In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emergent properties between order factors and work-context?   |
| <p>Learning should be allowed to emerge within the context of sensemaking.</p>   | <p>Learning experience should be established within the domain of complexity to allow for new learning properties to emerge.</p> <p>New learning properties should be within the context of the learning area, learning structure or design.</p> | <p>Learning is not in the order domain. Learning is in the domain of relationships between knowledge and work context.</p> <p>Learning is working with what comes out of the learning experience not what is stated in the learning outcomes. (Learning outcomes are in the knowable.)</p> <p>Learning is about relevance; relevance is an emergent property within a group of different learners, because relevance is unique to each of them.</p> |     | <p>Definitely the latter, because that's where the relevance exists. Because if you are not operating, if your learning is not touching that person's life which their job is part of – their world – so if it doesn't touch their world, they are going to ask, "What can I do with this? There's nothing I can do with this, there's nowhere to put this in my world." So context is... so the way that the learning happens is by working with what comes out of the learning, not with what you've said in the learning outcomes, because that might be irrelevant to me, it doesn't touch my world, so why...I've got nothing to do with this; therefore it will fall flat. It's all about relevance, it's about, "What can I do with this? Have I got a place to put this in my library, in my head, because that's how I...? If there's no place for me to put this..."</p> <p>[Irrelevant files.]</p> <p>Yes.</p> |
| Step 3   | Step 2   | Step 1  | Q6: | In your understanding of learning, should learning explore the emergent properties between un-order factors (knowledge relationship) – the relationship between old knowledge, new knowledge and work context?  |
| <p>Emergent properties within knowledge allow for integration of the context.</p> <p>Context is a key element in deciding to change behaviour.</p> | <p>Effective learning is built on the emergent properties between old and new knowledge within a changing work context.</p> <p>The emergent properties are instrumental in the development of a new context. A new</p>                           | <p>For learning to happen, existing knowledge and new knowledge should be allowed to reflect on the work context.</p> <p>Relevance of new knowledge is filtered through an existing work context.</p> <p>Through emergent properties, new knowledge should be</p>   |     | <p>Well, if you think about it, that's really where learning happens, isn't it? What I'm saying by that is, if I know what I know and that influences what I do, so now what you're saying is you have this new knowledge that is coming my way and I have a work context, then I'm saying, is this new knowledge relevant to me and can I use it to help me within the work context? So, if you're pitching the right knowledge, so to speak, that is relevant, you know it's relevant, they might not know it's relevant, and they use the knowledge to increase their existing knowledge, it might cause discontentment or uneasiness but you will definitely broaden the person's knowledge.</p>  |

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| <p>Context leads to consciousness.</p> | <p>context leads to new emergent properties.</p> <p>A new context provides the decision to change behaviour or not to change behaviour.</p> <p>The relationship between old and new knowledge is one of integration, not replacement.</p> | <p>developed into new work context.</p> <p>New knowledge should provide new options in decision making.</p> <p>Old knowledge cannot be ignored or forgotten. Old knowledge should be integrated through a process involving emergent properties and context.</p> <p>All knowledge, integrated knowledge, is used to understand and develop the work context.</p> <p>Unlearning can only be possible if there is a new context to replace the old knowledge with.</p> <p>That which should replace the old knowledge should hold more significance for the person than the old.</p> <p>Given the relevance of context, knowledge and behaviour can be changed.</p> | <p>[Can we ignore old knowledge and just provide new knowledge?]</p> <p>No, I don't think you can. Otherwise that knowledge wouldn't exist to begin with. So I think knowledge can become irrelevant as things evolve but I don't think you ever ignore...so at some point the knowledge will fall off. I don't think knowledge as such has a shelf life, whether or not it's relevant to your purpose where you will decide whether to discard it or to keep it. We are living in an evolving knowledge world.</p> <p>[There are some processes out there (?) that indicate that if you want to create a change you have to get people to unlearn old knowledge before they can learn new knowledge. What's your view on that? Can we unlearn something?]</p> <p>I think you can only unlearn... you can unlearn, so I agree with the process of unlearning. But you will only unlearn something if you've got something to replace it with. So this is where that whole concept of buying [into] the content... if you can show me that it's going to make my life better by doing it your way, I'll do it your way. I will give up my old ways and adopt your ways.</p> <p>[I will change my behaviour.]</p> <p>Correct.</p> <p>[But can I unlearn that knowledge?]</p> <p>I will forget it. It won't exist for me anymore. Yes, I can unlearn it, because if it happened) habitually, it will just go so far away from what I do that I will literally forget it. So yes, I think unlearning is a...provided you can give me something better to work with and if I'm using it, if I adopt it, I forget, so effectively I've unlearned that behaviour. But it's got to become a habit of mine, I've got to start doing it habitually or I might go back to the old.</p> <p>[So you acquire a habit that tells you [that] you don't need that information, you need [this] information?]</p> |
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|   |   | <p>There is a choice, however, if the new is better than the old.</p> <p>It is a choice to unlearn an existing or old behaviour.</p> <p>Changing behaviour is always a replacement, not a void.</p>   |     | <p>I need a new habit, yes.</p>   |
| Step 3  | Step 2  | Step 1  | Q7: | <p>In your understanding, why is providing work context during a learning intervention important for developing multiframe thinking?</p>  |
| <p>Building multiframe thinking develops the sense of complexity, which builds personal significance.</p>           | <p>Providing work context during training deepens the understanding of work complexity.</p> <p>Multiple frames of thinking ensure that the work context does not set boundaries to learning.</p>              | <p>Work context is important for establishing relevance of learning</p> <p>Deepening the objectives of training can be achieved by providing multiple frames of thinking.</p> <p>Multiframe thinking will help in understanding the complexities of the work.</p> <p>Providing a work context is not a limiting factor to learning, it is not a boundary.</p> |     | <p>I think there must be an element of it, so in other words you can't go and train neuroscience to banking. So, there's got to be some relevance to what I do as an individual but I don't think that's the most important thing. It also depends on what your objective for your learning is, but you can bring in all sorts of other elements that are not related to my actual job to help me with my job. So, I wouldn't use a work context as a limiting factor when I'm designing or deciding what I'm going to teach. I can play around a little bit with different things that can always link back to behaviour in the workplace. Am I making sense?</p> <p>[Let me ask the next question, then we can come back here.]</p> |
| Step 3  | Step 2  | Step 1  | Q8: | <p>In your understanding, what is providing different frames of reference during a learning intervention?</p>   |
| <p>Effective training programmes solicit multiframe thinking to enhance the ability to choose relevant actions.</p> | <p>For effective multiframe thinking, relevance of context is key.</p> <p>Training programmes by design or by facilitation should solicit different frames of thinking to stimulate the learning process.</p> | <p>The learners in a training session will most probably have different views or experiences even if they are from the same work environment.</p> <p>Different frames of reference enrich the learning environment.</p> <p>Different frames of thinking stimulate insightful discussions. It makes the</p>  |     | <p>I think it's very important to have as [many] diverse frames of thinking as possible within reason... because you would think that the people who are sitting in that room mostly come from the same world, but they might have different opinions about elements of the world. The benefit of having different opinions is it enhances the learning environment. It enhances the process of learning because it encourages debate and disagreement, and as a facilitator you can just observe and let this thing happen. If you had everybody there with the same view about everything it would be incredibly... I think it would be very dull...very little learning would take place. I think it's very important.</p>         |

