Professional military instructor identity and the effect of collaborative instructivism

by

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Submitted in partial fulfilment of the requirements for the degree

Philosophiae Doctor

in the Faculty of Education

University of Pretoria

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March 2019

DECLARATION

I declare that the thesis, which I hereby submit for the degree Philosophiae Doctor in Science, Mathematics and Technology Education, General, at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

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DEGREE AND PROJECT	PhD
	Professional military instructor identity and the effect of collaborative instructivism
INVESTIGATOR	Dr William Wagner
DEPARTMENT	Science, Mathematics and Technology Education
APPROVAL TO COMMENCE STUDY	12 October 2016
DATE OF CLEARANCE CERTIFICATE	10 July 2018

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ACKNOWLEDGEMENTS

This study is dedicated to all the military instructors[1] who contributed to my development as a soldier in the South African Armoured Corps. I was privileged to serve my beloved country for 42 years with faith, respect, integrity and pride.

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[1] Statue of the military instructor at the SANDF COLET in Clubview, Pretoria

ABSTRACT

Soldiers execute four tasks, namely, to prepare (train) to kill, to kill, to prepare to die and if and when required, to die. Good instruction is a contributing factor in the effective and efficient execution of the first three tasks and the prevention of the fourth. Given that a professional identity such as Profesional Military Instructor Identity (PMII) is predictive of performance, the lack of a PMII in the South African National Defence Force could explain the current unsatisfactory performance of military instructors. The rationale for this study is therefore to contribute to the body of knowledge of military education and training, leading to the enhancement of the effectiveness of the training of and by military instructors. This is done in order to improve the effectiveness of military training.

The research was carried out within an interpretivist-constructivist paradigm. Subsequently, an inductive/qualitative research approach was followed and an exploratory research strategy, applying a focus group discussion and three expert interviews to collect data, was used. Thematic networks analysis and coding by means of Atlas.ti were utilised to analyse the data. The literature review resulted in two conceptual frameworks, namely, that of the PMII; and secondly of an educational approach known as collaborative instructivism. Applying the two conceptual frameworks, a codebook was constructed and used to complete the analysis. Two main conclusions stemmed from the analysis.

The first main conclusion states that the lack of a PMII and the detrimental effect of the current unsatisfactory performance of military instructors can be reversed by institutionalising and formally teaching the concept of a PMII. A stronger PMII will negate the effect of poor performance and even lead to improved execution. By providing an improved educational construct and quality of instruction, collaborative instructivism has a pronounced effect on PMII, resulting in the second main conclusion, namely, that in order to encourage the development of a PMII, collaborative instructivism should also be institutionalised and implemented in training doctrine and competency-based curricula.

Keywords: professional military instructor identity, collaborative instructivism, sub-identities, influencing factors, identifying indicators

LANGUAGE EDITOR DISCLAIMER

Exclamation Translations

To whom it may concern

The thesis entitled, "Professional military instructor identity and the effect of collaborative instructivism" has been edited and proofread as of 05 August 2018.

As a language practitioner, I have a Basic degree in Languages, an Honours degree in French and a Master's degree in Assessment and Quality Assurance. I have been translating, editing, proofreading and technically formatting documents for the past seven years. Furthermore, I am a member of the South African Translators' Institute (SATI) and the Professional Editors' Guild (PEG).

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LIST OF ABBREVIATIONS

COLET   -   College of Educational Technology

ETDP   -   Education, Training and Development Practices (also Practitioner)

FOL   -   Facilitaror of Learning

GOC   -   General Officer Commanding

MPI   -   Military Psycological Institute

NCO   -   Non-commissioned officer

PMI   -   Professional Military Identity

PMII   -   Professional Military Instructor Identity

SA   -   South Africa (also South African)

SADF   -   South African Defence Force

SAMHS   -   South African Military Health Service

SANDF   -   South African National Defence Force

SETA   -   Sector Education and Training Authority

WO   -   Warrant officer

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CHAPTER 1 INTRODUCTION

1.1 HISTORICAL PRELUDE

Since the advent of organised warfare up until the current age of modern conflict, soldiers had to be trained in order to apply their weaponry to act as organised, disciplined and well-rehearsed entities and to be able to plan and execute strategies, operations and battles. Dupuy (1987, p. 200) called the period in military history from antiquity until mid-1200 the "Era of the Muscle" and the period from 1250 until 1800 the "Era of Gunpowder". During both these eras, military training was primarily a behaviourist activity (Swain, 2008) where cognitive processes such as reasoning, problem solving and decision making were left to the generals.

Individual activities, for example, fighting with a sword, and collective activities, such as manoeuvring a phalanx[2] to repel a flank attack, was "automated" by repetitive drilling, practice and fear - for the enemy, as well as for the home side commanders. The "Era of Technological Change" (Dupuy, 1987, p. 201), ranging from 1800 until the present day, however, required a change in military operational thinking, and military training. Due to the accurate rifle with its conoidal bullet, battles could no longer be fought with perfectly drilled and immaculately dressed columns and squares as the rifle caused three times more casualties than the breech-loaded musket (Dupuy, 1990a). Soldiers on the battlefield now had to move in a more dispersed fashion, over longer distances and in smaller groups in order to survive the murderous effect of well-aimed, accurate weapons.

At the same time as the development of the telegraph (and later the radio), this period allowed artillery observers to correct indirect fire[3] from guns well out of harm's way, as opposed to the previously direct fire delivered from exposed and vulnerable guns and artillerymen (Dupuy,1985). This called for a manoeuvrist approach[4] to leadership,

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[2] An ancient formation of infantry in which soldiers stood in closed formation with shields overlapping and spears pointing forward (Dupuy, Johnson & Hayes, 1986).

[3] "Fire delivered on a target which cannot be seen by the aimer" (Dupuy, Johnson & Hayes, 1986, p. 120).

[4] "[d]ie kundige aanwending van magte, terrein, beweging en taktiek om die vyand direk en indirek te dwing om op te tree en te beweeg volgens eie magte se gevegsontwerp. Sodoende word eie magte in staat gestel om die inisiatief te behou..." [the skillful use of forces, terrain, movement and tactics to compel the enemy, directly or indirectly, to act and move according to the battle design of own forces] (De Vries, 1987, p. 1).

organisations and operations in order to outwit the enemy as success by firepower alone was rarely possible. This approach requires a more constructivist view of military education and training in order to encourage innovative thinking, which would lead to the maintenance of initiative.

1.1.1 Background

Archaeological findings indicate that organised warfare started between 7000 BC and 6000 BC (Keegan, 1993). However, it was not until the dawn of recorded history, *circa* 3200 BC, that it was observed that the Sumerians, occupying the region which today is known as Iraq, waged war using soldiers on foot who were organised into groups of 48 men who manoeuvred on the battlefield in a square-shaped formation. This implied that some form of military training had to take place (Gabriel & Metz, 1992). The training was physical, skills-based, mostly individual, but also collective in nature. Individual training involved mastering the technique of throwing spears or javelins, the use of a bow and arrow or slingshot, and the effective use of a sword or battle axe and a shield. Collective training, in the form of drills and marches, was done to ensure the timely and orderly movement of the square or phalanx on the battlefield. The training methods applied would have been similar to those still used to desensitise a kill-averse human being and to provide him[5] with combat skills in order to survive the battlefield. These methods would include brutalisation, classical conditioning (repetitive stimulus-response), operant conditioning (stimulus-response-reward or punishment) and role modelling (glorifying heroes) (Grossman, 2001).

Since the social change from the hunter and gatherer to the agriculturalist and pasturist at about 8000 BC, urban communities assembled in well-protected cities. These cities were walled and well-guarded and could often withstand a siege by an enemy for an extended period of time, as was the case with the Biblical city of Jericho, with its three-meter-thick walls and 10m wide moat, as well as the cities of the Sumerian civilisation in ancient Mesopotamia (4000 BC) (Gabriel & Metz, 1992). This led to the establishment of a specialised group of soldiers, known as engineers or

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[5] For ease of reading, masculine nouns and pronouns are being used, however, it does not refer to a single gender exclusively.

Sappers[6]. They were first employed by the Assyrian armies (2000 BC), whose task it was to enhance the mobility of an army by clearing or crossing obstacles, like moats and walls, and to restrict the mobility of the enemy by erecting obstacles, such as walls, spikes, ramparts or trenches. Until its fall in the 5th century AD, the Roman empire also employed engineers to build roads and bridges, as well as the construction of siege weapons, which included catapults, siege towers and battering rams (Keegan & Holmes, 1987). Engineers therefore required training in more cognitive skills, notably mathematics and mechanics, in order to plan and execute their tasks effectively.

As the Stone Age evolved into the Bronze Age and eventually into the Iron Age, speed, mobility and protection were needed to overcome massed infantry attacks. The chariot, manned by two to four archers or spearmen, entered the battlefield *circa* 2500 BC and reigned in the war arena for nearly 1300 years. A charioteer was required to steer his chariot in the midst of battle, avoiding obstacles, other chariots and enemy weapons, often firing arrows or throwing and thrusting with spears or lances. Given the skills required, more rigorous and repetitive training of a behaviourist nature, both individual and collective, was needed.

The same rigorous and repetitive training was required by the cavalry, or horse-mounted soldiers, which appeared on the battlefield *circa* 1000 BC. At the same time, the Egyptians and Assyrians brought more order, organisation and discipline to the battlefield (Dupuy & Dupuy, 1993). The first battle to be recorded, namely, the Battle of Megiddo, took place in 1469 BC when Thutmosis led the Egyptian army in a well-organised envelopment manoeuvre. This resulted in a resounding victory against rebellious chieftains in Palestine. The Persian army of 500 BC was led by King Cyrus the Great, who "made conscious effort to instil concepts of discipline and training" (Dupuy & Dupuy, 1993, p. 19). This was followed by the Grecian Army (*circa* 600 - 400 BC) with its well-trained, disciplined and physically fit hoplites. These were later examples of armies where military training led to centuries of military dominance over lessor enemies. It also led to well-known battles such as the Battle of Marathon (490 BC) and the Battle of Thermopylae (480 BC), both of which took place in ancient

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[6] The name given to a military engineer, originating from the French "*Sape*", describing a trench which was dug by military engineers to bring the artillery closer to an enemy position, hence "*sapeur*" (Keegan & Holmes, 1987).

Greece. By then (*circa* 500 BC), the Chinese military system was already the subject of serious study, leading to the writing of the epic "Art of War" by the famous Chinese general, Sun Tzu (2002).

In the third century BC, the Macedonian Army was first led by King Philip and then by his son Alexander (the Great) of Macedonia. This army used a difficult battlefield manoeuvre known as the "oblique order of Epaminondas[7]" to secure numerous victories, the most famous being the Battle of Issus (333 BC) against the Persians (Keegan, 1993). In order to execute the Epaminondian manoeuvre, military training by now had to be collective and comprehensive, requiring behaviourism, cognitivism and even a degree of constructivism.

The Roman empire with its conquering armies was next to enter the Western and Eastern European arena. Flavius Vegetius Renatus was a high-ranking Roman who wrote a military treatise, *De Re Militari*, in which he provided a training curriculum for the Roman soldier and stated the following:

> They [the Romans] thoroughly understood the importance of hardening them by **continual practice**, and of **training** them to every manoeuvre that might happen in the line and in action. The courage of a soldier is heightened by his **knowledge of his profession**, and he only wants an opportunity to execute what he is convinced he has been **perfectly taught** (own emphasis) (Phillips, 1985, p. 85)**.**

During the Dupuyan "Era of Gunpowder" (1250 – 1800 AD), Prussian military philosopher Major General Karl von Clausewitz had a specific theory of war, which he described as follows:

> Entkleiden wir so das Gefecht von allen Modefikationen, die es nach seiner Bestimmung und den Umständen, aus welchen es hervorgeht, bekommen kann, abstrahieren wir endlich von dem Wert der Truppen, weile dieser ein gegebenes ist, so bleibt nur der nakte Begriff des Gefechts, d.h. ein formloser Kampf übrich, an dem wir nichts als die Zahl der Kämpfenden unterscheiden. (Von Clausewitz, 1832, 1972, p. 374)

> [If we thus strip the engagement of all the variables arising from its purpose and circumstances and disregard the fighting value of the troops involved (which is a given

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[7] This tactical manoeuvre was first used by Epaminondas of Thebes in the Battle of Leuctra (371 BC) where he routed the Spartans (Dupuy & Dupuy, 1993).

quantity), we are left with the bare concept of the engagement, a shapeless battle, in which the only distinguishing factor is the number of troops on either side (Von Clausewitz, 1832, 1993, p. 228).]

Dupuy (1987) called Clausewitz's theory the "Law of Numbers". He further suggested that the above quote by Clausewitz attributes victory in combat to three factors, namely, the number of troops; the variable factors affecting a force in battle, for example, posture, weather and terrain; and the quality of the force, determined by leadership, **training,** experience and morale. Dupuy (1987) also postulated, using the "Law of Numbers", that superior combat power always wins battles and confirmed it by numerical analyses of 83 battles in his so-called Breakpoints Database (Dupuy, 1990b).

1.1.2 Modern military training

Modern military activities range from repetitive behaviourist activities, for example, clearing a broken cartridge from a rifle, to highly constructivist pursuits, such as planning a military operation or national-level security strategy. When training for these activities, the training event could be done in a potentially deadly environment, for instance, on a shooting range during a live fire training exercise, or in the safe and comfortable surroundings of a lecture room, or even in a simulator during a virtual simulation training exercise. The soldiers participating in these training events differ in terms of their level of knowledge, skills, attitude, intelligence, background and age. Until the 21st century, the instructional theory of choice was instructivism, which, supported by behaviourist and cognitivist learning theories, allowed military training to be highly structured, disciplined and instructor-centred. However, operational commitments, new weaponry, course content, increasing costs and decreasing budgets, as well as the generational and cultural characteristics of the millennial soldier created the need to review the future instructional and learning theories and methods. The US Army, for example, responded to this need by developing a future learning concept known as the Continuous Adaptive Learning Model (CALM), informed by an outcomes-orientated instructional strategy and the use of network technologies to ensure a career long continuum of learning. Collaborative learning, experiential learning, blended learning and modernised distributed learning are important elements that are used in this model (Department of the Army, 2011a).

In the South African Defence Force (SADF), the end of the Cold War, trans-formational imperatives and changing operational requirements (South African Department of Defence, 1998) also played a decisive role in the SADF's realignment from a wartime force to a peace-time force. Military instructors also had to adapt their warfighting and educational skills in a newly established South African National Defence Force (SANDF) (South African Department of Defence, 1998).