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|  | <p>The outcome of a training programme is not the agreement on a best practice, but the choice of relevant action within various situations.</p>   | <p>facilitation process easier.</p> <p>The training programme should solicit different frames of thinking to stimulate the learning process.</p> <p>Discussion, sharing and conversations do not have to lead to agreement during a training session.</p> <p>If the context is relevant, agreement or disagreement can both lead to learning.</p> | <p>[Would it become the role of the facilitator or educator to challenge that frame?]</p> <p>Very much so.</p> <p>[And to introduce a different frame?]</p> <p>Yes, and different people having different views about the same thing helps that process, which was what I was trying to say. As a facilitator, it makes my life easier if there are people that disagree because then I don't have to do the work, they do the work for me.</p> <p>[So that disagreement is a good thing in a classroom?]</p> <p>Absolutely, it's a very precious thing, to (nurture) that. As long as it's within reason and you don't (?) after work. So as long as it remains relevant to whatever you are discussing, and if you haven't [had] to take them around somewhere, you have to always come back. So, yes, relevance remains the key for me.</p>  |
| Step 3   | Step 2   | Step 1  | Q9: What is your understanding of the concept of co-creating work reality for learners during a learning intervention?  |
| <p>Co-creation of work realities cannot occur through lecturing, it should be the collaboration and contribution of the learner group.</p> <p>Co-creation of work realities is a collective process based on individual personal significance.</p> | <p>For co-creation of realities to emerge from a learning intervention there should be a collective focus on common understanding of learning and work environments.</p> <p>Co-creation is achieved through the collective contribution of thinking and deciding of the learner group.</p> | <p>The ideation of training should be to create something new.</p> <p>It is about creating a new reality as a collective, therefore co-creating.</p> <p>Co-creation of realities can be on the level of collective common understanding of the world of work that is or should be.</p>  | <p>My understanding of that is that I have an expectation as a facilitator that we all, while we are here, are in the process of creating something new. So when you walk out of here tonight we have contributed to the creation of a new reality for us as a group, as a collective. I don't necessarily have to become that reality, but when I go back to the workplace there will be a level of understanding between you and me because we were on the same course together, so we will behave a similar way at work because we were on the same course together. We have contributed to that reality of our own work environment, that's my understanding. So it's about that bell-curve shift, not just moving from left to right, you're actually shifting the whole bell curve, picking it up when you're down, further down.</p> <p>[So you don't have to be part of the new reality, you can still help to co-create it?]</p> |

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|  | <p>Co-creation of realities can only be achieved through the interaction of learners within the learner group, with the learning content and the context created through multiframe thinking.</p> <p>Sustainability of a co-created reality is linked to the level of personal significance that is elevated through the learning process.</p> | <p>Co-created realities might have low relevance to the individual but are invaluable to the collective.</p> <p>Co-creation should be the result of contribution of the learner group.</p> <p>Co-creation cannot occur through lecturing.</p> <p>If a level of personal significance is not created during the training intervention, collective co-creation is not sustainable after the training event.</p> | <p>I think you would find it very difficult to not be part of something that you've had a contribution to creating. But you do not necessarily have to...it might not be a relevant reality for you; you might have a different role to play. Your supervisor, just to give you an example, might be on a course with his clerks, and we are working in their world. He is having a contribution to the creation of their reality but he won't go and behave like a clerk at the workplace, he must remain a supervisor, but they must go and behave.</p> <p>[Do you think it's possible that a person goes through a learning intervention – and we are pretty sure that learning has occurred – that they can go back to the workplace and not change at all, [yet] co-create a new reality? So they've learnt, they've changed their way of thinking, they've observed new frames of thinking and reference, and they go back and they change nothing. Is that possible?]</p> <p>Yes. I'm afraid to say it is. I think that's got to do with your question about significance. There's a link back to that question because you can give them the best tools in the world, you can give them the best facilitator in the world, you can give them the best of everything, if they don't believe that they are capable, it won't happen in the workplace. Yes, it goes back to that question of personal significance. If you as an individual don't believe it, it's not going to happen.</p> |
| Step 3   | Step 2   | Step 1  | Q10 In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?   |
| <p>Co-creation of work realities can be addressed and enabled during the learning process.</p> <p>Beliefs or myths drive our personal significance, which drives our intention</p> | <p>Personal significance should be focused on as an enabler of contribution.</p> <p>To develop or discover personal significance the current beliefs or myths of a learner should be reflected on.</p> <p>By design, learners should reflect on the current beliefs or myths of their work realities to develop</p>                            | <p>People only contribute if they believe they can contribute.</p> <p>Lacking in personal significance will inhibit the sense of ability to contribute in a co-creation of the work reality.</p> <p>The learning process should be able to reflect on the current self-belief and should</p>  | <p>Very important, because self-belief will drive confidence and confidence will help me to contribute, if I believe that I can contribute. If I don't believe, I can't contribute to the workplace, I'm not going to contribute. So, if I don't feel personally significant, I will not believe that I have the ability to contribute, what I'm saying is rubbish. But if I believe in myself, if I feel significant, I'm going to believe that everything I say is important. Whether it is or not is irrelevant, I believe that it is, and life will teach me when to speak and when not to speak. But it starts with me.</p> <p>[And self-belief, is that linked to the learning, or can learning change that self-belief?]</p> <p>I think learning can create self-belief by showing people that they don't have self-belief. Because we don't even know that we don't have self-belief, so we</p>  |

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| <p>to co-create work realities.</p> | <p>or discover personal significance within the work reality.</p> <p>With more understanding of their own beliefs, and with a stronger sense of contribution, learners will have more confidence to challenge and co-create their work realities.</p> | <p>show if this is not present</p> <p>Insights into one's own beliefs are vital for the development, the discovery of personal significance, and often lacking from learning processes.</p> | <p>have to show people that they don't. If you can show them, suddenly they realise, "Hang on a second, that's why I'm like this, or that's why this happens in my life, this is why."</p> <p>[So learning can influence self-belief?]</p> <p>Definitely.</p> |
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## Interview 8

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| Participant Details:            |                          |
| Participant Identification Code | DS01                     |
| Academic Field                  | Psychology               |
| Work Field                      | Learning and Development |
| Years of Experience             | 30                       |
| Date of Interview               | 3 October 2015           |

## Questions

| Step 3   | Step 2   | Step 1  | Q5:   |
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| <p>Training should be designed dependent not on the content but the context of the world of work.</p> <p>Learning effectiveness is making sense of the context of the world of work.</p> <p>Training should be focused on learning and problem solving.</p> <p>The starting point and flow of learning is by work context.</p> | <p>There are different focuses for training sessions.</p> <p>Depending on world of work and level of work the training can shift from static order factors to contextualised insight-driven learning events.</p> <p>Training should be structured with the focus on the learning process of problem solving.</p> <p>Training sessions can be structured on a spectrum crossing un-order and order domains, rather than categorised into boxes.</p> | <p>Traditional training seems to be in, and stays in, the order domains of the known and the knowable, only focusing on the information – maps and algorithms – with pre-determined outcomes.</p> | <p>In your understanding of learning, should learning be a static provision of order factors (known and knowable) or should learning explore the emergent properties between order factors and work-context?</p> <p>We ended with this conversation that said that most probably the space of training was in the knowable, not even in the known, because what you're doing is...there's a right way to work a system, you learn that, bang, train it...</p> <p>[Yes, training will never come out of that order space, the known and the knowable, so it's sort of moving up and down in that space...]</p> <p>Because training is, then, a mechanistic process of making sure that a known map and a known algorithm for effective action is effectively installed in somebody else's head. And that's where an assessment can actually assess that. You can see whether you've managed to install that.</p> <p>[And you can predetermine the outcome, say "This is what you are supposed to know to this level."]</p> <p>So I'm thinking that even in the knowable...what's an example of the knowable?</p> <p>[An example of the knowable would be something that I as the teacher or facilitator will introduce to a class, which has already been determined, like a policy, but the learner might not have seen that before. So it will move in their space. It's something that can be known but it's not for that learner or specific person known yet and they have to gain that knowledge.]</p> |

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|  | <p>The nature of work and the level of work determine the starting domain of the training session, as well as the flow of the training session.</p> <p>Some training will stay in the order space; other training should cross the domains, focused on context and changes in context within the world of work.</p> | <p>Mechanistic and linear training can work and is enough in the order domains.</p> <p>If training is focused on the learning process, understanding the level of problem solving within the required level of work will determine the domain to be focused on. The more that problem solving drives a function or a training session, the less static and order-driven the training should be.</p> <p>The more the focus is on learning during a training session, the more the focus should be on work context.</p> <p>This applies equally to the level of strategic thinking required in a job that is trained. The more that strategic thinking is required, the less static the training should be.</p> | <p>So, that would be a new system or something...</p> <p>[New knowledge...]</p> <p>So, there's a known thing that moves there – that's where outcomes can work, training can work.</p> <p>[But it's also between different learners, not just one learner, working from different viewpoints and/or different practices even. How would they deal with that, and can different people learn from it? Relationships? And that's for me where experience and different levels of experience might play a role.]</p> <p>It might play a role...but you know what I'm thinking is that it's probably an oversimplification to think of all learning as being the same. Because if you look at, for example, a job-evaluation system – any of them, Hay or Patterson or SST (?) – the problem solving differs greatly between different levels, and at the most elementary level there's no real problem solving, it's just like kind of 'Just replicate this action without hurting yourself', to executing a procedure in a given instance, to selecting from a range of procedures that can equally be applied in a given instance, to...and that would be more your specialist-type diagnostic thinking. And then you get into other types of problem solving where it becomes far more to do with creating a mental model of a given situation, understanding how the components fit together, and being able to make decisions in the context of essentially a mental model situation where you're trying to get a certain outcome – there are a lot of variables and there's no actual procedural route to a decision. And that starts to get to quite higher levels, relatively, of problem solving, and from there it becomes more complex with more and more variables over a bigger and bigger scale, with bigger impacts, but essentially the inherent determinism in a learning situation. The other end of the spectrum would be strategic problem solving because there's absolutely nothing deterministic about it. You don't know if you've made a wrong or right strategy decision until years after the fact. What you have to do is consider a range of variables, weight them, and make a whole lot of decisions based on the probability of these variables, and how they interact, creating a different outcome, so that what you see across the spectrum of different problem-solving situations is you have a very different degrees of problem-solving complexity.</p> <p>If you take [it] now to the other extreme: I've got to strategise for a bank across multiple countries, and I've got to figure out what we have to do to get maximum business advantage. The problem-solving complexity is hugely different. And where I'm kind of interested in it...the kind of thing that I think we do is about contextual problem solving where there's an element of meaning to...where the success of your outcome, the</p> |
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|  |  | <p>The learning focus becomes less information driven and more insight focused.</p> <p>The more complex the variables become, the more focus should be placed on emergent relationships between the variables.</p> <p>Training and learning should not be categorised but rather placed in a spectrum crossing from un-order to order.</p> <p>On one end of the spectrum you will require more mechanistic, content- or information-driven training, and on the other end you will require less content and more context-driven learning.</p> <p>The spectrum of learning can also be linked to the level of work. If procedural work is not useful in the job, then it should not be in the training.</p> <p>The less the procedural requirement and the more that EQ is required, the more contextualised the learning should become, with a stronger focus on insight.</p> | <p>value of your behaviour, is not a function of executing a linear routine. It's a function of understanding a more complex set of variables, understanding how they interact, and navigating them on a dynamic basis, thinking your way through a working environment. It's an interesting thing because if you take an elementary job in a bank, like a teller, there are certain parts of that job that are extremely defined – do this, do this, do this, do this.</p> <p>Instead of imagining a category of training and a category of learning, imagine a spectrum that's got an infinite number of points from training to learning. Over here, training means I'm replicating...I'm just reproducing a known sequence. If you imagine learning as being at some other end of the spectrum, where it's not...over here, what you're doing is you're dealing with new situations, you are dealing, with essentially kind of applying principles, there's a high degree of judgement, it's very discretionary.</p> <p>So what happens is, as you go in that direction, you need more learning. As you go in that direction, you need more training. The key thing hinges on what you mean by these two words. What's the difference?</p> <p>[So, given this, where does education fit in, as opposed to training vs. learning? Because in our learnerships we don't train people to cash cheques but we do provide them with a longer-term view, more problem solving, but also not to this level of learning described. Is that where education comes in, is it more generic?]</p> <p>What we don't do is we don't teach people lots of procedures and, if you look at for example banks, but most environments I'm familiar with – there's a level at which (it's usually just below managerial level) where your procedural learning stops being useful. Where it's in a branch, for a consultant, procedural learning rules.</p> <p>But there's some other type of problem solving that is apparently more judgemental, more discretionary, that's got an EQ component and you've got to have a broader contextual view. That's what we're trying to do. Whether it's a learnership or an academy, we're trying to teach problem solving in areas where there isn't yet a deterministic solution, a linear A-to-B solution, where there's judgement, where there's problem solving.</p> |
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| Step 3  | Step 2   | Step1  | Q6: | In your understanding of learning, should learning explore the emergent properties between un-order factors (knowledge relationship) – the relationship between old knowledge, new knowledge and work context?   |
|   |  |  |     | This question was answered within the previous question and therefore not posed to the participant.  |
| Step 3  | Step 2   | Step 1   | Q7: | In your understanding, why is providing work context during a learning intervention important for developing multiple frames of thinking?  |
| <p>To allow the epistemology to function more options within the information should be explored.</p> <p>The intention of training should be to develop multiframe thinking to allow for more options to emerge from the information.</p> <p>By allowing the epistemology to function, the focus of learning becomes sense-making through and within various contexts.</p> <p>Sense-making leads to deep understanding</p> | <p>Context helps to develop insights.</p> <p>Training programmes should allow learners to know, think and decide, to decide when more options are required.</p> <p>Developing multiframe thinking allows for more options.</p> <p>Training programmes should help learners to view complexities within the context of the workplace.</p> <p>Viewing complexities within context brings meaning and relevance.</p> <p>Making sense and indicating</p> | <p>Providing work context is critical to the success of learning. It provide insights into the complexities of work procedures</p> <p>Training programmes should allow for learners to slow down and think.</p> <p>Providing different views of work context helps learners to anticipate different possible outcomes.</p> <p>Anticipating different outcomes will help them in making appropriate decisions.</p> <p>Making appropriate decisions helps the learner to succeed within the work context.</p> <p>Context helps in wrapping complexity and relationships around procedure.</p> <p>Complexity within the context helps to create meaning and relevance, building</p> |     | <p>I think it's absolutely critical because the thing about a procedure is that it's a series of actions based on the way the machines and the tools work and what the business is trying to achieve. So what those things do is probably teach an established way of getting a good outcome that you can just replicate. But as soon as you get a bit further along the axis you have to get people to slow down enough to think. You have to get them to anticipate different possible outcomes, some good, some bad. You've got to get them to make decisions based on what's more likely to lead them in a positive direction and not what's more likely to lead them in a negative direction. You've got to get them to make decisions that are more likely to lead to their success in context because people will always do that. So what happens is, as soon as you start introducing context you start wrapping something around a procedure – you're mapping a model of the context around a procedure that gives it a different meaning and relevance to the person, the client, the bank, rather than a set of different instructions you execute on. Something fundamental happens then, but it doesn't happen by itself – you have to make it happen.</p> <p>[Would that context maybe add to new or emergent relationships between things?]</p> <p>Definitely. If you look at a procedure, there are sort of no relationships, it's the relationship between what you see on the screen now and the form you fill in and what data you enter and where you get the client to sign and what you do. There's no, 'This is a bank, this is how we help'; there's no broader context. A procedure's almost a sort of self-contained context – you can snip it out...</p> <p>[The procedure of cashing a cheque does not relate to the economy. It hasn't got that context.]</p> |