In 1998, the SANDF responded to the need for modern instructional and learning theories and methods by adopting a constructivist approach to education, training and development. However, due to the heterogeneous nature of military training ranging from psychomotor skills, such as the firing of a rifle, to highly cognitive competencies, for instance, operational planning, pure constructivism could not be applied effectively. In addition to the problem of a sub-optimal instructional approach, the training of military instructors by civilian contractors led to a degradation in the quality of instruction by military instructors, as well as the subversion of the military ethos[8] of the SANDF. This state of affairs called for a further review of the instructional practices of the SANDF (South African Department of Defence, 2015b). This in turn led to the development of a versatile, modern and theory-based instructional theory, namely, collaborative instructivism. This research strove to obtain an understanding of the professional identity of the military instructor in the SANDF, given the substantial training paradigm shift he has had to make since 1998. After all, it is the military instructor who keeps soldiers alive.

1.2 INTRODUCTION TO THIS STUDY

From the historical prelude, as provided in Section 1.1.1 and Section 1.1.2, it is obvious that the training of soldiers throughout history, irrespective of the level of civilisation or armament, has always been a decisive factor in successful military operations. Delivering this training to the Roman army were the *Hastiliarius*, or weapons instructor and the *Tesserarius*, the drill instructor. As in all armed forces, the military instructor in the SANDF to this day still trains soldiers for the variety of tasks that they are required to execute during operations, as described in the South African defence policy (South African Department of Defence, 2015a).

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[8] Military ethos, also known as warrior ethos, refers to "professional attitudes and beliefs that characterise the...soldier" (Department of the Army, 1999).

Before stating the research problem and research questions, it is however necessary to understand the contextual background affecting the military instructor and directing the problem statement. The contextual background will address the guiding policies of the SANDF, as well as the institutional background and social influences. The contextual background will be followed by the educational-historical background of the military instructor in the SANDF, which also contributes to the problem statement and research questions.

1.2.1 Contextual background

The first contextual influence guiding military training (Louw, 2013), is the South African defence policy, known as the South African Defence Review 2015 (SADR 2015) (South African Department of Defence, 2015a). The SADR 2015 provides a defence mission, four goals, which are derived from the mission, and thirteen tasks underpinning the goals (see Figure 1.1). It is also confirmed that "the goals and tasks are not prioritised, but present the full spectrum of defence activity necessary to attain the intent of the Constitution (1996)" (South African Department of Defence, 2015a, pp. 3-13). This implies that the SANDF, regardless of the fact that it is currently primarily involved in border protection and peace-keeping operations (DefenceWeb, 2018) still trains members for all tasks that it could be required to execute, starting with basic soldiering competencies and conventional warfighting competencies. Based on the analysis of the Hezbollah-Israeli War (2006) (Matthews, 2008) the SANDF training system, founded on this threat-independent, effects-based strategy, could be judged as sound. This opinion is echoed by Piddock who declared that "maintaining the advantage in conventional warfare will lay the foundation for success across the entire spectrum of Warfare" (2009, p. 20). The SANDF policy framework for military training, is discussed in Section 2.5.4.
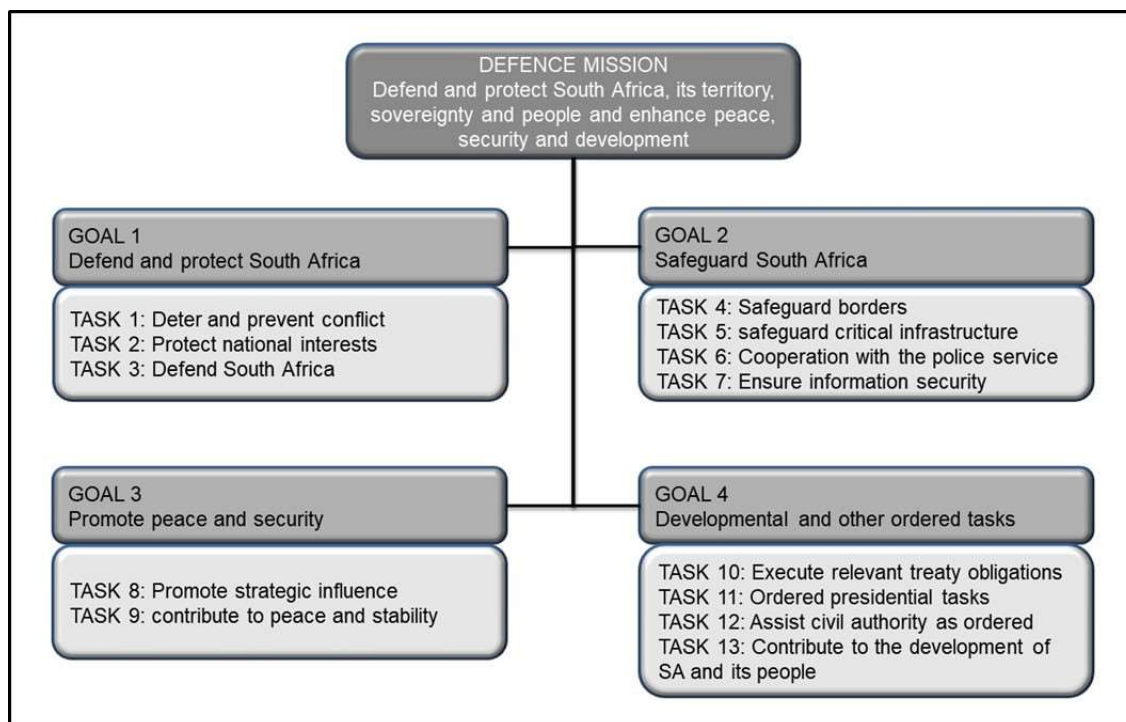
Figure 1.1 SANDF Mission, goals and tasks (South African Department of Defence, 2015a)

SANDF COLET provides the second contextual influence. Established in 1976, it is the primary training facility for military instructors in the SANDF. Until 2002, an educational technology approach was followed to design and present three training courses to military instructors. These instructors would then return to several colleges and schools, for example the South African Air Force College and the Infantry School, where they would train more military instructors. Since 2002 SANDF COLET applied an outcomes-based training approach and, as ordered by the Defence Review 1998, redesigned its programmes accordingly. The programmes were also presented at the colleges and schools as mentioned above and some members would even undergo similar training at civilian companies. More detail with regard to the programmes is provided in Section 2.6.2. In view of a decline in the quality of instruction to and by military instructors, the Chief of Human Resources of the SANDF ordered on 29 September 2015 that the situation should be rectified (South African Department of Defence, 2015b) and that a new educational construct - known as collaborative instructivism - combined with three new, competency-based programmes, was to be implemented. Depending on transfers to and from other institutions, SANDF COLET employs 20 to 30 military and civilian instructors, the former ranking from sergeants to

colonels. Although military instructors are required to have passed Grade 12 and to be trained in the provided instructor programmes, their qualifications vary from Grade 12, with no instructor qualification, to Masters degrees and even the occasional doctoral degree. The military instructors include both genders and members from all four Services (army, air force, navy and military medical service). COLET instructors do not differ in any way from other military instructors in the SANDF. More information on SANDF COLET is provided in Section 1.4, Section 2.5.4, Section 2.6.1, Section 2.6.2 and Section 3.3.3.

According to Esterhuyse and Heinecken (2015), the politicisation of soldiers, a lack of leadership, command and control in the SANDF and incompetence brought about by promotion through political favouritism, impact on the professionalism of all soldiers, including the military instructors. Subsequently, these social factors influence the research problem and research questions in this study as well. Section 2.5.1 and Section 2.8.7 further refer to the influence of these factors.

1.2.2 Educational-historical background: From military instructor to facilitator

Military instructors in the SANDF, as in the pre-1994 SADF, comprise officers, non-commissioned officers (NCOs) and warrant-officers (WOs) who can be described as someone who imparts military knowledge, skills and culture by means of a variety of instructional techniques in order to facilitate and enhance learning. Military instructors themselves should possess the required warfighting knowledge, skills and culture, as well as instructional skills. South Africa experienced exposure to the British military culture and traditions after the Anglo-Boer War (1899 – 1902). This, coupled with the exchange of instructors between the Union Defence Force and the British Army afterwards, as was the case with the Special Service Battalion (Barnard, 1993), military instructors adopted a British military ethos, which extended to training. Direct instruction was the instructional method to be used and military instructors were regarded as disciplined professionals, displaying a proud soldierly bearing. For 50 years the result of this method of training provided exemplary results from a military point of view – as attested to by the 20-year long Bush war (Scholtz, 2013).

During the transformation of the SADF to the SANDF after 1994, the instructional theory changed from objectivism (instructivism) to constructivism, and outcomes-based training was implemented. Accreditation with the Education, Training and Development Practices Sector Education and Training Authority (ETDP SETA) (SA Qualifications Authority, 2000) provided credits for training done and soon soldiers applied for military instructor training for the sake of the qualification. As numerous civilian companies also provide the same or similar training, soldiers were, and still are allowed to undergo instructional training outside the military. Adding to this state of affairs, military instructors became known as 'ETDPs' (Education, Training and Development Practitioners) and 'facilitators', while instruction became 'facilitation (of learning)' (South African Department of Defence, 1997b). A degradation of both instructional quality and of the military ethos became apparent (South African Department of Defence, 2010), which led the SANDF Chief Human Resources to instruct in September 2015 that the current level of training provided to and by military instructors should be improved (South African Department of Defence, 2015b).

1.2.3 The military instructor and professional identity

Johansen (2013) reports that professional military identity exists, based on the theories of Huntington (1957), Janowitz (1960) and Moskos (1981). Furthermore, Johansen (2013) states that such an identity has a predictive influence on military performance. Professional identity is, however, unspecified in the SANDF, with no evidence found of it having been discussed or formulated in the SADF or the SANDF. It is also not mentioned in the latest military policy of the SANDF (South African Department of Defence, 2015a; South African Department of Defence, 2018a).

As military instructors are trainers of soldiers – military teachers, so to speak – it is a fair assumption that a professional identity for military instructors, although also not mentioned in the SANDF, similar to a professional teacher identity (Van Putten, 2011), likewise exists. This concept can be called the Professional Military Instructor Identity (PMII). Van Putten (2011), as well as Chong, Ling and Chuan (2011) suggest that training and education influence Professional Teacher Identity (PTI). Subsequently, it is postulated that the changes in the training of military instructors (see Section 1.2.1) influenced the PMII in spite of the fact that it is undefined. Due to its predictive influence

on military performance (Johansen, 2013), this could thus be the primary reason for the change in instructional quality and military ethos.

1.3 PROBLEM STATEMENT

It was observed by senior educational managers in the SANDF (South African Department of Defence, 2010; South African Department of Defence, 2015b) that the quality of instruction provided to and by military instructors of the SANDF has deteriorated over the past two decades. It is further postulated that this is due to the current training policy and its effect on the PMII. Proceeding from this assumption, as well as the instruction given by Chief Human Resources (South African Department of Defence, 2015b), I developed an educational approach known as collaborative instructivism. Collaborative instructivism may be described as an educational approach where learning is facilitated by giving learners comprehensive information and guidance through instruction. This is done in order for them to effectively and efficiently construct their own mental representations utilising collaborative methods and supportive devices. The SANDF decided to implement this approach in order to improve the current level of training provided to and by military instructors (South African Department of Defence, 2015b). It is as yet unknown whether collaborative instructivism has an enhancing effect on the PMII and, by implication, on the quality of instruction, as was originally intended.

The problem that was investigated in this research may thus be described in a nutshell as follows: this study explored the currently undefined PMII in the SANDF and the impact of collaborative instructivism on this PMII.

1.4 PURPOSE STATEMENT AND RESEARCH QUESTIONS

The purpose of this qualitative case study was to explore the perceptions of a sample of military instructors and military educational managers with the intention of describing the currently undefined PMII in the SANDF, and to investigate how a construct, collaborative instructivism, may shape this PMII. The SANDF College of Educational Technology (SANDF COLET) was chosen as the research site. The military instructors at SANDF COLET are not "hand-picked" or specifically selected, and members are transferred to the institution, even without the required training.

Representivity in terms of race, gender and Service (army, air force, navy or military health service) is more often the reason for transfers to and from SANDF COLET. Given the representational nature in terms of its military instructors, SANDF COLET can be seen as a microcosm of the SANDF in general and its military instructor training facilities specifically. It is expected that this research will lead to a better understanding of military instructor training and the improvement thereof. The primary research question for this study was as follows:

How do military instructors in the SANDF COLET perceive the relationship between collaborative instructivism and the professional instructor identity?

Given the unknown nature of the PMII in the SANDF, the following secondary research questions were posed to describe the PMII, its influencing factors and identifying indicators. The relevant secondary research questions are as follows:

1. *How can collaborative instructivism be described in a military context?*

2. *How can PMII be described?*

3. *What are the perceived factors that influence PMII?*

4. *In a military context, what are the identifying indicators for the appropriate support of PMII?*

In view of the purpose of this study as stated above, it was not my intention to venture into the field of military sociology, but rather to use the existing literature to conceptualise frameworks for PMII and collaborative instructivism for use in the data analysis process. Given the educational focus of this study, namely how the PMII is *shaped* by collaborative instructivism, issues and debates on transformation and politics, are briefly mentioned and their effect, as described by researchers, is considered.

1.5 RATIONALE OF THE RESEARCH

According to Snider (2003), soldiers have four tasks, namely, to prepare (train) to kill, to kill, to prepare to die, and if and when required to, to die. Notwithstanding the different tasks, including peace-keeping, and roles the SANDF has to fullfil, the training regime remains the same and so do the four tasks of a soldier. By investigating and describing the PMII and applying collaborative instructivism, based on its predictive

influence on military instructor performance (Johansen, 2013), the PMII might contribute to military instructors providing good instruction. Good instruction is a contributing factor in the effective and efficient execution of the first three tasks and the prevention of the fourth. The rationale for this study is therefore clear – to contribute to the body of knowledge of military education and training. This could lead to the enhancement of the effectiveness of the training of and by military instructors in order to improve training in the SANDF, thereby keeping soldiers alive.

1.6 RESEARCH METHODOLOGY

As the educational construct of collaborative instructivism was taught to military instructors at the SANDF COLET, it became clear that the concept of a professional identity is not a popular topic of discussion and where elements thereof were mentioned, there was hardly any consensus of views. The multitude of interpretations and perspectives on the subject of professional identity, and the dynamically changing views of members as discussions continued, convinced me, in spite of being an ardent objectivist and being well versed in quantitative methods, to conduct the research within an interpretivist-constructivist paradigm (Hathaway, 1995; Cohen, Manion, & Morrison, 2007). This implies a relativist ontology and a subjectivist epistemology in view of which an inductive/qualitative research approach was followed (Creswell, 2014). An exploratory research strategy using interviewing and conversing to collect data (Yin, 2011) was applied.

1.6.1 Data collection and sampling

The General Officer Commanding (GOC) of the Training Command of the SANDF, which is the higher headquarters of SANDF COLET, ordered research with regard to the effect of collaborative instructivisim on the effectiveness of instructor training. As soon as ethical clearance for this research was received from the University of Pretoria, the GOC of the Training Command authorised the use of the results of the SANDF research as input for this research.

Babbie (2010, p. 334) explains that "descriptive and explanatory statements" are to be made about the unit of study in any research. In this research, the unit of study, also regarded as the research population (Ritchie, Lewis, McNaughton Nicholls, &

Ormston, 2014), was the military instructors in the SANDF. These military instructors consist of non-commissioned officers, warrant-officers and officers who are currently employed in any of the roles of instructor, moderator/evaluator, administrator, developer/policy writer, commander or manager/director in the SANDF. The unit of observation or sample, which comprised the participating members, were the individual military instructors at the SANDF COLET, as well as several senior officers who were former instructors, currently employed in other roles, as mentioned above.

It was foreseen that 27 instructors from the SANDF COLET would attend the collaborative instructivism training session, which was presented two to three days per week for two months. I was the military instructor for these events, with three additional instructors occasionally presenting lectures. Due to other commitments and activities, such as sick leave and ordered tasks, only 20 members attended. Using purposive sampling, a focus group of 13 out of 20 possible candidates consented to participate in the discussions. Furthermore, the researcher attempted to ensure that the volunteers consisted of members from all four Services[9], namely, the SA Army, SA Air Force, SA Navy and SA Military Health Service (SAMHS) according to official SANDF equity requirements (South African Department of Defence, 2015a)

The focus of the research was on a semi-structured focus group discussion and individual interviews. As soldiers operate in a strict hierarchical environment, they are often afraid and reluctant to leave a group or to refuse participation. To avoid such a situation, I did not participate in the focus group discussion, but made use of an officer from the SAMHS who is a trained industrial psychologist as an assistant to gather information (Colonel C.P. Bester, Ph D (Industrial psychology)). He conducted the focus group discussion dressed in civilian clothes at all times to reduce the possibility of intimidation due to rank even further. Three subject matter experts, all military instructors or former military instructors and serving in other roles in the SANDF, were interviewed to verify and enhance the results obtained in the focus group discussions and subsequent analysis thereof.

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[9] Armed forces are divided into a number of armed services such as the army, air force and navy. Different countries have different armed services, often abbreviated by the single word "service", for example the SANDF has four services, as indicated, as does the US Armed forces, consisting of the US Army, US Air Force, US Navy and US Coast Guard (South African Department of Defence, 2015a).

1.6.2 Data analysis

Hesse-Biber (2007) states that the most difficult skill in qualitative analysis is the ability to see what is in the data. In order to see what is in the data, thematic analysis, thematic networks analysis (Attride-Stirling, 2001) was used in spite of the fact that Braun and Clark (2006) claim that it is uncertain what thematic analysis is and how it is done. It was chosen as it is an in-depth form of analysis, providing better understanding while patterns, themes and sub-themes are being developed. Open coding by means of Atlas.ti was carried out to analyse the data.

1.7 ETHICAL CONSIDERATIONS

An application for ethical clearance was submitted to the Ethics Committee of the Faculty of Education at the University of Pretoria. After approval was received, authority for the technical execution of this research was requested and subsequently received from the SANDF, represented by the GOC of the Training Command.

A consent form, signed by the participants, explained the process followed and made it clear that refusal to participate would not pose a threat of influence or reprisal of any kind. No name or force number was mentioned or used during the focus group discussions and no intrusive questions were asked. The research assistant did the transcription of the focus group discussion, keeping all speakers anonymous. I conducted the interviews myself and the transcription was done by a third person.

1.8 DEFINITION OF TERMS

Collaborative instructivism. An approach where learning is facilitated by giving learners complete information and guidance in order to construct mental representations accurately and efficiently utilising collaborative methods and supportive devices (See Chapter 2 for a comprehensive discussion of this concept)

Military instructor. A military instructor is regarded as any uniformed member of the SANDF who is actively involved in military training or the direct support thereof. For example, quality assurers or staff officers who have received educational training as an instructor/facilitator at NQF level 4 (national certificate) or higher (South African Department of Higher Education, 1998).

South African Defence Force (SADF). The name of the South African armed forces, being the army, air force, navy and medical services before 1994. The SADF consisted primarily of Caucasian members of the South African population who were drafted into the SADF by means of conscription.

South African National Defence Force (SANDF). The name of the South African armed forces, being the army, air force, navy and medical services after 1994. The SANDF consists of all members of the South African population and are all volunteers.

SANDF College of Educational Technology (COLET). A military unit of the SANDF, situated in Pretoria, where military instructors are trained. The SANDF COLET is regarded as the centre of excellence for education and training in the SANDF.

1.9 LAYOUT OF THE STUDY

This study consists of five chapters, each containing the following:

Chapter 1: Introduction. Chapter 1 contains the introduction and background, as well as the rationale and research questions of this research. The chapter also includes a brief description of the inductive/qualitative research approach, the focus group and interview methods of data collection, and the thematic analysis type of data analysis. Chapter 1 concludes with a concise account of the ethical considerations, a definition of frequently used terms, the layout of the study and a summary.

Chapter 2: Literature Review. Chapter 2 consists of the literature review leading to the conceptual framework of the study. It includes discussions on the professional military identity. The three elements of PMII, namely, the sub-identities, influencing factors, and identifying indicators are fully investigated, followed by an equally extensive study of learning and several learning theories, such as behaviourism, cognitivism and constructivism. The chapter is concluded with a report on collaborative instructivism and its effect on PMII.

Chapter 3: Research methodology. This chapter describes the research methodology employed in this study. A description is begun by confirming the interpretivist-constructivist paradigm, leading to the research approach and the research questions – one primary and four secondary questions. The research design,

looking at the research strategy, method of data collection, sampling and the data analysis type, that is thematic analysis, follows next. The chapter is ended off with an explanation of trustworthiness and ethical considerations.

Chapter 4: Research results. The analysis and findings of the data accumulated during the research phase are deliberated in this chapter. The deliberation starts with a description and explanation of the data collection methods, namely, interviewing and conversing, and the data analysis method, which was a thematic networks analysis. Various themes were synthesised from the process and are extensively discussed.

Chapter 5: Conclusion and recommendations. The results of the research are summarised in this chapter, as well as recommendations with regard to the implementation of the findings. Recommendations pertaining to further research are also provided in this chapter.

1.10 SUMMARY

In summary, the evolution of armed conflict since 7000 BC stimulated by the increase in the complexity of organised warfare, as well as the proliferation in the lethality of weapons brought about by technological progress, led to a growing need for effective training and experienced trainers. Military historical research has confirmed that troops of poor quality, mostly brought about by poor training, lose battles (Dupuy, 1987).

Paramount to effective training is the military instructor and his instructional practices. These practices are influenced by the technological, financial, social and political imperatives of the time. The proposed pedagogical credo of the SANDF is collaborative instructivism with a view to improving instructional skills, recovering the SANDF military ethos, and accommodating the millennial soldier.

Professional identity also appears to influence the military performance of soldiers and military instructors. However, since it has not been studied or formulated in the SADF or SANDF before, the demand for research into the PMII of SANDF military instructors was identified. The conceptual frameworks of the PMII and of collaborative instructivism were used to guide the in-depth analysis of the effect of collaborative instructivism on the PMII. The analysis was done by applying a qualitative approach,

using a focus group, as well as individual interviews. The results are reported in the five-chapter dissertation to follow.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

According to Mouton (2001), a literature review is an appraisal of the existing knowledge in a particular field of study, which, as stated by Creswell, can be used "as a benchmark for comparing the results with other findings" (2014, p. 28). In this case, the literature review is an appraisal of two constructs, namely, PMII and an educational construct known as collaborative instructivism. These two constructs emanated from the research problem, i.e. exploring the currently undefined PMII in the SANDF and how collaborative instructivism can possibly shape this PMII (see Section 1.3), as well as from the research questions. This exploration of the literature has been designed to lead to the creation of two conceptual frameworks, namely, that of the PMII (see Section 2.6.3.4) and of collaborative instructivism (see Section 2.8.6) (see Figure 2.1). These frameworks will be used to provide guidance during the data analysis.
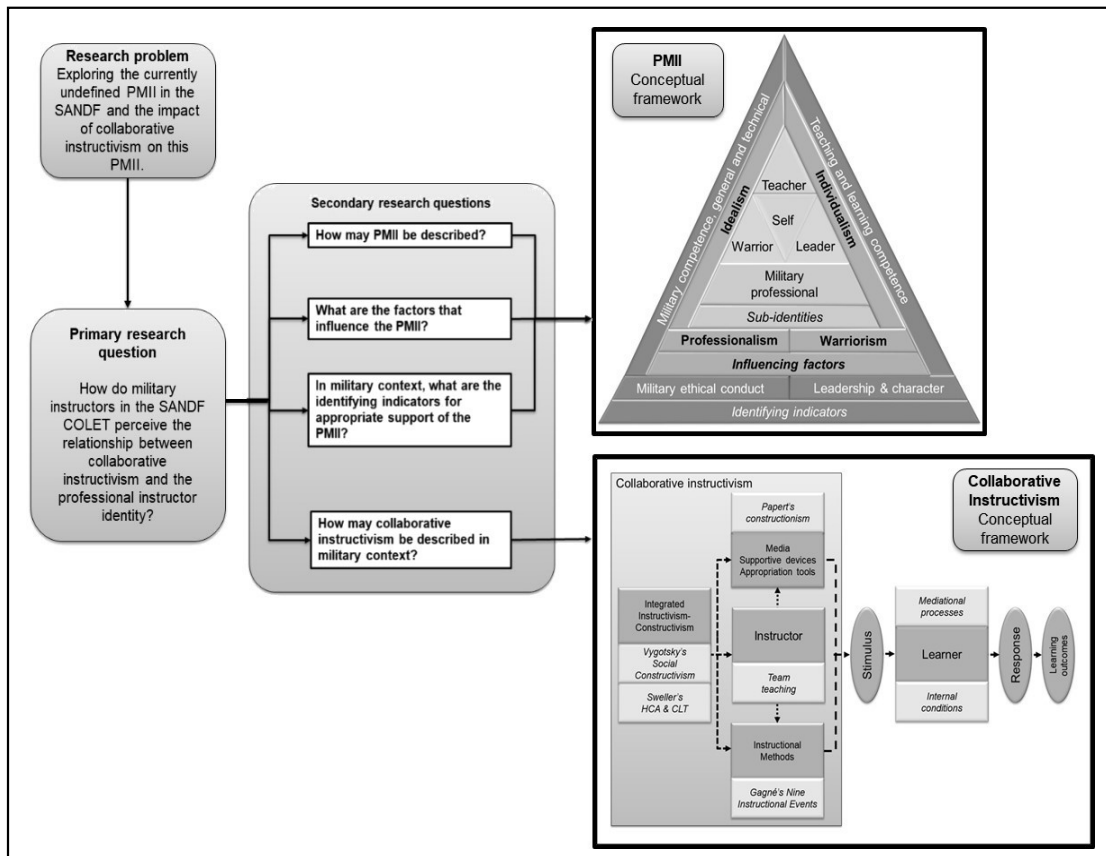
Figure 2.1: The development of two conceptual frameworks

With regard to constructing the PMII conceptual framework, the researcher decided to start from first principles, namely, the Self, followed by self-concept and identity. Identity development and identity theories are used to further enhance the understanding of PMII. A chronological order of views and hypotheses is used to indicate the growth in psychological and sociological insight into the matter. In this regard, the views of James (1890) were used to elaborate on the concept of the Self. Cooley (Rousseau, 2002) and Mead (Stryker, 2008) describe the social impact of the development of the theory of Self, followed by considerations by Rogers (1959), Schunk (1989), Rosenberg, Schooler, Schoenbach and Gecas (1995) and Oyserman, Elmore and Smith (2012) on the subject of self-concepts. Stryker and Burke (2000) and Weinreich, Bacova and Rougier (2003) introduce the subject of identity, followed by Tajfel and Turner's Theory of Social Identity (2004), Stryker and Burke's Identity Theory (2000) and the theory of Eric Erikson on identity development (Sokol, 2009). Oyserman et al.'s (2012) Identity-Based Motivation Theory (2015) provides the raison d'être for the deliberation on identity as it indicates the effect of identity on one's actions.

Following on from identity, the focus shifts to professional identity. The views of various identity researchers are discussed and one can conclude that there is still no acceptable definition of professional identity. For the purposes of this study, a definition for both occupational and professional identity was formulated before moving on to Professional Military Identity (PMI).

The exploration of PMI began with a definition of a soldier, confirming that the military is indeed a profession. Using the theories of Huntington (1957), Janowitz (1960) and Moskos (1981), the changes in the military environment since the end of the Cold War and the effect thereof on the military profession were then examined. In spite of the apparent "deprofessionalisation" and emerging "occupationalisation" of the military, it is shown that the military profession still exists. Next, military training and its effect on PMI are discussed, along with the construction of the PMI conceptual framework, which contains sub-identities, influencers and identifying indicators. A definition of PMI is also formulated.

PMII was the next construct to be researched. First, the instructor and military instructor is defined, followed by an investigation into the training processes of the US

Army and the British Army as bases for comparison. The SADF and SANDF processes are next in line, leading to the PMII conceptual framework and its definition. All of the elements of the conceptual framework are thereafter discussed in detail.