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| <p>Deepening understanding builds personal significance.</p> | <p>relevance creates understanding.</p> <p>Understanding builds personal significance within a work context</p> <p>The intention of the training programme becomes making sense of information, turning knowledge into workable context.</p> <p>Making sense of most information, knowledge or situations can only be achieved through multiple views of reality.</p> | <p>personal significance.</p> <p>Most procedures being linear, context provides the emergence of relationships between process and people, process and process, as well as people and people.</p> <p>Context should not be a boundary, it should be used for deepening the sense-making process.</p> <p>Context allows for learners to understand how the procedure relates to bigger systems – increasing the learner’s sense of personal significance.</p> <p>The meaning of a procedure can only be established within the context of the world of work.</p> <p>In developing a context, training programmes should develop an understanding of the intention of the procedure.</p> <p>The intent of a procedure may be different to the intention of an individual performing the procedure.</p> <p>Multiframe thinking is allowing different individuals to engage differently with the intention of the procedure.</p> | <p>Exactly. The job of being a teller does in some way relate and the meaning of the job does relate to the client and the economy and your success and your bank. The meaning...</p> <p>[But if a learner, through a learning process or a learning intervention, discovers that meaning in context, would that not help them to be different in their job than just following a procedure?]</p> <p>Absolutely – that’s what I’ve always thought. So if you go back to the philosophy of language, of people trying to define what words mean, eventually they come to this thing and they mean what they mean in context. Which is a bit of a cop-out, but that’s as far as you can get. I think that holds for most things: they mean what they mean in context. Meaning is constructed by individuals. So, I could execute a procedure but the difference between my executing a procedure and my understanding the intention of the procedure and how it links different actors together makes a fundamental difference to my engagement with the situation, my personal investment of energy in it. And I think this whole thing goes to engagement; I used to think that just giving people a picture of the context would help, but if that’s just knowledge it helps about as much as nothing. But if you can get them to see, ‘Oh, my word, my job is meaningful in this, this, this and this way’, something else starts to happen to that discretionary thing. And if you couple that with helping them understand what an effective approach looks like in that situation, you’re doing something profound, you’re giving them a deeper meaning and a better method. I think that’s when it starts to become more transformational and less just replicating a given set of ways of doing things. In banking, or any discipline.</p> <p>[That context, if you add that different meaning, which changes that individual through the relevance that they create or that is emerging – wouldn’t that help them to do their job differently and therefore almost co-create their reality? Because their reality is not different because of the deeper meaning they have attached to a procedure, it’s not just a procedure.]</p> <p>That’s what I believe, and I believe that’s very fundamental. I believe that from everything I’ve seen in this business as well as from psychotherapy. Psychotherapy’s effective when there’s a shift in the way a person sees something. You don’t know where that person’s going to end up when that happens. It’s like being in the same world but it’s new and the behaviour will shift then.</p> |
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|   |  | <p>When individual intention is aligned to the intention of the procedure a meaningful experience is created.</p> <p>Meaningful experiences leads to and builds on a stronger personal significance.</p> <p>Learning now becomes more transformational within the context of the world of work.</p> <p>Context provides the learner with more ways or thinking about the procedure they perform.</p> <p>When training provides a different frame of thinking it allows for people to co-create their work reality.</p> |     |  |
| Step 3  | Step 2   | Step 1   | Q8: | In your understanding, what is providing different frames of reference during a learning intervention?   |
| <p>Multiframe thinking provides variables of purpose, intention and line of sight to context.</p> <p>Multiframe thinking focuses learning towards problem</p> | <p>Effective training programmes should teach more than the required procedure.</p> <p>Effective training programmes should include the context of the problems that the procedure solves.</p> | <p>Most training programmes will only teach the procedure, the what' that should be done based on the context of the procedure. It also teaches learners not to deviate from the procedure.</p> <p>What most training programmes don't teach is what</p>   |     | <p>Let's take a simple procedural thing and let's try this. Cashing a cheque. Come in, hi, we have to comply with the law and we can't lose the bank's money, so this is how we cash a cheque. Here's the procedure: dadadada. Teach the procedure. In the simulation the person knows how to cash a cheque, they do it, they get full marks for the assessment and off they go. What do you know about the value that person can create? You know that they can cash cheques. They know they shouldn't deviate. Whether they will or won't is a different question. You can't take away the procedure but you start off with, 'What does this procedure solve?' It solves a situation of you, on behalf of the bank, authorising a payment that's not valid, in other words, it prevents fraud. Secondly, it prevents the money from ending up in the wrong place. And those are bad outcomes for you and the bank and very much so for the client. So we are going to be working with this procedure as a tool for</p> |