2.2 SELF AND SELF-CONCEPT

In 1890, William James, a professor of Psychology at Harvard University, provided a comprehensive discussion on the topic of the "Self". He postulated that the Self is the way that "I" think of "me". Oyserman et al. (2012) add that the Self is the way that "I", the actor, thinks about "me", the object, and "I" am aware of thinking. James did not only regard the Self in psychological terms, but included the physical as well, defining the Self as "the sum total of all that he CAN call his" (1890, p. 291). He also stated that there exist multiple selves, which he classified as the material self, the social self, the spiritual self and the pure Ego. James described the material self as the physical entities that are part of our existence - from our bodies to our worldly possessions, such as clothes, houses, family, friends. Man's social self, said James, is "the recognition which he gets from his mates" (1890, p. 293). Again, he saw many different social selves, ranging from how the Self is regarded by his loved ones, to the recognition by his peers and even concepts such as fame and honour. James regarded the conscience, morals, values and other spiritual thoughts as being part of the spiritual self, and lastly, he saw the "I", which links the past, present and future and which is not based on experience, as the pure Ego. The question is, however, what is the influence of the environment, being in the community, location and even time on the view of "me".

In 1902, James Horton Cooley's theory of the "looking-glass self" postulated that how one views oneself and how one views the views of others are inseparable – we do not only perceive ourselves, but also imagine and react to how others perceive us. This leads to the Self experiencing the will to succeed, the will to be acceptable, to be victorious, as well as feeling the effect of failure, pride, joy and other emotions (Rousseau, 2002) and incorporating it in the view of the Self. Following the views of James (1890) and Cooley (Rousseau, 2002), as well as Mead's "Symbolic interactionism" theory (Stryker, 2008), self-concept emerges as the next concept of interest.

Self-concepts (note the plural), according to Oyserman et al. (2012), consist of the mental concepts or ideas of who one is, was, or will become and is therefore the structure and contents of what "I" think of "me". Grecas describes self-concept as "the concept the individual has of himself as a physical, social, and spiritual or moral being" (1982, p. 3), which Pajares and Schunk (2001) find is formed by environment, experiences and the influence of others. Self-concepts can be descriptive or evaluative, for example, "I have brown eyes", or "I do well at sport".

Stets and Burke (2003) describe self-concept in terms of three components of which the first is self-esteem. Self-esteem, argue Rosenberg et al. (1995), is of both an affective and cognitive nature. The affective or worth dimension relates to the feeling of self-value or self-worth and influences psychological well-being, whereas the cognitive or competence dimension refers to the person's view of his own capability (Cast & Burke, 2002) - "I am strong/good/clever/dumb". Self-image is the second component of self-concept and, according to Rogers (1959), Rosenberg et al. (1995) and McLeod (2008), is defined as the view one has of oneself. Self-image should not be confused with the concept of self-efficacy, which Gecas (1989) and Bandura (1994) define as the belief in one's ability to be successful in a task or situation. A self-image statement would be "I am a caring person" versus a self-efficacy statement being "I am a good soldier". The last component of self-concept is the ideal self (Rogers, 1959), which is the self you wish to be or would most like to be (McLeod, 2008).

In terms of the nature of self-concept, Schunk (2014) is of the opinion that self-concepts are multi-dimensional and that one's awareness of the increasing number of dimensions comes with age. Marsh and Shavelson (1985) researched the hierarchical nature of multi-dimensional self-concepts, confirming its existence and added organised, stable, developmental, evaluative, and differentiable to the set of self-concept characteristics. Owens, Robinson and Smith-Lovin (2010) state that self-concepts consist of three attributes, the first being self-referring dispositions, which includes abstract characteristics, attitudes, traits and values, for example, patriotism. The other two attributes are physical characteristics and identities.

In conclusion, an integration of the overabundance of views of psychologists, such as James (1890), Cooley (Rousseau, 2002), Oyserman et al. (2012) and Schunk (2014) provide several characteristics of the Self and of self-concept, which are important for

the further debate on identity. Firstly, the overall self (indicated as "Self") is a mental construct of how "I" thinks of "me". The <u>Self</u> consists of multiple selves, including the physical, social and spiritual selves, as well as the pure Ego. Self is not only influenced by how you think about yourself, it is also affected by how you see the way in which others see you. <u>Self-concepts</u> are mental concepts of "me" in the past, present and future, which contain structure and content resulting from internal, as well as external influences. Therefore, self-concepts are multidimensional, hierarchical functions of the environment, others and of one's own thoughts and perceptions. Based on the deliberations on the Self and self-concepts, it now needs to be determined what the construct of "identity" entails and how it relates to the Self and self-concepts.

2.3 IDENTITY

Stryker and Burke (2000) hypothesise that there is a relationship between the Self and the community, whereby the individual creates societies, organisations, etc., and the community reciprocates by interacting with the individual by means of language and other symbols, in order for the individual to reflect upon himself as an object. This hypothesis is supported by Mead who said "Society shapes self shapes social behaviour" in Stryker and Burke (2000). The hypothesis is also in agreement with James (1890) who stated that there are as many selves as there are positions in the community that one can hold. One has an "identity" for every position in the community, which forms one of many parts of the overall or comprehensive self. There is a vast collection of diverse definitions (Sokol, 2009) available, the first coming from Weinreich et al. who postulated:

> <u>Identity</u> is defined as the totality of one's self-construal, in which how one construes oneself in the present expresses the continuity between how one construes oneself as one was in the past and how one construes one self as one aspires to be in the future (Weinreich et al., 2003, p. 120).

Next, but in less elaborate terms, Stets and Burke (2003) define identity as the understandings, feelings and expectations of the self in a social position. This is followed by Oyserman et al.'s (2012) definition of identity as the content of self-concepts and consisting of traits, characteristics, feelings and roles that defines who one is in either the past, present or future. Integrating the essence of these definitions,

the following interpretation could provide an appropriate basis from which to explore identity, namely:

> Identities are constructions of the past, present and future view of one self, based on feelings, expectations or understanding of one's social role or position. Identities are the content of self-concepts, and the parts of the overall Self.

Having defined identity and its relation to the Self and self-concepts, the types of identities and underlying theories with regard to identity development are of importance, i.e. Erik Erikson's Psychosocial Development Theory (Sokol, 2009). Explanatory and descriptive theories to be used in the discussion will include Identity Theory and Social Identity Theory.

In view of James' multiple selves (1890), Oysterman et al. (2012) postulate that identity theorists such as Stryker and Burke (2000) are of the opinion that there exist numerous identities which are stable and distinct and based on the social positions and roles of the individual. However, some social identity theorists, for example, Tajfel and Turner (2004), are of the view that identities change constantly based on social interactions – so-called cross-situational malleability. Nevertheless, both identity theorists and social identity theorists agree on three types of identity, namely, personal identity, social or collective identity, and role identity (Oyserman et al., 2012).

Personal identity, also known as the "individualised self" (Botha, Lloyd & Khapova, 2015, p. 25), according to Owens et al. (2010), identifies one as an individual. However, it is socially- and institutionally-based as it identifies the individual as such amongst other individuals in the social group or institution, for example the number, rank and name of a soldier amongst other soldiers. Alternatively, Oyserman is of the opinion that personal identity is not related to membership of a social group and states that "they are decontextualized descriptions of personal traits, characteristics and goals" (2009, p. 251). This is in agreement with Hewitt (1997, p. 93) who postulates that "[p]ersonal identity thus emphasizes a sense of individual autonomy rather than of communal involvement". Whatever the view with regard to the social influence on personal identity, this identity is clearly of a personal and static nature and would only change in uncommon situations.

Social identities, according to Tajfel and Turner's (2004) Social Identity Theory, are constructs of self, based on the groups to which the person belongs. Owens, Robinson and Smith-Lovin categorise social identities as "category-based" and "group-membership-based" identities (2010, p. 479). Given that a person belongs to multiple groups, there exist multiple identities, each requiring a specific set of actions and behaviour. Being a citizen of a country requires certain behaviour, which is not the same as the behaviour of a member of a specific church. If you adopt the membership and resultant identity of a group, one regards oneself as part of the 'in-group', while groups one is not a member of are regarded as the 'out-groups'. Tajfel and Turner (2004) postulated their principles with regard to social identity, namely, one attempts to maintain a positive social identity, which is based on comparing the in-group with the out-group. Should one find the social identity of the out-group more satisfactory, one will leave the current in-group to become a member of the more pleasing group – which comprises cross-situational malleability or social mobility.

Role Identity reflects one's membership in a specific role or social position in a social group. One requires group members for recognition of the role and someone to interact with in the selected role (Owens, Robinson & Smith-Lovin, 2010). In this context, an officer needs to be recognised by his soldiers as an officer and he needs sub-ordinates to interact with and to give orders to.

Last in terms of the identity discussion is the issue of identity development. Erikson's Psychosocial Theory (Sokol, 2009, p. 140) is used in this regard. According to Sokol (2009), Erikson's theories, although not without criticism, have had a major influence on the topic of identity development over the past 50 years. Erikson postulates that one's identities are developed throughout one's lifetime based on constant cultural and social influences. He divided a person's lifetime into eight developmental stages, which are infancy, early childhood, the activity stage, school stage, adolescence, early adulthood, adulthood and late adulthood or maturity (own names provided). According to Erikson, the primary identity development period is adolescence, which is between the ages of 12 and 24 years (Sokol's interpretation). He is further of the opinion that this is the period where the adolescent has to decide on an occupational identity and that the inability to do so will create uncertainty with regard to the reason for life, which in turn will lead to a sense of loss, discontent and dissatisfaction. Sokol (2009) is an

ardent believer that identity is imperative for development. In spite of his focus on identity development during adolescence, Erikson also acknowledges the realignment of identity in the later stages, which could be brought about by re-adapting to changing social roles, physical relocation, illness, and death, amongst others. Notwithstanding the criticism regarding Erikson's theory, his assessment that one is inextricably part of society and that it has an undeniable effect on the development and character of one's identity has influenced identity theory since 1959. Oyserman's Identity-based Motivation Theory explains this further.

Oyserman (2015) postulates that events prompt salient or prominent identities, which carry with it a motivation and readiness to act and a readiness to make sense of the world in terms of norms, values and associated goals through procedures corresponding to identity. The willingness to apply these procedures depends on the context of the prompt or cue, which is similar to Tajfel and Turner's (2004) view that identities are malleable and dynamically and situationally constructed. Even difficult actions will be regarded as important and will be executed when regarded as being in congruence with the salient or principle identity or identities. Oyserman (2015) thus says that one's current identity is socially determined and that one will act in a way that is based on the way in which the identity is prompted. Van Knippenberg (2000) states that these actions are executed because one wants to act in a manner that is in accordance with the requirements of the group. Therefore, one's salient identity motivates one to work for the group interests, which influences individual performance.

To conclude the discussion on identity, it is confirmed that the construct known as identity is a construction of oneself based on a social role or position. Tajfel and Turner's Social Identity Theory (2004) states that these identities change consistently based on social interactions. Years before, Erikson (Sokol, 2009) laid the foundation for the malleable identities model by suggesting that one is an inseparable part of at least one social group, which affects the construction of one's identities. Oyserman's Identity-Based Motivation Theory (2015) explains the process of action based on salient identity cueing. Van Knippenberg (2000) finally indicates that the existence of an identity, inextricably connected to a social group, leads to individual performance. The next paragraph addresses professional identity and the effect of the deliberation on identity on this specific construct.

2.4 PROFESSIONAL IDENTITY

Before engaging in the process of defining and discussing the concept of professional identity, the concepts of 'profession', 'occupation', 'job' and 'career' must first be clarified as these will add to the meaning and definition of professional identity. According to the online Oxford English Dictionary (2016), an "occupation is defined as what a person is engaged in; employment, business; work, toil", while a profession is described as "[a]n occupation in which a professed knowledge of some subject, field, or science is applied; a vocation or career, especially one that involves prolonged training and a formal qualification". A job is "a piece of work; *esp.* a small and discrete piece of work done as part of one's regular occupation or profession" and a career is "a course of professional life or employment, which affords opportunity for progress or advancement in the world". According to the above definitions, a 'profession' is a sub-set of 'occupation', with the distinction being that a profession requires knowledge, training and education. However, Caza and Cleary (2016) are of the opinion that 'profession' as a concept has been extended in that it has become multifaceted and that the prescriptive nature of knowledge, training and education, which qualifies a profession, has been reviewed. Lastly, McKinlay (1970) and Nuciara (1994) assert that a profession is characterised by the following indicators, namely: a theoretical and practical body of knowledge, autonomy and self-control, a unique ethic, and a professional body. This leads to the issue of professional identity.

There are numerous views on the definition and concept of professional identity. Fagermoen presents a moral philosophical case to define professional identity within a nursing environment. This definition states that professional identity is "the values and beliefs […] that guide […] thinking [and] actions" (1997, p. 435)

Beijaard, Meijer and Verloop (2004) are of the opinion that professional identity, in the context of teachers, refers to the views of others as well as the view of oneself, based on one's background, experience and what one regards as important in one's work. Beijaard et al. (2004), supported by Day, Kington, Stobart and Sammons (2006), also concluded that professional identity is not static, but is constantly evolving over time and consists of several sub-identities.

Bulei and Dinu (2013) introduce their definition by first describing an identity construct, which consists of three sub-identities, namely, the personal identity, social identity, and the institutional identity. These identities equate to the three identities described in Section 2.3, with institutional identity consisting of professional identity; and organisational identity being the equivalent of the previously described role of identity. Influencing factors are also mentioned, namely, professional development, -standards, -specialisation -organisation and -certification, role-perception, competencies, career development and self-concept. They subsequently define professional identity as "a concept composed by a combination of identities that shape the roles individuals adopt and the ways in which they behave when they perform their work" (Bulei & Dinu, 2013, p. 254). Professional identity, according to Bulei and Dinu, is primarily concerned with work performance, results, and the opinion of others. Also, it is interesting to note the fact that no mention is made of the distinction between profession and occupation. Moreover, professional identity is apparently applied to all forms of occupation.

Gibson, Dollarhide and Moss (2010) define professional identity, in the context of councillors, as the view one has of the self as a professional, one's professional competence and one's view of oneself as a member of a professional community. This definition indicates a clear difference between profession and other occupations.

Clarke, Hyde and Drennan cite numerous researchers in the field of professional identity and from several disciplines, such as teaching, indicating the excess of definitions provided and emphasising the lack of stability in the views of professional identity. They even mention the "competing definitions" provided (2013, p. 8). Clarke et al. (2013) find that in this regard, the existing research is insufficient – an opinion also expressed by Beijaard et al. (2000). Rus, Tomşa, Rebega and Apostol (2013), from a teachers' professional identity perspective, maintain that teacher professional identity research started in 1970 and by 2012 there was still no accepted definition thereof.

Caza and Cleary (2016) not only indicate that the interpretation of profession has changed, but also state that a change in the definition of professional identity has taken place. They furthermore use the concept of "work identity" (p. 31) which includes not only professional identity, but also other identities, i.e. occupational identities.

Professional identity is considered as indicative of the type of work that one does, and often, as well as the advanced training required. Caza and Cleary declare that professional identity makes use of personal identities, but is primarily social identities- and role identities-based. The closest that they have come to defining professional identity is to proclaim "professional identity as being a unique construction of who one is when one is finding ways to contribute meaningfully to society" (2016, p. 31).

A thought-provoking position on occupational identity is provided by Ashforth and Kreiner (1999) in their research regarding the so-called 'dirty work'. Dirty work is defined as occupations that are viewed as degrading or disgusting. Society gives this dirty work to people and applauds them for doing it because it is work that must be done. However, society then stigmatises the 'dirty workers' for doing their physical, socially or morally tainted work. This occurs because society regards dirty as bad and inferior, and clean as good and superior. Nonetheless, it was found through "abundant qualitative research from a wide variety of occupations" that dirty workers "tend to retain relatively *high* occupational esteem and pride" (Ashford & Kreiner, 1999, p. 413) through ideological techniques such as reframing, recalibrating and refocusing. They also attempt to secure a positive social identity by applying social weighting. Ashford and Kreiner define occupational identity as the "set of central, distinctive, and enduring characteristics that typify the line of work" (1999, p. 417).

Numerous other researchers can also be discussed and quoted in order to determine a definition for professional identity. However, as alluded to by Beijaard et al. (2000), Clarke et al. (2013), and Rus et al. (2013), research is still insufficient and opinions are still too divided. Based on the information provided in this section, one can arrive at the following conclusions.

2.4.1 Conclusion 1

Considering the variety of opinions on profession and professional identity, and for the sake of clarity with regard to the description and definitions of words and phrases, it will be assumed that a profession is a sub-set of all occupations. It is distinguished by the fact that a profession requires "extensive training, intense study and mastery of specialised knowledge" (Bulei & Dinu, 2013, p. 250).

2.4.2 Conclusion 2

Bearing Conclusion 1 in mind, it is accepted that the concepts of occupational identity and professional identity exist and that distinguishing elements are present in the respective definitions.

2.4.3 Conclusion 3

In spite of the variety of views, all researchers are of the opinion that a professional identity has an internal element that is viewed by oneself; and an external element, which is observed and influenced by society. The researchers further find that it can be regarded as a construct of three conceptual elements: personal identity, social or collective identity, and role identity

2.4.4 Conclusion 4

Neary (2014) provides a definition for occupational identity which is rather generic and, taking the above conclusions into consideration, as well as the definition of identity (see Section 2.3) into account, can be defined as follows:

> <u>Occupational identity</u> is a construction of the past, present and future perceptions of oneself based on feelings, expectations or understanding of one's occupational context, and on one's collaboration with the occupational community.

2.4.5 Conclusion 5

Again, here the researcher uses the definition of identity (see Section 2.3), and includes the three conceptual elements, namely, personal identity, social identities and role identities. Professional identity can thus be defined as follows:

> <u>Professional identity</u> is a construction of the past, present and future perceptions of oneself, based on the values, education and competencies of one's profession, and on one's ethical collaboration with the professional community.

In the above discussions with regard to professional identity, it was noticed that most of the research regarding professional identity was done within a specific context. Professional identity in the teaching, counselling, nursing, medical, legal and military practices are but a few of the fields observed. This would indicate that, in spite of certain generic features of professional identity, domain-specific attributes do merit

domain-specific research. For further inquiry into the identity of the military instructor, it is therefore required to explore professional military identity first.

2.5 PROFESSIONAL MILITARY IDENTITY

The word 'military', as in 'professional military identity', is defined as "an individual: having the characteristics of a soldier; soldierly. Of a person's attitude, bearing, or conduct: characteristic of a soldier" (Oxford English Dictionary Online, 2016). Regardless therefore of the presence of civilians in modern military forces, such as the SANDF, occasionally also employed in the same post as a soldier, for example as an instructor, this paper will investigate the identity as applied to the (uniformed) soldier[11]. This is due to the unique tasking and training which only a soldier is subjected to and which influence the military profession and professional military identity. According to Toner (1995), these tasks are to kill, to train to kill, to die and to prepare to die. For further discussion in this paper, a soldier will subsequently be defined as follows:

> A <u>soldier</u> is a member of all services of an armed force, including officers, non-commissioned officers and privates, formally trained and prepared in the unique tasks of killing and dying.

Although it is <u>accepted</u> that the inculcation of a professional military identity happens during the process of military (re)socialisation, during which civilians are turned into soldiers (Heinecken, 2014), this resocialisation is not discussed further as it is not the focus of this study. Before investigating professional military identity, however, the changing military profession must be clarified. Thereafter, the influence of one of the four tasks of a soldier, namely, to prepare to kill, otherwise known as military training, will also be deliberated on.

2.5.1 The changing military profession

Using the characteristics of a profession, as provided by Nuciari (see Section 2.4), it would have been a straightforward task to define the military profession had it not been for the dependence of the military profession on the organisation – so-called

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[11] Although the word 'soldier' normally describes a member of an army or landward force, 'soldier' for the purpose of this dissertation is a member of all military services, such as the army, navy and air force.

heteronomous professional work (Nuciari, 1994, p. 7). This means that the profession is integrated with the organisation and that the actions of the professional are controlled by the organisation, whose top structure consists of members of the same professional group. Huntington (1957), Janowitz (1960) and Moskos (1981) provide theories to describe the differences between, and changes within military organisations and the effect of these changes on the military profession.

Huntington (1957) summarises the factor that creates the uniqueness of the military profession by declaring the military profession to be that of the "management of violence" (1957, p. 11). However, in spite of its uniqueness, Huntington (1957) acknowledges the body of military knowledge, the existence of a military ethic of selfless service, and what Heinecken (2014) calls institutional autonomy. He confirms Nuciari's indicators of a profession (see Section 2.4), thereby verifying the professional status of the military. Changes to the military profession have also taken place over time. One of these changes is the issue of civil control over the military and the effect of the accompanying civil military relations on the military profession. Huntington (1957) is of the opinion that liberal civilian control over the military, specifically in a low-threat situation, will lead to a decline in military capability and professionalism. Nuciari (1994) describes this situation as deprofessionalisation and occupationalisation of the military profession. Huntington's solution to this problem is what is called objective civilian control, which allows "autonomous military professionalism" (1957, p. 83). He argues that autonomy for the military would lead to professionalisation and political neutrality, which would bring about voluntary subordination to civilian control – a soldier who does not obey is, after all, not professional.

Janowitz (1960) is a civil-military relations theorist who saw the future military as a constabulary force, operating – "executing tasks" in modern military jargon - in an environment where there is no clear distinction between peace and war. He also emphasises professionalism, but, contrary to Huntington, proposes increased civilian control. Like Huntington and Janowitz, Moskos (1981) was also concerned with internal and external influences on the military profession. He has proposed his institutional/occupational model (I/O Model) and hypothesises that the American military is moving from an institutional to an occupational format. He distinguishes

between the two entities by stating that people in an occupation identify with others doing the same work, whereas members of an institution identify with the organisation and share a sense of responsibility for the performance of the organisation. Moskos proposes that, although both models would be present, the American military consists of an all-volunteer force, following the occupational model where the military has become a job, not a calling or vocation. The SANDF is following the same route as an all-volunteer force (South African Department of Defence, 1998; South African Department of Defence, 2015a), displaying all the features of the occupational model mentioned by Moskos (1981). According to Heinecken (2014), the civilianisation of the military and the outsourcing of military work seem to undermine military professionalism and corporateness. From a South African perspective, Heinecken also mentions the politicisation of the military, racial tension, a disrupted chain of command, gender issues and confrontational unionism, all having an effect on civil-military relations, which, as alluded to by Huntington, influence the military profession.

A definition of the military profession concludes the investigation into the current position of the military professional. This definition, influenced by the role and tasks of the soldier, the effect of civil-military relations and the South-African specific challenges to the military, is proposed as follows:

> The <u>military profession</u> is comprised of well-prepared experts in the ethical application of combat power, serving under authority and entrusted to defend the State.

Military training, says Toner, "is primarily concerned with converting civilians into soldiers who will serve their country with true faith and allegiance and, at the same time, be prepared to kill and die for it" (1995, p. 40). If one were to combine the definition of military profession and Toner's military training quote, it would look like this:

> Military training is primarily concerned with converting civilians into soldiers [<u>well-prepared experts</u>] who will serve their country with true faith and allegiance [<u>the ethical application of combat power, serving under authority</u>] and, at the same time, be prepared to kill and die for it [<u>entrusted to defend the State</u>].

Clearly, the military profession is upheld by military training, which is the next construct to be discussed.

2.5.2 Military training – a generic perspective

Toner (1995) affirms the exclusivity of being a soldier by confirming the four tasks of a soldier, namely, to kill, to train to kill, to die and to prepare to die. There is no other occupation, not even that of a policeman, where the person is expected to execute these tasks on a daily basis. Snider (2003), Toner (1995) and the US Army Training and Doctrine Command (TRADOC) (2010) agree that soldiers should therefore receive training and education of the highest quality. Snider (2003) is of the opinion that soldiers, specifically officers, should acquire military technical knowledge, knowledge of human development, socio-political knowledge and lastly, knowledge of military ethics. Toner argues emphatically that even the best trained soldier without ethical education is a recipe for disaster. "Officers and soldiers not morally competent are not militarily competent." Toner (1995, p. 43) is supported in this view by TRADOC, who published the value-based US Army White Paper on The Profession of Arms (Department of the Army, 2010, p. 4). Toner further asserts that good military training resides in the concept of "fidelity to purpose" (1995, p. 48), which means to be combat ready, and thus training should result in soldiers who are highly disciplined, mentally, militarily and morally competent, and conditioned for combat. More than 200 years earlier, in the first years of the 19th century, Lieutenant General Sir John Moore started training light infantry[12] of the British Army at the Shorncliffe Camp in England (Fuller, 1924). His training methodology became known as the Shorncliffe Military System and entailed the same immutable training outcomes that were mentioned by Toner. How this training is conducted in various armed forces will now be explained in a general fashion.

To turn a civilian into a soldier, a process known as military socialisation (Heinecken, 2014), who is prepared to kill and to die requires a training system that starts with initial or foundational training. During this training, the civilian is introduced to weapons, military culture, military ethics, discipline and physical conditioning. This is followed by advanced weapon training, tactical training and the continuation of training in military culture, military ethics and discipline. Officers and non-commissioned officers undergo further advanced training and education. Military training for senior members is done

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[12] Light infantry: Infantry used as skirmishers, often dressed inconspicuously and armed with rifles instead of muskets (Keegan & Holmes, 1987).

on a military- and national strategic level and may also include numerous technical and academic programmes, even at under- and post-graduate level (Department of the Army, 2011a; South African Department of Defence, 2015a).

Except for the military training mentioned above, soldiers also undergo advanced military training, for example, military planning and strategy, which is presented at military institutions such as colleges and academies and is offered by military and civilian personnel. Soldiers further undergo education and development similar to that experienced by students in civilian occupations. These courses and programmes are presented at both military and civilian institutions.

Obtaining a generic perspective of military training paves the way for an understanding of training in the SANDF. This understanding is required in order to define the concept of professional military identity as it applies to the South African soldier.

2.5.3 SANDF education, training and development

Since the transformation of the SADF to the SANDF in 1994, education, training and development (ETD), known as Human Resource Development in military jargon, is constantly under scrutiny. This scrutiny is necessary to accommodate the new volunteer soldier, recruited within transformational and equity imperatives. Policy-makers constantly attempt to provide the most suitable policy framework for the education, training and development of the soldier, utilising modern educational technology, i.e. processes, procedures and enabling devices. The current policy will now be discussed, followed by a taxonomy of military ETD as derived from the SADR 2015.

2.5.4 The SANDF policy framework for military training

The national defence policy of South Africa, which provides guidance to all departmental policy in the Department of Defence (DOD), is called the SADR 2015 (South African Department of Defence, 2015a). Tasking the SANDF to accomplish four goals, which are sub-divided into a total of 13 specific tasks, the policy also provides a 14-year defence development trajectory within which the SANDF must evolve from its current state into a defence force befitting the threats, roles and tasks

of the future African strategic environment. The SADR 2015 is quite specific with regard to the technological requirements of the future SANDF and states the following:

> Due to the increased proliferation of technology within all realms, especially within the defence environment, Defence needs to **adapt with the rapidly changing electronic environment** (own emphasis) (South African Department of Defence, 2015, pp. 2-27).

It is also declared that:

> The Defence Force is a balanced, modern and flexible force employing advanced technologies appropriate to the African environment, and supported by science, engineering and technology capabilities (South African Department of Defence, 2015, pp. 4-2).

The SADR 2015 mandates the SANDF COLET, where instructors, directing staff, facilitators, lecturers and other ETD practitioners are to be trained, and orders the following:

> [SANDF COLET is to provide] [t]he professional training to be competent (sic) to apply the knowledge, skills and systems as proposed by the applied science of educational technology is of fundamental importance in the provisioning of education, training and development in the national education, training and development landscape as contextualised for the military (South African Department of Defence, 2015, pp. 11-12).

Furthermore, a taxonomy of the education, training and development of the South African soldier is provided (See Figure 2.2). The four types of training and education are based on a set of ETD principles and are executed according to a series of concepts. Eleven ETD Principles underpin the military ETD system of the SANDF, four of which address the ETD processes specifically (marked with *). The four principles are as follows:

2.5.4.1 Primary focus

"Notwithstanding the broader development of its members, defence education, training and development has a primary focus on the defence mandate, the development of a warrior ethos and the ability to execute combat operations" (South African Department of Defence, 2015, pp. 11-2).

2.5.4.2 Accredited learning programmes

"Defence presents accredited learning programmes that satisfy its organisational objectives, as well as its human capital requirements" (South African Department of Defence, 2015, pp. 11-2).

2.5.4.3 Distance and e-learning

"Distance and e-learning will be emphasised to enable more Reserve members to avail themselves of the opportunity for empowerment and development" (South African Department of Defence, 2015, pp. 11-3).