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| <p>solving with the intention to perform beyond the procedure.</p> | <p>When training links learning to problem solving and not just to procedure, different contexts provide the opportunity for multiple frames of thinking, which makes the context more explicit.</p> <p>With multiframe thinking, context can explore line of sight to business results, purpose of procedures and problem-solving spectrums.</p> <p>Training becomes learning with intent to perform beyond the ordinary.</p> | <p>problem the procedure solves.</p> <p>It does not allow for different scenarios to be explored to help the learners to solve problems more effectively.</p> <p>When training programmes explore different contexts with the focus on learning to solve problems, it develops the ability to think differently in different scenarios. It allows for multiframe thinking</p> <p>If training is only focused on procedure, the context of the application of the procedure is often hidden. Multiframe thinking makes the context more explicit.</p> <p>Learner perception dictates learning procedure. Context is required on line of sight and purpose of procedure.</p> <p>Lack of full context leads to the wrong kind of behaviour.</p> | <p>achieving a collective outcome rather than the way things have to be done. I would suggest that fundamentally people are in a different classroom in the one instance and in the other, because you created a different reality here. There's a story about the bricklayers and the cathedral. I'm either laying bricks or building a cathedral. And there is something fundamentally different about them. The thing that we don't appreciate is just how fundamentally different they are.</p> <p>[Teaching people how to cope with these different situations – is that where we then would apply different frames of thinking so that they can learn? Because they might never have experienced that before?]</p> <p>It's quite interesting – that's a good question – because maybe what we're doing is...what we do quite often is make the context more explicit. This is why you're here, this is the purpose. Then your judgement and things like that can be enacted and played out against the backdrop of the purpose. If you're there just as a procedure executer – different world.</p> <p>[Because many times the learner would come to the classroom with the idea to learn procedure, not understand the line of sight or the purpose; if we make that explicit in itself it gives a different frame.]</p> <p>Yes, hugely. I mean a case in point – the sales thing. You find that people's default assumptions about what sales are and what the magic of selling is are usually misinformed. Their preconceptions have created a wrong sense of contexts which programmes the wrong kind of behaviour. Change those preconceptions and it becomes easy to learn some new type of behaviour in the same situation. I think that's a nice example – we've seen this even empirically and people start reporting results in the call centre. No new skills, just a frame of reference; you're not shoving a product in an oke's face, you're trying to help him make his life better. Selling is not pushing, selling is helping people solve problems. Ping! I've still got the big three here about the system, same products, same phone call – but I'm thinking in a different way. This is a deep truth – when you do this right, you can't step in the same river twice. Go through (?), same phone call the next day, it's not the same phone call, it's just not. It's something else, you're making a different meaning of it. The procedure's going to be the same. I'm not an expert, I've never read anything on it, but looking at ideas around the learning organisation and what you see with high-performing people and things like that, the common thread is always they do more than something that's compliant. They've</p> |
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|   |  | <p>Training programmes are not always about new skills, but should be about new thinking, new frames of reference.</p> <p>High-performing people have a richer mental map with an intention to execute beyond the ordinary.</p>   |     | <p>got a richer mental map and they've got an intention that is just beyond the execution of the high determinism – they're adding something. That adding is quite a human thing – it's humanity in action. It's not just...</p>   |
| Step 3  | Step 2   | Step 1  | Q9: | <p>What is your understanding of the concept of co-creating work reality for learners during a learning intervention?</p>  |
| <p>The purpose of a training programme should create the intention to co-create the workplace.</p> <p>Enhancing the learner's mental model of the workplace creates a mindset of changing and co-creating a more effective workplace.</p> | <p>A well-designed training programme should focus the learning element, on co-creation of the workplace – the change in behaviour required to improve the work produced.</p> <p>Learning activities, the learning process should be guided by the learners.</p> <p>There should be opportunities to explore various directions and possibilities.</p> <p>The purpose of the learning should not just be focused on the workplace but on changing and co-creating the workplace.</p> | <p>If the focus is not on co-creation of work realities the training focus is on sharing the information.</p> <p>With the focus on co-creation, the approach is on exploring the learning ideation, where it should go, what the obstacles might be, what problems. The focus is on conversations with the learners.</p> <p>If the learning is focused on co-creation of work realities, learners search for and find the purpose of the training, which activates the relevant learning.</p> <p>There is a better understanding of the context, better</p> | Q9: | <p>I think it's critical. It goes to that point I was making about giving people knowledge of a context but it doesn't help much. Let's take a very obvious one and explore it a little bit. Take something about risk. So the classical risk, the not co-creating approach, the information-transfer approach, would be: "Here's a picture of risk – here's a book, I'll give you some excerpts." A co-creating approach in a classroom would be, "Let's explore this idea of risk. Where do you want to be by the end of today? What could get in the way? Could something go wrong with that? Would it be problematic if it did?" And you could start building, engaging with people in a type of conversation where they build with you a picture of risk, as opposed to saying, "The definition of risk is, you know, the likelihood that you won't end up with an intended outcome." And it's a very different thing and I think what happens is that...and we see this...if we look at our courses, we have a few important models that we try to use to help people get a better grasp of their context, a better map; better ways of navigating the context. When you really get it right, it's a small number of big ideas that help them make big new sense of complex situations. It's almost like a bit of an alchemical thing where, if you can give a person a big new idea, it's like switching the lights on in a dark room and they'll see it. They will learn where everything in that room is because now they're in a space that they can see. But if I gave them a list of all the things that were in the room and got them to try to memorise it, it would be useless. As soon as they got disorientated, they wouldn't know where they were. It's like that thing in the one article about, "Make sure people can read maps before they go into the hills." Don't try to teach them about every danger and every river. Teach them to read maps and how to find yourself when you're confronted with a map, and stop people getting lost.</p> |

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|  | <p>A training programme that is focused on co-creation of the work realities will enhance the learner's mental model of the workplace.</p>  | <p>navigation through problems and better decision making.</p> <p>Most learners attending a training session will not go back and re-create their work or change their behaviour because the learning was not important enough.</p> <p>The learner's mental model of the workplace, and the importance of their work, is not addressed strongly enough to create the intention to change it.</p>   |     | <p>[The question is also about how they take that back to the workplace and recreate their workplace?]</p> <p>That's the other thing – you can teach people all about risk in a linear sense and they can go back to the workplace and then they won't reconstruct their workplace. Some will; most will be too busy; some definitely won't. So what you're actually working with in a classroom is their construction of the workplace. That is what you're working with – their mental model of the workplace. Because their behaviour, the moment they walk in the door, is already embedded in the mental model. They've got some mental model. It might be vague, it might be just execute all these procedures properly to stay out of kak, and you work with...</p>  |
| Step 3   | Step 2  | Step 1   | Q10 | <p>In your understanding, how important is an individual learner's sense of personal significance in the co-creation of work reality?</p>   |
| <p>Personal significance combined with the insight of problem significance is what is required to co-create work realities.</p> <p>Training that is focused on learning is focused on co-creation of the work reality.</p> <p>Learning should lead to a higher level of consciousness that allows higher-order</p> | <p>A training programme that is focused on learning, the focus is more than just 'can do'. The focus should be on 'do'.</p> <p>This requires higher-order thinking and not just knowledge.</p> <p>The learner and the learning should be placed in the context of the workplace,</p> <p>The problem significance should be established within the context of the personal significance of the</p> | <p>Co-creation of a work reality is not possible without a sense of personal significance.</p> <p>If learning is about solving a specific problem, i.e. the cognition required to solve the problem, and learning can make the problem personal for the individual, the problem will be solved and thereby co-creation of a new work reality without that problem having occurred.</p> <p>Learning can happen, and knowledge can be added without personal</p> |     | <p>My own intuition is that it's very important. We're [asking if] the new reality of work that we're trying to get people to appreciate with the view to empowering them – will that happen without personal significance? I doubt it because I think that learning, like I said, is the solution to a problem and when the problem is personal then it happens. When the problem is abstract, arm's length, impersonal, I'm not really sure that it results in what I would call proper learning, which is behaviour change to produce better outcomes. But having said that, you can imagine sort of having the lights go on but you don't really care about what's in the room anyway. We've seen this occasionally, people come on a learnership, they've got some other plan for next year. Okay, they'll learn, but personal significance gives it the energy and the value and the meaning – it's like the motor. So the lights can go on, but personal significance is not the same as insight. You can have insight, and it can be insignificant. I mean, there's lots of insights I have that have got absolutely no impact on my behaviour. I once had an insight that you couldn't reconnect the electrics in a car in a certain way because you'd melt the dashboard. Maybe that did change my behaviour because I started believing in auto electricians! But I mean, think about something like stamp collecting. I happen to know what the most valuable stamp is in the world, but it's not exactly a valuable insight.</p> |

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| <p>thinking and personal decision making.</p> | <p>learner to solve the problem.</p> <p>The learning process cannot be a linear process of acquiring knowledge only.</p> <p>Training should be designed to establish higher-order thinking that links problems to personal significance.</p> <p>By establishing insights into the problem significance and personal significance, higher-order thinking or higher-order awareness is established.</p> <p>Learning should lead to a higher-order awareness where the learner can decide to act or change behaviour, or not.</p> <p>The interaction between problem significance and personal significance on a higher-order awareness level, is the key to co-creation.</p> | <p>significance. But that knowledge may not lead to change or solving the problem.</p> <p>If personal significance is established, which is different from knowledge or even insight, co-creation of the work is almost inevitable.</p> <p>To create personal significance in the classroom, during the learning intervention, the training process cannot be mechanistic and linear.</p> <p>The more time that is spent during the classroom session, or the learning intervention, on the significance of the problem and how it translates to personal significance, the significance of the problem and the insight that solves that problem, the more effective the learning experience becomes.</p> | <p>[So, I think if we want to get people to change their worlds or recreate their world of work, we have to create personal significance in the classroom, or heighten the sense of personal significance for the individual in the role to behave differently and co-create a future or a reality.]</p> <p>This is where it's not mechanistic, it's not linear – the way we would have done this say five or 10 years ago, we'd spend 10 minutes at the beginning of the module saying this is bloody important because of X, Y, Z, and some people get it and most don't and some just couldn't give a shit, you know? And the more time we spent on (never mind co-creating the new reality) co-creating the problem that the insight solves, the better it's become because there's been people...see, if you don't know you've got a problem why would you solve it? But if you spend some time...Wow, if I don't know this, I can't A, B, C. Maybe I really need to understand this; I've never thought about it, but... So it's like quite often your learners don't know what they don't know. A part of what they don't know is that they don't know that they've got this problem that depends on them knowing...not knowing is not like it doesn't matter – it matters that you don't know.</p> <p>[It's a situation where the problem is not significant to them – but it's their problem.]</p> <p>Ja. Precisely. If you go back to our contact centre, it's an interesting conversation – those okes that got zero, the needle didn't move – those okes didn't have the problem. They have the problem like having sales [ability] but they don't personally have the problem.</p> <p>[The problem hasn't become their reality.]</p> <p>Ja. And they kind of checked out anyway. They're not living in the problem. That's actually what we have to do in the learning – get people to live in the problem. That's why it's so difficult to do...if I go back to Nedbank and think about how difficult it was to get those sales groups really working. Because we're trying to get all the okes on the same problem. But there were younger people, they liked what we were doing. It works well for them. The other okes, it's like, hey? They can't see how they're going to get benefit from it because their problem's not that.</p> <p>[Again, it puts emphasis on having the right audience in the classroom and making sure you don't have people</p> |
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|  |  | <p>Learning should be aimed at getting people to live inside their problems.</p> <p>To create learning is difficult because the learning has to get the learner to live inside the problem.</p> <p>The focus of learning design should be to link personal significance with problem significance.</p> <p>If this link can be established, a new level of consciousness is reached where the personal significance is the solution to the problem significance, and the personal knowledge and skill the solution of the problem.</p> <p>Applying the adult learning principle of problem solving, learning requires more than Bloom's taxonomy.</p> | <p>that shouldn't be there – but if they are, how do you frame that session so that it becomes their problem? I think that's where we, in creating a safe learning environment with the check-ins, that's part of what we need to do, make this a problem for you.]</p> <p>What's interesting is if you go from an idea of personal significance to problem significance, it's both, but it's like problem significance. It's like, "Why should you bother to learn anything today? You know everything about sales performance, don't you?"</p> <p>[Adult learning principles tell us that about having a problem to solve. So it's how do I make that a problem of personal significance to a specific learner? How do I draw that problem's significance out of each person, which is different for each person? The learning outcome doesn't do that.]</p> <p>It's an interesting one because I don't know if you've seen those other taxonomies – I think you're the one who told me about them. It's like an emotional taxonomy...it's like we're too...maybe there's a way of defining learning in [terms of] behavioural outcomes, and that would be a shift away from Bloom, because Bloom says, "In an assessment I can do." And that's what we've always assumed, that's where our jobs ended in training. "Okay, I can do it." The fact that he doesn't do it on the job, well, that's not my problem.</p> <p>[We didn't care about it because it's out of the scope of training.]</p> <p>Ja. Whereas for us, what are we? We're in the industry of learning, but we're in the industry of actual learning, behaviour-change learning, new-world or transformational learning, whatever it's all about. It's not about 'can do', it's about doing.</p> <p>[About changing and actually getting a shift in behaviour and actually getting a shift in result.]</p> <p>From that point of view, that's far more for me like therapy in a way than it is like training. Because with therapy, if you get people to see a situation in different ways, things change, and you don't know how they're going to change. It's weird. Behaviour change is not linear. It's one of the big things psychology's wrestled with, the idea of linear being. If I hit the red pool ball</p> |
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|  |  | <p>There is a shift from the taxonomy of 'I can do' to doing it.</p> <p>The training does not stop when the point of 'I can do this' is reached.</p> <p>Learning starts when this point is reached and when the knowledge, skill and attitude are linked to personal significance.</p> <p>The 'problem can be solved' changes into 'the problem is solved'.</p> <p>This is co-creation of reality.</p> <p>Training that is learning focused should become more like therapy.</p> <p>Learning is allowing people to see their situation, their problem, in a different way, think about it differently, behaviour is seen differently.</p> <p>Training interventions should not just be about providing the map of knowledge. They should teach navigation through the map.</p> | <p>with the white pool ball, it carries on in a predictable way because of mass and angles and velocity. Behaviour is not like that, it's like significance.</p> <p>[We're making sense of reality rather than providing the recipe. If we can help people make sense of their reality by providing them with frameworks, reference points, knowledge, they can go out and then change the behaviours they need to change in the direction they need to go.]</p> <p>We're not like a map shop, we supply maps but we help you navigate. We teach navigation. If we do anything, we teach navigation, which is how to orient yourself, how to understand where you want to be, where you are now, and how to get there and use the available maps to help you. It's like a meta scheme.</p> |
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## Annexure C: Interview Coding