2.5.4.4 Appropriate methodologies

"Education and development is delivered effectively through tailored infrastructure and sufficient capacity, coupled to appropriate methodologies and delivery systems, such as blended learning and e-learning" (South African Department of Defence, 2015, pp. 11-2)
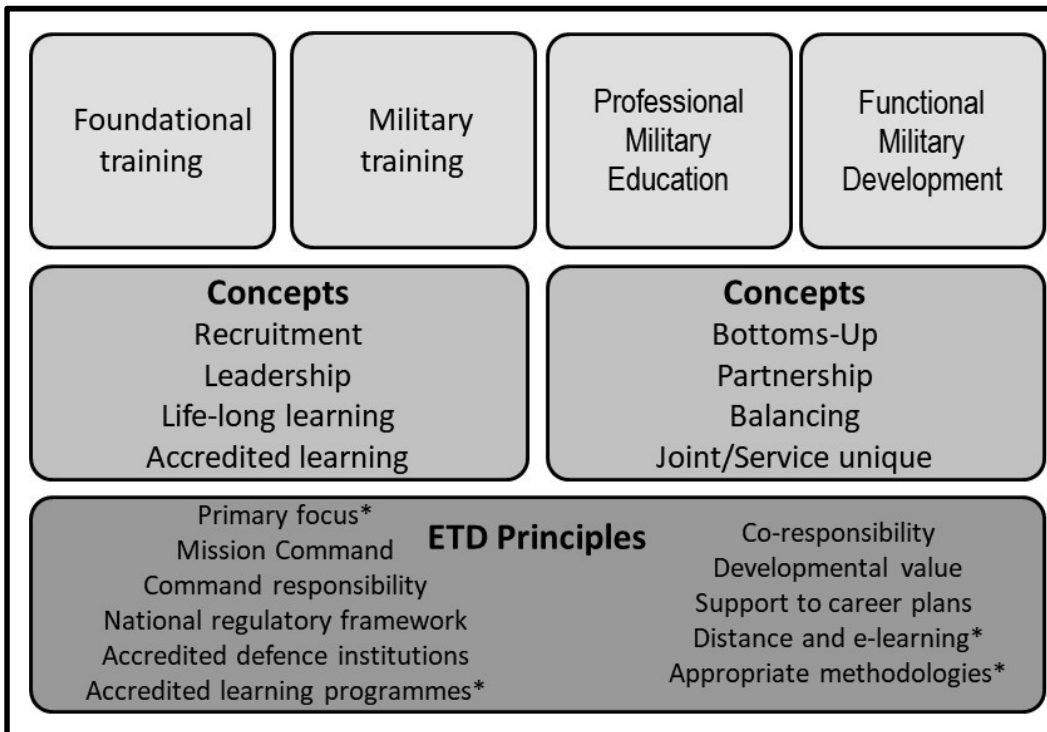
Figure 2.2: A diagram of the taxonomy of military education, training and development, as derived from the Defence Review 2015 (South African Department of Defence, 2015a).

The first two principles make it clear that the defence requirements, which are the defence mandate, the warrior ethos and the execution of combat operations, have priority over personal developmental requirements. The last two principles confirm the need for distance learning through e-learning. Foundational training is the initial orientation and training of a recruit, as well as the initial development of a young officer. Military training entails technical, tactical and operational training, which prepares the soldier to execute his/her primary task, namely, warfighting. Professional military education is presented by military institutions such as the colleges of the services, the SA National War College and the SA National Defence College in cooperation with tertiary institutions. Functional military development is the responsibility of the soldier and occurs outside of formal education and training provided by the DOD. It often entails post-graduate studies.

2.5.5 Defining professional military identity

Both professional identity and the military profession have been defined, followed by a deliberation on military training, which sustains the military profession. The question is thus whether professional military identity is simply a combination of the two definitions, or whether there is more to the professional identity of the soldier. The Norwegian and US militaries have researched the matter.

Johansen, Laberg and Martinussen (2014) studied the military identity of a selection of soldiers in the Norwegian armed forces based on the premise that military identity is influenced by a conceptual dimension, which Johansen also called "identities" (Johansen, 2013). During the Cold War, the conceptual dimension was idealism, which was based on "strong collectivism, patriotism and altruistic values" (Johansen, 2013, p. 19). The soldier therefore saw himself, and was seen by the community, as the protector of his people and country. As the Cold War ended, the role of the Norwegian soldier changed and the required tasks could no longer be reconciled with the identity – what the soldier had to do and what was expected, both by himself and the community, were no longer in harmony. With peacekeeping becoming the primary mission, Janowitz's (1960) constabulary force became a reality. Corresponding to Tajfel and Turner's Social Identity Theory of Malleable Identities (see Section 2.3) (2004), the professional military identity of the Norwegian soldiers was about to change. At the same time, a 'new' type of soldier was joining the armed forces,

namely, the Generation X and the Millennials. Individualism – a trait of the Generation X and the Millennials – became a conceptual dimension influencing the new military. Given that individualism is based on modern humanism, self-righteousness, opposition to authority and a breakdown in values, joining the military was done purely to get a job (Johansen, 2013). The military as an institution became an occupation where self-interest took precedence over organisational values and motives (Moskos, 1981). Johansen (2013); Johansen, Laberg and Martinussen (2014) and Faris (1995) have empirically shown that individualism has a negative impact on combat effectiveness.

Two additional influencing dimensions were also researched, namely, warriorism and professionalism. Warriorism expresses attitudes toward war fighting, expectations of fighting in a war and satisfaction when actually fighting in battle (Johansen, 2013, p. 22). During their research with regard to the measuring of military identity, Johanson et al. (2013) found, using a statistical procedure known as principle component analysis, that warriorism and professionalism can be combined in a single component. For this study, however, they will be regarded as separate dimensions. Professionalism, which is based on the theories of Huntington (1957), Janowitz (1960) and Moskos (1981), is a combination of shared attitudes, values, norms, skills and behaviours, as prescribed in Norwegian military doctrine (Johansen, 2013; Johansen, Laberg, & Martinussen, 2013). According to Huntington (1957), professionalism consists of the willingness to participate in peacekeeping operations, known as the expeditionary ethos; the development of skills and execution of operations (operational ethos); as well as team cohesion and fellowship (peer ethos). Research by Johansen et al. (2014) indicates that military identity, influenced by all four dimensions, contributes to organisational commitment. Professionalism, as an influencing dimension, adds to specific military skills, while individualism has a negative effect on the same specific military skills and must therefore be contained. Each of the conceptual dimensions contains values, thoughts and beliefs. Given Pajares' (1992) hypothesis that beliefs influence thinking, behaviour and decision-making, the four conceptual dimensions (idealism, individualism, warriorism and professionalism) can thus be seen as 'influencers' of the PMI (Van Putten, 2011).

Johansen's research provides insight into the military identity of the Norwegian Armed forces and a convincing model, influenced by all four dimensions, that could be used to describe professional military identity. To add to such a model, the American interpretation of professional military identity will briefly be explored.

Ricks (1997) wrote of the dissonance between the soldier (US marines in this case) and their former civilian environment after their initial training (boot camp). Although described 20 years ago, this is indicative of the rift between soldiers, with their ingrained military beliefs, values and behaviour, and civilians. What Fournier (1999, p. 283) referred to as "disciplinary logic of professionalism" and what Finnerty (2013, p. 6) calls a "rhetorical device to inculcate behavioural norms" had and still has an effect. Snider (2003) refers to it as the professional identity of the US military officers and provides four "identities", which according to Beijaard et al. (2004) could be regarded as sub-identities, namely, warfighter[13], leader of character, member of the profession, and servant of the nation. He also states that the officer should have "clusters" of expert knowledge, that is, military-technical knowledge, military ethics, human development knowledge, and socio-political knowledge. The officer should also conduct himself according to a value system with principles such as honour, loyalty, service, competence, teamwork, subordination and leadership. The next issue to turn to is the view of the PMI of the SANDF.

The latest overarching defence policy of the SANDF, the SADR 2015, does not refer to PMI at all, which is consistent with my experience of 42 years in the SADF and SANDF. PMI, as a concept, was and is not debated at all. Using the characteristics of McKinlay (1970) and Nuciara (1994) (See Section 2.4) Heinecken (1997), showed that both the SADF and SANDF adhered to the requirements of a professional institution, although flawed in some cases. However, the existence of a possible PMI was and is not formally verbalised or popularised. Based on the prevailing anti-intellectualist attitude in the SANDF, Esterhuyse (2006) alternatively is of the opinion that the SANDF still has a long way to go towards professionalism. It seems, though, that the SANDF is not unique in the case of a non-existent PMI. According to Dynes, the

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[13] Warfighter: used as a synonym for "Warrior", defined as a "person whose occupation is warfare; a fighting man, whether soldier, sailor, or (lately) airman" (Oxford English Dictionary Online, 2016)

British army provides "no clear and consistent definition for its understanding and application of the term 'professionalism' or 'professional' " (2014, p. 13).

Finally, a conceptual framework for a new PMI for the SANDF (See Figure 2.3) can be constructed by firstly using the sub-identities of the PMI as provided by Snider (2003), namely, the warrior, the professional, the servant of the nation, and the leader. As the military professional will obey the orders of the government in service of the nation, the sub-identity 'servant of the nation' will for this dissertation be included in the sub-identity 'military professional'. Considering Hewitt (1997) and Oyserman's (2009) statements that personal identity is an autonomous construct outside of societal influence, the Self is the fourth sub-identity. The sub-identities are the nucleus of the framework, combined to be the professional identity of the soldier. Central to the identity is the Self sub-identity, the autonomous construct. As this PMI is constructed for all soldiers, some of the sub-identities will be relevant for only some members, for example, the leader will apply to officers and non-commissioned officers, whereas the warrior would be applicable to all soldiers. Johansen (2013) describes the conceptual dimensions, which are idealism, individualism, professionalism and warriorism. These fulfil the function of 'influencers' or 'influencing factors'. The influencing factors affect the creation of the identity and therefore form the next surrounding layer.

The last element of the PMI conceptual framework is the identifying indicators. The realisation of the PMI is supported by these indicators and they consequently form the outer layer of the framework. In other words, they are the 'markers' that show the PMI in action and are observed by the soldier himself, fellow soldiers and society. Snider (2003) provides four knowledge clusters, which, when combined with Johansen's performance indicators (2013) (general military competence, specific military competence, organisational commitment, and leadership and character), provide inputs to the four identifying indicators. These indicators are: military-technical competence; general military competence; military ethical conduct; as well as leadership and character. Beijaard et al. (2004) use three actualisers for the professional teacher identity, which are subject matter expertise, teaching process skills, and learner developmental skills. There are similar traits as actualisers for a professional identity, which shows similarity to the PMI identifying indicators. Finally, the following definition for PMI is proposed:

<u>Professional military identity (PMI)</u> is a construction of the past, present and future perceptions of oneself as a warrior and a leader, based on military ethical conduct, general and technical military competence, as well as leadership, character and affiliation with a cohort[14] of military professionals[15].

The PMI framework is presented below in Figure 2.3; however, various elements of the PMI framework will be discussed in more detail during the discussion of the conceptual framework of PMII (see Section 2.6.3.4).

Figure 2.3: The conceptual framework for a professional military identity (PMI)

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[14] Cohort: "A band of warriors in general. A company, band; *esp.* of persons united in defence of a common cause" (Oxford English Dictionary Online, 2016).

[15] Professional: "Engaged in a profession, esp. one requiring special skill or training; belonging to the professional classes" (Oxford English Dictionary Online, 2016).

2.6 PROFESSIONAL MILITARY INSTRUCTOR IDENTITY (PMII)

For PMII to be described, the perceived factors that influence PMII, as well as the identifying indicators must be determined. Before discussing and defining a military instructor, the terms 'instruction' and 'instructor' need to be described. This is due to the inconsistencies in academic circles when addressing terms such as 'teaching', 'instruction', 'training' and even 'facilitating learning' (Slabbert, De Kock, & Hattingh, 2009). Gagné and Briggs define instruction as "a set of events, [that are communications] external to the learner, which are designed to support the internal processes of learning" (1979, p. 155). They also state that the "set of events" affects the learner in a way that "facilitates learning" (Gagné & Briggs, 1979, p. 3). Instruction, says Gagné, describe <u>all</u> events that have a direct effect on learning. Instruction therefore does not only include events delivered by another human being, but all events generated or delivered by inanimate objects, such as a computer, book, television, amongst others. There are five types of instruction, viz. direct, indirect, interactive, independent and experimental instruction, of which only direct instruction is not learner-centred and is presented by a teacher. Slabbert et al. (2009) make a clear distinction between a teacher and a "facilitator of learning" (FOL), indicating that the FOL facilitates the learning <u>process</u>, whereas the teacher accomplishes "learning to know" (2009, p. 100) and is in control of the learners' learning while applying teaching methods, skills and techniques. In terms of both Gagné and Briggs (1979) and Tetzlaff's (2009) deliberations, instruction includes all practices that would allow any of the theories of learning, such as behaviourism, cognitivism and constructivism, to be applied. Gagné's definition of instruction could be regarded as a valid, all-encompassing description of the term. An instructor could thus be defined as follows:

> An <u>instructor</u> is a person who, by means of a variety of instructional techniques and media, delivers a set of communications to a student with the purpose of facilitating learning.

2.6.1 The military instructor defined

A practice since antiquity is to refer to instructors according to the subject that they deliver. The Roman army employed *Hastiliarii*, or weapons instructors and *Tesserarii*, drill instructors. Today there are flight instructors, driver instructors, drill instructors,

weapons instructors and physical training instructors (PTIs), to name but a few. Often, the names given to instructors are peculiar to the organisation to which they belong. The US Air Force call their instructors 'military training instructors' (MTI) and the US Marines call theirs 'Drill instructors' (DI) (2016). In the British Army, a recent instruction stated that the instructors should be called 'trainers' in some cases. The SANDF uses the term 'instructor' and, recently 'military instructor'. The custom of reference to a subject also applies in the SANDF and a military instructor in the SA Armoured Corps teaching tank gunnery is referred to as a 'gunnery instructor'. Military instructors at senior institutions, such as the SA National War College or the SA National Defence College, are referred to as 'directing staff' (DS) (South African Department of Defence, 2010).