### Relationship between training and learning

| Category Codes  | BA02  | PC01  | CP01   | DS01   | DC02  | CM01  | GL02   | DS01 |
|---|---|---|--|--|---|---|--|------|
| Training should focus on improving performance (5/8)  | Training is not multi-dimensional                                       | Traditional training has lost its performance improvement drive               | Traditional training is not performance focused, more procedural focused   | Learning broadens the application of training  | Training should be focused on performance improvement                                     | Traditional training is non-integrative / learning is integrative       | Traditional training is not performance improvement based      |      |
| Training (the event) is the start of the learning process, not the conclusion (4/8)             | Training is not natural, it is forced                                   | Learning is based on a collaborative relationship between teacher and learner | Training is extrinsic (organisation driven) – Learning is intrinsic (personal)                                   | Learning will occur irrespective of the lesson plan, but might not be in line of the lesson plan | Learning should be activated and not concluded during a training event                    | Training is not focused on performance, but on content                  | Training is the starting point of learning, not the conclusion |      |
| Training is non-integrative / multi-dimensional – learning is integrative (5/8)                 | Training enables learning   | Learning is integrative to broaden the application of information             | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  | Opportunities to learn and engage should be openly created during a training intervention | Training interventions should be used as the starting point of learning | Learning (process) is about integration                        |      |
| Traditional training is not focused on personal significance (1/8)                              | Training is about outcomes  | Learning is broadening the application of information                         | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  |   |   |  |      |
| Training is about outcomes (learning outcomes) (1/8)  | Traditional training is not focused on developing personal significance | Learning is integrative to broaden the application of information             | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  |   |   |  |      |
| Traditional training is not natural, it is forced (1/8)   | Traditional training is not focused on developing personal significance | Learning is integrative to broaden the application of information             | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  |   |   |  |      |
| Training is extrinsic / learning is intrinsic (organisation vs. personal driven) (2/8)          | Learning requires finding personal relevance                            | Learning is constructive  | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  |   |   |  |      |
| Opportunities to learn and engage should be openly created during a training intervention (2/8) |   | Learning is contextual  | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  |   |   |  |      |
| Learning is transformative (2/8)  |   | Learning is contextual  | Learning (process) should allow information and knowledge to be experienced within a problem-centric environment |  |   |   |  |      |

| Category Codes  | BA02   | PC01  | CP01  | DS01 | DC02  | CM01 | GL02 | DS01 |
|---|--|---|---|------|---|------|------|------|
| Learning is about the consciousness to choose (2/8)       | Learning is about reframing the "now"                  | Learning should be more than classical conditional                  | Learning (process) should develop responsibility and engagement |      | Learning should be an integrative process of space and time |      |      |      |
| Learning is not about behaviour change (1/8)              | Learning (process) must enhance personal consciousness | Learning is a choice to change behaviour or not to change behaviour |   |      |   |      |      |      |
| Learning should be more than classical behaviour (1/8)    | Learning is about consciousness to choose              |   |   |      |   |      |      |      |
| Learning is constructive and should be experienced (2/8)  | Learning is not about behaviour change                 |   |   |      |   |      |      |      |
| Learning is about relevance (2/8)                         |  |   |   |      |   |      |      |      |
| Learning is contextual (1/8)                              |  |   |   |      |   |      |      |      |
| Learning will occur irrespective of the lesson plan (1/8) |  |   |   |      |   |      |      |      |
| Learning is based on collaboration (2/8)                  |  |   |   |      |   |      |      |      |

## Learner's sense of personal significance

| Category Codes  | BA02   | PC01  | CP01   | DS01  | DC02  | CM01   | GL02  | DS01  |
|---|--|---|--|---|---|--|---|---|
| Contextualisation is inherent to sensemaking (1/8)  | Learning is sensemaking and sensemaking is personal and significant    | Learning (process) should focus on enabling the learner to choose to change behaviour through a higher level of consciousness | Learning (process) should focus on the (personal) motivation / attitude that will lead to a sustainable choice to change behaviour | Learning should lead to higher levels of consciousness that allows higher order thinking and personal decision making | Establishing a higher sense of personal significance is the responsibility of the training programme (architecture) | It is the responsibility of the training programme (design) to allow learners to find their sense of contribution – personal significance (architecture) | For learning to exist, there should be a framework that demonstrates the relevance of knowledge     | Learning drives personal significance of a future purpose   |
| Complexity is about making sense of complicatedness (1/8)   | Personal significance is defined in relevance as a sensemaking process | Personal significance is the main purpose of learning (process)   | The learning (process) should be focused on the persistence of mindset   | Deepening understanding (sensemaking) builds personal significance  | Personal significance has a direct influence on learning success  | Personal significance has a direct influence on the level of the learning experience   | Personal significance has a direct influence on the level of the learning experience                | Learning will be in line with the relevance (sensemaking) that the learner experience during the training event |
| Personal significance drives the sense of purpose in the learning process (2/8)                           | The learning (process) must create personal significance               | Personal significance is the main purpose of learning (process)   | The training programme is responsible for developing the sense of personal significance  | Training should be focused on learning and problem solving (personal significance)                                    | Personal significance should be developed within the individual's sense of a personal sphere of influence           | Learning should develop the human being  | Beliefs and myths drive our personal significance which drives our intention to co-create realities | Personal significance is equal in importance to content and skills development                                  |
| Learning is sensemaking and sensemaking is equal in importance than content and skills development (3/8)  | Contextualisation is inherent to sensemaking                           | Learning should be contextualised through a sensemaking process   | The training programme is responsible for developing the sense of personal significance  | Training should be focused on learning and problem solving (personal significance)                                    | Personal significance should be developed within the individual's sense of a personal sphere of influence           | Constructed mindsets build stronger personal significance  | Beliefs and myths drive our personal significance which drives our intention to co-create realities | Personal significance is equal in importance to content and skills development                                  |
| By challenging beliefs and myths, learners become significant in the co-creation of the work system (2/8) | Complexity is about making sense of complicatedness                    | Learning should be contextualised through a sensemaking process   | The training programme is responsible for developing the sense of personal significance  | Training should be focused on learning and problem solving (personal significance)                                    | Personal significance should be developed within the individual's sense of a personal sphere of influence           | Constructed mindsets build stronger personal significance  | Beliefs and myths drive our personal significance which drives our intention to co-create realities | Personal significance is equal in importance to content and skills development                                  |

| Category Codes   | BA02   | PC01  | CP01   | DS01  | DC02   | CM01  | GL02  | DS01  |
|--|--|---|--|---|--|---|---|---|
| Learning (process) should be focused on constructing persistent mindsets to build stronger personal significance (2/8) | Learners become significant in the co-creation of the system   | The training programme should be concerned with problem solving within the context of the work procedures | Personal significance is the bases of understanding what should be learnt and why  | Creating a sense of personal significance is the responsibility of the learning programme (design / architecture) | during a learning process  | Creating a sense of personal significance is the responsibility of the learning programme (design / architecture) | Personal significance is the bases of understanding what should be learnt and why             | Personal significance is the responsibility of the learning programme (design / architecture) |
| Personal significance has a direct influence on the level of learning experience (4/8)                                 | Personal significance drives the sense of purpose in the learning process (sensemaking)  | The success of the learning (process) depends on the level of sensemaking and personal significance       | Personal significance is the responsibility of the training programme to develop personal significance (architecture)                | It is the responsibility of the training programme to develop personal significance (architecture)                | Personal significance has a direct influence on the level of learning experience | Personal significance is the responsibility of the learning programme (design / architecture)                     | Personal significance is the responsibility of the learning programme (design / architecture) | Personal significance has a direct influence on the level of learning experience              |
| Learning should develop the personal motivation that enforces the human being (2/8)                                    | Learning (process) should develop a higher level of thinking (consciousness) to enable the learner to choose to change behaviour (3/8) | Personal significance is defined in relevance as sensemaking (5/8)  | It is the responsibility of the training programme / learning process (design) to develop personal significance (Architecture) (7/8) | Personal significance is defined in relevance as sensemaking (5/8)  | Personal significance is defined in relevance as sensemaking (5/8)               | Personal significance is defined in relevance as sensemaking (5/8)  | Personal significance is defined in relevance as sensemaking (5/8)                            | Personal significance is defined in relevance as sensemaking (5/8)                            |