During the transformation of the SADF to the SANDF after 1994, the SANDF committed itself to the accreditation of its formal courses and programmes with the National Qualifications Framework (NQF). In terms of military instructors, the training programmes were redesigned in accordance with the prescripts of the Education, Training and Development Practices Sector Education and Training Authority (ETDP SETA) (SA Qualifications Authority, 2000). As ordered by the Defence Review 1998, the Department of Defence aligned its ETD system with the national ETD system, and training programmes for military instructors were revised accordingly. In spite of instructions to the contrary (South African Department of Defence, 2010), the name of 'instructor' was changed to 'facilitator' – not 'facilitator of learning' though - and even to 'ETD practitioner' (ETDP). In 2014, after I assumed command of the SANDF COLET, I ordered the re-instatement of the name 'military instructor' and the professionalisation of the military instructor in the SANDF. These actions included the drafting of an instructor's creed to be handed to new military instructors on special parades at SANDF COLET and the popularisation of a series of Instructor's Qualities.

With these changes in the management, training and nomenclature of the military instructor in the SANDF, identity dissonance (Warin, Maddock , Pell & Hargreaves, 2006) or identity crisis was bound to result. However, before discussing the professional identity of the military instructor, the military instructor himself must first be defined and his training described. Using the definitions of an instructor and of a soldier (see Section 2.5), the following definition is proposed:

A <u>military instructor</u> is a soldier who, by means of a variety of instructional techniques and media, delivers a set of communications to a soldier with the purpose of facilitating learning in preparation for the execution of the unique tasks of killing and dying.

As stated in Section 2.5, this study concerns the soldier as military instructor. Civilians employed in training or educational roles in the SANDF will be referred to as 'instructors'. It must also be kept in mind that a military instructor will, as he progresses in rank, be appointed in various other posts. He might be appointed outside the training environment, for example, in a logistic or operational post, or in posts in a training department where he will operate in a different role, such as training manager, commander of a training unit, training designer, policy writer, amongst others (South African Department of Defence, 2017). The military instructor, however, remains the primary profession.

2.6.2 The training of military instructors

Before deliberating on the training of the SADF and SANDF, military instructor training in the US armed forces and the UK army will be examined briefly to provide a basis for comparison. Although military instructors in the US armed forces, that is the Army, Air Force, Navy, Marines and Coast Guard, are trained in different institutions with different curricula, the US Army process provides a fair model as it bears resemblance to the other US processes and the SANDF process.

The US Army Training and Doctrine Command published a document in 2011, known as "The US Army Learning Concept for 2015". In this document, the Continuous Adaptive Learning Model (CALM) was proposed, which was to replace the instructional practices of the time. CALM is characterised by a constructivist approach, being learner-centred, problem-centred and collaborative, and making use of technology in blended learning as the method of delivery (Department of the Army, 2011a). This document gave rise to the Foundational Instructor/Facilitator Course (FIFC), which replaced the Army Basic Instructor Course (ABIC) (Eugene, 2013). The FIFC emphasised a change from an instructivist learning approach to a constructivist approach and "provides fundamental knowledge of instruction methods and facilitation techniques" (Department of the Army, 2016, p.1). The names 'facilitator' and

'instructor' are used interchangeably, but are also combined as a new name, 'instructor/facilitator'. When attending the FIFC, the US Army instructors receive initial instructor training in subjects such as instructional skills, facilitation skills, adult learning, critical thinking and how to conduct an After-Action Review. Thirty-three methods of instruction, e.g. brainstorming, demonstration and panel discussion, are provided. Ironically, the content of the FIFC, with limited exception, mirrors the ABIC content and the 33 methods of instruction are identical to the 20 methods of instruction and 13 methods of delivery in the ABIC manual (Department of the Army, 2016). More advanced and specialist courses are also provided to meet the needs of specialist trainers at various institutions. For example, at the US Army Command and General Staff College (CGSC) at Fort Leavenworth, Kansas, a four-phased developmental process is followed to provide facilitators at the College with facilitated teaching skills and curriculum development skills (Gordon & Martin, 2012). In an attempt to professionalise the instructor, badges are awarded at basic, senior and master levels. These badges are awarded according to requirements met, such as courses attended, assessments and experience.

In the UK armed forces, recent changes have also influenced the training of instructors. The army serves as a good case in point. Due to parliamentary concern about intolerable incidents at the British Army Deepcut training camp from 1995 until 2002, an inquiry was conducted. This resulted in the so-called 'Lord Blake Report' in 2002, which reported, amongst others, on the effectiveness of military instructors in the British army. In 2012, the Army Instructor Functional Competency Framework policy was introduced, not only to provide a more effective learning process, but also to address instructor selection and management. It provided an instructor competency framework that indicated which knowledge and skills an instructor should have to ensure operationally capable students. In 2013, the Defence Trainer Capability (DTC) project was launched with the aim of improving instructor skills by adding modern learning theories and technologies. Service (i.e. Army, Navy and Royal Air Force) unique training for instructors was also to be replaced by a single training of trainer's process at various military installations in the UK (Webb-Fryer, 2015). Until 2014, two courses were presented to prospective trainers, namely, the Defence Instructional Techniques (DIT) course and the Defence Train the Trainer (DTTT) course. These were followed by several other courses focusing on special skills such as coaching

and supervision, the use of simulation, and training management. A behaviouristic learning theory was followed, using instructor-led, classroom type training in order to ensure that learning took place and often to pursue 'automation' in the application of military skills. The new training of trainer's process makes use of technology, blended learning and modern instructional methods. It also proposes continuous professional development and constant scrutiny and assessment of instructors. As in the case of the US Army, the UK armed forces are also moving towards the constructivist approach in learning, i.e. to become more learner-centred. However, the more conservative British military instructor still prefers the behaviourist and cognitivist approaches (Webb-Fryer, 2015). Following the theories of Vygotsky, Wenger and Bandura, Webb-Fryer (2015) proposes a social learning approach – socio-constructivism.

In the SADF and SANDF, most of the military instructors were, and still are being trained at the SADF (later SANDF) COLET, often still known by its Afrikaans acronym KOLOT (Kollege vir Opvoedkundige Tegnologie) since 1976. The educational technology approach, initially defined as "die toepassing van kennis, sisteme en tegnieke om leer by die mens te bevorder [the application of knowledge, systems and techniques to improve human learning] (South African Department of Defence, 1997b, p. 2), was used in the design and development of courses. It ignored the resources element found in later, more modern definitions of which the latest definition, now also used in the SANDF, is "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources" (Definition and Terminology Committee of the Association for Educational Communications and Technology, 2008). Three courses were presented to the permanent force instructors. Educational Technology Part 1 (EdTech 1) (South African Department of Defence, 1997a) provided the competencies to members which would allow them to act as confident and effective instructors in the SADF/SANDF. The students were taught how to plan, prepare, present and assess training events using only behaviourism and cognitivism as learning theories, as well as four methods of instruction: the lecture, demonstration, discussion and peer/partner learning. Students were also instructed in the application of educational media. Educational Technology Part 2 (EdTEch 2) (South African Department of Defence, 1985) was an advanced course for more senior members to be deployed on the middle

management level as senior instructors or training managers. The course content consisted of learning theory, adult learning, training administration, training management, curriculum studies and instructional media. The last course was called the Train-the-Trainer course and was presented to Permanent Force members who were assigned to present the Basic Educational Technology course (BET) (South African Department of Defence, n.d.) to National Service members who were selected to become instructors. The BET courses to the National Service members were presented at several geographically dispersed training institutions such as the SA Naval College at Gordon's Bay, the Infantry School in Oudtshoorn, the School of Armour in Bloemfontein and the Air Force College in Pretoria. The instructors trained in this manner during the 'educational technology era', ranging from 1976 until 2002, were regarded as well-trained and highly effective (Scholtz, 2013; Esterhuyse & Heinecken, 2015). The effectiveness of training provided was specifically commented on by Dunnigan (1988), who regarded the SADF as the best armed force in Africa and, in terms of his effectiveness score, second only to Germany.

During the 1994 transformation period of the SADF to the SANDF, ETD also underwent a transformation and outcomes-based education and training became the approach of that time. The National Skills Development Strategy of the Minister of Labour informed the National Qualifications Forum Act and the Skills Development Act, which the new SANDF, as ordered by the Defence Review 1998, undertook to support and implement where possible (South African Department of Defence, 2012). By 2002, training programmes for the military instructors in the SANDF, namely, BET, EdTech1 and EdTech 2, were redesigned to reflect the prescripts of the ETDP SETA. Programmes, including ETD Level 1, Facilitators pathway NQF level 5 and Designers pathway, were designed and presented. Thereafter, until 2015, numerous other programmes and name changes followed (South African Department of Defence, 1997b). Ironically, the content of the EdTech courses and the new programmes show remarkable similarities. Using EdTech 1 (South African Department of Defence, 1997a) and Facilitation Skill (South African Department of Defence, 2012) as examples, the same methods of instruction, the theory lesson, demonstrations, group discussions and one-to-one training are found, as well as adult learning (more comprehensively done in Edtech 1), target group analysis, and communication. As the new programmes were credit-bearing of NQF level 4 and 5, it was found that non-

instructors also attended the programmes for the sake of 'credit-hunting', and underperformers in operational units were frequently transferred to instructor posts, ignoring the requirements of post profiles. Others were posted as instructors purely for the sake of promotion (South African Department of Defence, 2010). In the process of 'credit-hunting', soldiers attended similar programmes through civilian providers. These programmes are presented in two to five days, whereas the same or similar programmes at the SANDF COLET last three to seven weeks. Without the disciplined military environment and with 'facilitators' with no background or even knowledge of the military, discipline, professional standards and the military ethos soon dissipated (South African Department of Defence, 2015b). Training and education in the SANDF was described as 'mechanistic' and 'mark-sheet driven' (Esterhuyse, 2006, p. 35) and the quality of military instructors reduced to an unacceptable low (South African Department of Defence, 2010). On 29 September 2015, however, the Chief Human Resources of the SANDF agreed that the situation should be rectified. A new educational construct, known as collaborative instructivism, was accepted and new, competency-based programmes are in the process of being designed (South African Department of Defence, 2015b).

Following the 'educational technology era' from 1976 until 2002, the SANDF inculcated constructivist, outcomes-based education and training (OBET) as per government instruction. The current management and application of this approach led to the degrading of instructors' competencies, military ethos and discipline. This consequently detracts from at least two of the characteristics of a profession, as specified by McKinlay (1970) and Nuciara (1994), namely, the theoretical and practical body of knowledge and the unique ethic. Under these circumstances, the question remains: How can the professional military instructor identity be described?

2.6.3 Describing the PMII

Examining the definition of a military instructor (see Section 2.6.1), the dualistic nature of this profession is clear, i.e. that of a soldier that instructs or teaches. Having completed a thorough investigation and description of the soldier, the second 'personality' of the instructor, that of the teacher, must be considered. The description of the soldier and the conceptual framework of the PMI, i.e. the sub-identities,

identifying indicators, influencing factors and PMII definition will be used to construct the PMII conceptual framework.

According to Rus et al. (2013), Beijaard et al. (2000) and Van Putten (2011), there is no unanimous definition for professional teacher identity, it lacks clarity, and the composition thereof is difficult. Moreover, Clark, Hyde and Drennan's view of the matter is that professional identity is "complex, personal and shaped by contextual factors" (2013, p. 8). Therefore the teacher identity of the instructor will not be defined, but investigated in terms of possible PMII sub-identities, PMII influencing factors, PMII identifying indicators and a PMII definition. Beijaard et al.'s (2004) view that the definition of professional teacher identity is not stable, multi-faceted and consisting of sub-identities will also be taken into account.

2.6.3.1 PMII sub-identities

Using the Professional Mathematics Teacher Identity (PMTI) of Van Putten (2011) as a case in point, the sub-identities of the PMTI consist of the components of the PMTI which each can serve as a separate autonomous identity. Being a mathematics expert could, for example, be an identity on its own. The PMI has four separate sub-identities, namely the individualised self, the military professional, the warrior and, in the case of an officer or non-commissioned officer, the leader. Based on logic and deliberations by Dynes (2014), a fifth sub-identity is added to the identity of the military instructor, that of 'teacher'. Table 2.1 provides the five sub-identities with a description of each. Having described the sub-identities of the PMII, the influencing factors will be explored next.

2.6.3.2 PMII influencing factors

Beijaard et al. (2000) provide three teacher-related influencing factors: the teaching context, teaching experience, and the biographic detail of the teacher. Van Putten, who describes influencers as "the dominant factors which influence the formation of teacher identity" (2011, p. 61), suggests four influencing factors. These are biography, the tertiary environment, teaching practice, and the view of the subject. In military terms, the <u>biographic detail</u> of the military instructor is influenced not only by his personal life and upbringing, but primarily by his military experiences and the experiences of his military instructors. In a military environment, one of the first

interventions in the military life of a soldier is the inculcation of a new ethical code – new norms and values. This leads to a more homogeneous view of the value system within which the military instructor will operate.

Table 2.1: A list of PMII sub-identities and descriptions

SUB-IDENTITY	DESCRIPTION
THE INDIVIDUALISED SELF	The individualised self is also known as the personal identity. It is the core identity and is unique to the individual, while not influenced by the community. This is the place where the value-system resides and is the only identity which distinguishes the individual from all other individuals (Hitlin, 2003).
THE MILITARY PROFESSIONAL	The military professional executes the orders of the government and sees himself as a servant of the nation. Organisational values reside in the military professional, who also ensures ethical conduct, competence and teamwork (Snider, 2003). The military professional displays communication skills, expert educational techniques and character (Schatz et al., 2012).
THE TEACHER	The teacher identity distinguishes the military instructor from other soldiers. He needs to have specific educational expertise, operate within a unique environment (2000) and be able to operate effectively and efficiently in the various roles of the military instructor, befitting his rank.
THE WARRIOR	The warrior, or war fighter, is skilled in combat and is ready to partake in battle. This sub-identity is not applicable to all military instructors. Nurses and military social workers are regarded as non-warriors. Warriors often, however, have a problem with the credibility of non-warriors as their instructors (Johansen, Laberg & Martinussen, 2013).
THE LEADER	Officers and non-commissioned officers are trained military leaders who must display enhanced cognitive readiness in order to adapt and manage the ever-changing educational environment (Schatz et al., 2012).

The teaching context of a military instructor is determined by the service, i.e. army, air force, and navy, as well as the unit in which he finds himself. An infantry battalion in the army, for example, is normally more regimented than a unit in the navy. The subjects taught in a navy unit might again be of a technical nature, whereas the more physical subjects, such as musketry or fieldcraft are taught in the infantry battalion. Training differs from presentations and practical exercises to student-centric discussions on strategic matters in a defence college. Given the strong organisational culture and traditions found in military units, self-categorisation, where the instructor is the prototype that all students aspire to, leads to a process of depersonalisation and acquisition of the identity of the organisation, in this case, the unit. The instructor, if he is a strong prototypical leader, may enhance intragroup identity in a positive or negative manner (Hogg, Terry & White, 1995).