## Emergent properties of learning through a process of sensemaking

| Category Codes   | BA02  | PC01   | CP01  | DS01  | DC02  | CM01   | GL02   | DS01  |
|--|---|--|---|---|---|--|--|---|
| Sensemaking leads to deep understanding and higher levels of conscious awareness (2/8)<br>Emergent properties of learning are within various context including a personal context of the learner (3/8)<br>Successful learning (process) cannot occur in a static "order" world (making sense of work) (3/8)<br>The design (architecture) of a learning process should allow for emergent properties as a process of making sense of the (new) world of work (3/8)<br>Effective learning (process) is about making sense of context through emergent properties (2/8)<br>Contextualisation allows for new knowledge to emerge which enables sensemaking (5/8)<br>Making sense of context is a key element in deciding to change behaviour (1/8) | Emergent properties are developed by the individual / learner<br>Emergent properties are about personal context<br>Emergent properties in learning are a natural occurrence | Learning (process) should be focused on allowing new context to emerge<br>Work reality should be contextualised as a significant system<br>Learning (process) should challenge the learner's belief about work reality (to allow emergent)<br>Learning process should aim for higher levels of conscious awareness in learners | Building new knowledge is dependent on emergent properties from existing knowledge, new knowledge and workplace context<br>New knowledge is acquired or discovered from context of the new world of work (emergent)<br>Successful learning (process) cannot occur in a static "order" world | Sensemaking leads to deep understanding<br>Training should be designed dependent on the context of the new world of work, and not the content | Learning (process) should be provided as a combination of order and complexity<br>Context should be provided to allow for new learning to form (emergent)<br>The design (architecture) of a training programme should allow for the building of emergent properties within context of existing and new work realities | For learning to succeed new knowledge should be allowed to emerge from the work context<br>Contextualisation or sensemaking allows for new knowledge to emerge during a learning process | Context is the key element in deciding to change behaviour<br>Emergent properties within knowledge allows for integration of context<br>Learning should be allowed to emerge within the context of sensemaking | By allowing the epistemology to function, the focus of learning becomes sensemaking through and within various contexts<br>The starting point and flow of learning (process) is by work context<br>Learning effectiveness is making sense of the context of the (new) world of work |

## Co-creation of work realities

| Category Codes  | BA02   | PC01   | CP01   | DS01 | DC02   | CM01  | GL02   | DS01  |
|---|--|--|--|------|--|---|--|---|
| Successful learning (process) is designed (architecture) within the work context, and allows the learner to explore within that context (1/8) | Co-creation is using personal significance to influence work output  | Personal significance viewed within the new world of work is the backbone of co-creation of work realities | Successful learning (process) is designed (architecture) within the work context, and allows the learn to explore within the context               |      | Relevant problem solving is a key integrated skill required for the new world of work                            | Co-creation of work realities are at a level of business impact, where the line of sight is linked to the learning        | Co-creation of work realities cannot occur through lecturing, it should be the collaboration of the learning group | The purpose of a training programme should create the intention to co-create the workplace                |
| For co-creation to exist, the learning (process) should focus on higher order thinking and not conformity (1/8)                               | A learning process that develops personal significance is required to influence the collective voice – co-create |  |  |      | A business impactful learning experience is geared to co-creation of work realities                              | For co-creation to exist, the learning (process) should focus on higher order thinking and not conformity                 | the learning group   | Training that is focused on learning is focused on co-creation of the work reality                        |
| By design (architecture) the learning process should focus on the intentionality to contribute and co-create work realities (2/8)             |  |  | By design (architecture) there should always be a link or line of sight to the business results that should be co-created and not just performance |      | To have a business impactful learning experience, the (process) should be designed (architecture) to be an open, | A strong "being" or personal significance is focused on the exchange of value within the interrelationship of co-creation | For learning to be relevant there should be a change in outcome or behaviour in the workplace                      | Personal significance, combined with problem significance is what is required to co-create work realities |
| A business impactful learning experience (learning process) is geared to co-creation of work realities (3/8)                                  |  |  |  |      |  |   | Co-creation of work realities is a collective process based on an individual's sense of personal significance      |   |
| Co-creation is using personal significance to influence work outcomes (4/8)   |  |  |  |      |  |   |  |   |

| Category Codes   | BA02 | PC01 | CP01  | DS01 | DC02                        | CM01   | GL02  | DS01  |
|--|------|------|---|------|-----------------------------|--|---|---|
| <p>Personal significance viewed within the new world of work is the backbone of co-creation of work realities (7/8)</p> <p>Co-creation requires a collective and collaborative voice within an open and incorporative learning process (5/8)</p> <p>Co-creation of work realities cannot occur through lecturing, it should be the collaboration of the learning group (1/8)</p> <p>Co-creation of work realities can be addressed and enabled during a learning process (2/8)</p> |      |      | <p>By design (architecture) the learning process should focus on the intentionality to contribute and co-create work realities</p> <p>Co-creation of work realities are linked to the level of personal significance achieved through the contextualisation of work within the learning (process)</p> |      | <p>incorporative system</p> | <p>Co-creation requires the collective and collaborative epistemology of know, think, decide act</p> | <p>Co-creation of work realities can be addressed and enabled during a learning process</p> | <p>Enhancing the learner's mental model of the workplace creates a mindset of changing and co-creating a more effective workplace</p> |

## Different frames of reference

| Category Codes   | BA02  | PC01   | CP01  | DS01   | DC02  | CM01   | GL02   | DS01   |
|--|---|--|---|--|---|--|--|--|
| Different frames of reference are the building block for multi-frame thinking (1/8)    | Multi-frame thinking is an emergent property            | Multi-frame thinking depends on the level of knowledge, it broadens context and provides insight | Multi-frame thinking should allow for learners to choose, select and reject | The intention of training should be to develop multi-frames of thinking to allow more options to emerge from the information (context) | Multi-frame thinking allows for effective navigation through relevant problems                          | Training programmes should be designed (architecture) for the learner group to discover different frames of relevance emerging from the learning process | An effective training programme solicits multi-frame thinking to enhance the ability to choose relevant action | To allow the epistemology to function, more options within the information should be explored (more meaning) |
| Multi frame thinking build and align mind-set (1/8)                                    | Different frames of reference are essential to learning |  |   |  | Multi-frames of thinking within the work context help in understanding the complexity of the work space |  |  | Multi-frame thinking provides variable of purpose, intention and line of sight to the context                |
| Multi-frame thinking is an emergent property (2/8)                                     |   |  |   |  |   |  |  |  |
| Multi-frame thinking broadens context (2/8)  |   |  |   |  |   |  |  |  |
| Multi-frame thinking enables effective problem navigation (2/8)                        |   |  |   |  |   |  |  |  |
| Multi-frame thinking creates more meaning (sensemaking) of the new world of work (2/8) |   |  |   |  |   |  |  |  |
| Multi-frame thinking enhance the ability to choose relevant actions (2/8)              |   |  |   |  |   |  |  |  |
| Multi-frame thinking helps to understand complexity within the workplace (3/8)         |   |  |   |  |   |  |  |  |
| Multi-frames of thinking are essential to learning (process) (3/8)                     |   |  |   |  |   |  |  |  |