Lastly, the professional teacher identity is influenced by the teacher's domain knowledge. In the case of the military instructor, it is knowledge of the subject to be taught and knowledge of instructional techniques and other training and education related matters. Although not always true, one assumes that the military instructor has sufficient military technical knowledge to be able to teach the subject effectively. The military instructor also requires sufficient education and training knowledge and experience, mainly because his teaching might be the first, very important intervention in the formulation of a PMII.

The military identity influencing factors, as provided by Johansen et al. (2013) and used in the conceptual framework of the PMI, are individualism, professionalism, warriorism and idealism. As a soldier, the same factors should influence the identity of the military instructor, specifically the sub-identities of self, military professional, warrior and leader. It however leaves the question of the teacher sub-identity. In order to determine whether there are additional influencing factors, each of the military factors will be debated in terms of possible integration of the teacher influencing factors.

According to Triandis and Gelfland (1998), individualism is defined by four attributes: how the self is defined, the importance of personal goals vs group goals, rationality vs relatedness, and the importance of attitudes and norms. Given these four attributes, individualism is based on modern humanism and displays characteristics such as self-

righteousness, opposition to authority and a breakdown in values (Johansen, 2013). It is often typical of the members of Generation X and the Millennials, and leads to occupationalism, which rejects the idea of a 'calling' or a collective ethos in terms of military service. This further contributes to a degradation in the combat readiness of the force (Faris, 1995; Griffith, 2009). The Israeli Defence Force's conscription and reserve force duty are collective experiences and became "an integral characteristic of the individual conscience and his or her personal identity" (Ben-Dor, Pedahzur, Canetti-Nisim, Zaidise, & Perliger, 2008, p. 567). They are now facing the challenge of growing individualism, resulting in motivation by personal interest. The personal life and upbringing of the 'teacher' sub-identity of the military instructor is therefore integrated in and influenced by the individualistic influencer.

Professionalism consists of the willingness to participate in peacekeeping operations, known as the expeditionary ethos; the development of skills and execution of operations (operational ethos); as well as team cohesion and fellowship (peer ethos). Military professionalism is characterised by 'noble' characteristics, such as altruism, adherence to shared values and norms and well-honed skills – military and other, as required (Johansen, 2013). Professionalism breeds a strong organisational culture and self-categorisation, thereby influencing the teaching context, which influences the teacher sub-identity. Equally so, professionalism, specifically the operational ethos, will motivate the military instructor as a teacher to develop his educational skills – the teacher's domain knowledge – which would influence the teacher sub-identity as well.

Warriorism expresses attitudes toward war fighting, expectations of fighting in a war and satisfaction when actually fighting in battle (Johansen, 2013). The teaching context and teachers' domain knowledge are an integral part of this factor as credibility is important when teaching combat and other military technical skills - the subjects of killing and dying

Lastly, there is idealism, which is based on "strong collectivism, patriotism and altruistic values" (Johansen, 2013, p. 19). The soldier sees himself, and is seen by the community as the protector of his people and country. Idealism has diminished since the Cold War, but, according to Griffith (2009), improves under certain circumstances. Idealism is enhanced through camaraderie and unit culture, to name but two, which in turn influences the military instructor's teaching context. Moreover, as his value system

is changed during his training, his biographic detail is also influenced. Idealism leads to a more effective institutionally motivated soldier rather than an occupationally motivated soldier (Griffith, 2009).

After the analysis of the military influencing factors and the integration thereof with the teacher's influencers, it is clear that the military influencers embrace the teacher's influencers as well. The influencing factors of PMII thus remain the same as that of PMI and are described in Table 2.2.

Table 2.2: A list of PMII influencing factors and descriptions

INFLUENCING FACTOR	DESCRIPTION
INDIVIDUALISM	Individualism focuses on the individual and is characterised by, amongst others, self-righteousness, opposition to authority and a breakdown in values. The military instructor brought up in this era is influenced by these qualities and acts accordingly. The effect of this influence on the PMII should therefore be minimised through thorough training and education (Johansen, Laberg & Martinussen, 2013), or managed through individualist motivation (Ben-Dor, Pedahzur, Canetti-Nisim, Zaidise & Perliger, 2008).
PROFESSIONALISM	Professionalism is the influence on the military instructor which motivates him to participate in operations as ordered, to develop his military technical competencies and educational technology skills, and to co-operate effectively within his team. Although professionalism leads to military effectiveness (Faris, 1995; Griffith, 2009), it should not be over-emphasised as it might detract from the other influencing factors that are equally, and sometimes more important (Johansen, Laberg & Martinussen, 2014).

INFLUENCING FACTOR	DESCRIPTION
WARRIORISM	Warriorism influences the credibility of military instructors as warriors, leaders, and teachers of combat and military technical skills. Warriorism should be applied in the realm of all types of operations, not only warfighting and should not be over-emphasised (Johansen, Laberg & Martinussen, 2013).
IDEALISM	Idealism provides the affective influence through altruism, patriotism, *esprit d'corps* and a military value system to all the sub-identities of the total identity, leading to more effective military instructors and soldiers (Griffith, 2009).

2.6.3.3 PMII identifying indicators

Van Putten states that the professional teacher's identity is "*actualised* in the classroom through the functional roles that are played" (2011, p. 89), consisting of aspects or 'actualisers' that are displayed in the teacher's classroom practice. The 'actualiser' fulfils the same function as the 'identifying indicator' in this study. As in the case with the influencers, possible identifying indicators will be listed and discussed. Thereafter the PMI identifying indicators will be examined for possible integration with the teacher's factors. Van Putten (2011) provides three elements in her "observed teaching identity" questionnaire, namely, subject specialist, teaching and learning specialist and nurturer. This correlates well with the factors of Beijaard et al. (2000), being the subject matter expert, pedagogical expert and didactical expert. Combined as actualising traits or identifying indicators, it would be subject matter expertise, teaching and learning expertise, and lastly, developmental and nurturing skills. A subject-matter expert, in military context, could be teaching any subject from musketry to military strategy. Whatever the subject, logistics or warfighting, lives would be influenced directly or indirectly. Knowledge only is therefore not sufficient; the military instructor must possess subject-matter expertise. A soldier without the required teaching and learning expertise would not be able to facilitate the learning of students effectively, leading to injury or even death. Lastly, a military instructor, as a leader, does not only care for his students by imparting knowledge, but also by developing

them and showing compassion. Great generals such as Frederick the Great of Prussia, Napoleon, Rommel and Schwarzkopf (Connely, 2002), to name but a few, are well known for caring for their troops physically, emotionally and by providing proper training.

The identifying factors found in the PMI conceptual framework are military-technical competence, general military competence, military ethical conduct, as well as leadership and character. Military competence, both general and technical, compares with and includes subject matter expertise. By showing military competence, the military instructor will portray his PMII. Teaching and learning competence is, however, so important to the military instructor that it should be listed separately. This is one of the indicators of a teacher and of a military instructor and therefore becomes one of the identifying indicators of PMII. Nurturing students is also integrated in the characteristics of a leader with character. The five identifying indicators of PMII are listed and described in Table 2.3.

Table 2.3: A list of PMII identifying indicators and descriptions

IDENTIFYING INDICATORS	DESCRIPTION
MILITARY-TECHNICAL COMPETENCE	The military instructor displays above-average competence pertaining to his training as a soldier. These skills would not only include the skills of his mustering, for example, a tank crew commander, aircraft mechanic or an operational medical orderly ("ops medic"), but also tactical or operational skills becoming his rank. He is able to transfer this knowledge and skills by effective facilitation of the learning of his students (Snider, 2003).
GENERAL MILITARY COMPETENCE	The military instructor displays above-average competence relating to his general training as a soldier. These skills include general soldiering knowledge, skills, values and behaviour such as administration, writing skills and discipline. He is able to transfer knowledge and skills by effective facilitation of the learning of his students (Johansen, 2013).

IDENTIFYING INDICATORS	DESCRIPTION
MILITARY ETHICAL CONDUCT	A soldier, i.e. military instructor, without ethical knowledge and behaviour is not properly trained. The military instructor must demonstrate his commitment to ethical conduct at all times and teach it formally and informally to his students (Snider, 2003).
LEADERSHIP AND CHARACTER	In the SANDF military, instructors are leaders, being an officer or non-commissioned officer. As a leader, the military instructor must possess leadership qualities and character, which manifests itself in personal bearing, discipline, dedication and morale (Johansen, 2013).
TEACHING AND LEARNING COMPETENCE	The military instructor shows the ability to plan, organise, present and assess the correct teaching and learning for the subject effectively. He is also able to operate effectively and efficiently in the various roles of the military instructor, suiting his rank.

2.6.3.4 PMII conceptual framework and definition

Having now provided all the elements of the PMII conceptual framework (See Figure 2.4), a definition for PMII can be provided. The nucleus of the conceptual framework of PMII, as in the case of PMI, is still the sub-identities and the Self, as sub-identity is still central to identity. The teacher sub-identity forms the apex, being the defining element of the PMII, while the plinth - solid and unchanging - is formed by the military professional sub-identity. The next layer, the influencing factors, remains unchanged, but with the teacher's influencers ingrained in each one. The outer layer consists of five identifying indicators, of which military general and technical competencies are combined, and teaching and learning competencies were added. Based on the elements of the PMII, the following definition is proposed:

> Professional military instructor identity (PMII) is a construction of the past, present and future perceptions of oneself as a warrior, a leader and a teacher, based on military ethical conduct, general and technical military competence, as well as leadership, character and affiliation with a cohort of military professionals.
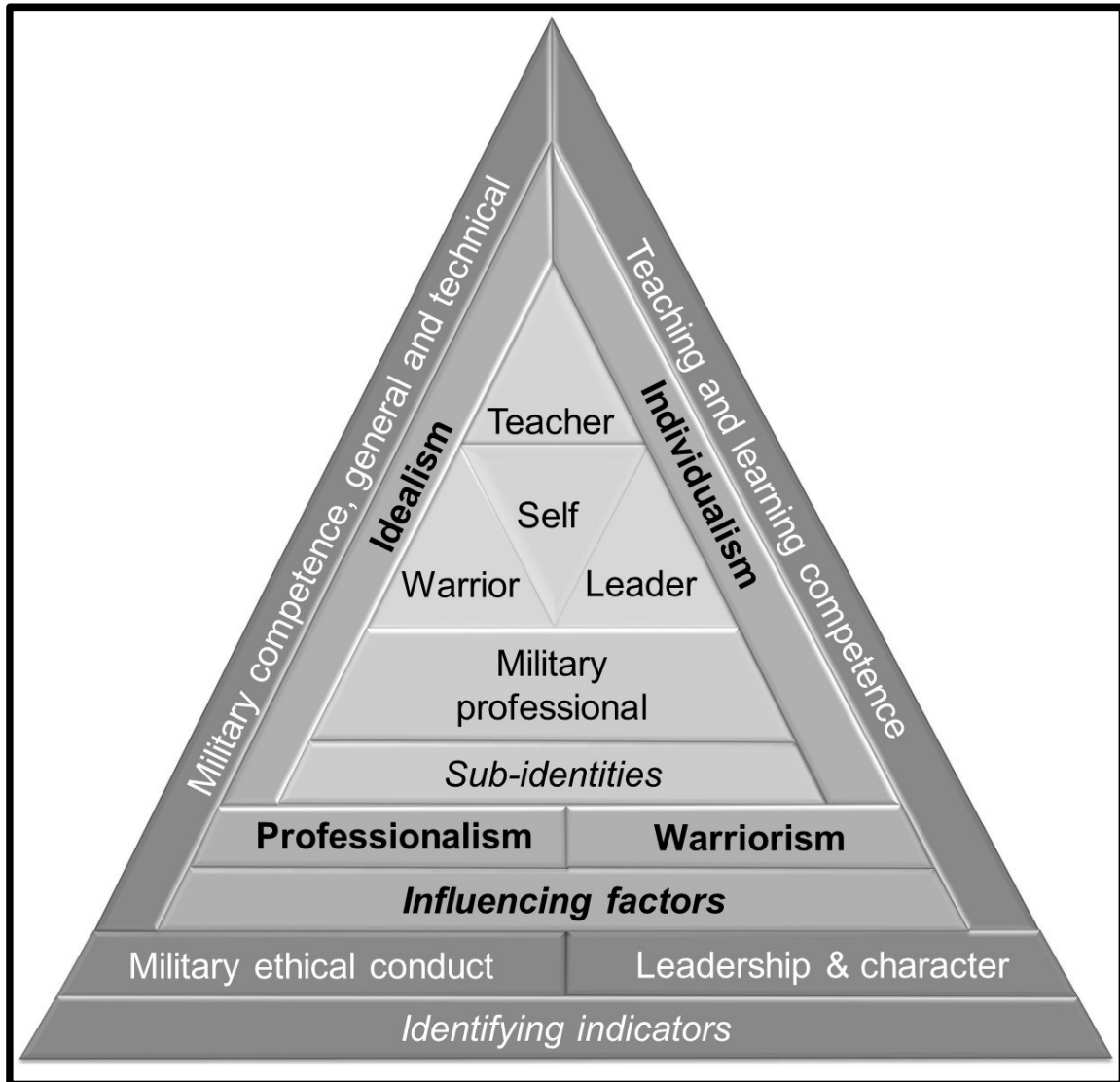
Figure 2.4: PMII conceptual framework

2.7 CONCLUSION WITH REGARD TO THE DEVELOPMENT OF THE PMII CONCEPTUAL FRAMEWORK

The PMII conceptual framework was developed first from principles defining professional identity, starting with identity theory, followed by PMI and lastly PMII. During the review of the relevant literature, it became clear that the concepts of PMI and PMII are unspecified in the SANDF, which has a detrimental effect on military instructors and instruction in general. By investigating and proposing the conceptual framework for a new educational approach, collaborative instructivism, it is believed

that this will enhance PMII with the desired improvement in the effectiveness of military instructors and their instruction.

2.8 COLLABORATIVE INSTRUCTIVISM

According to the conceptual framework of PMII, professionalism and competence are prime elements of the PMII construct. Both elements are acquired through training and education received, as well as the educational construct revealed in the training methodology of the instructor. As was illustrated (see Section 2.8.2.3.2), military instructors in the SADF and SANDF operated within an objectivist paradigm with an instructivist learning theory from 1973 until 2000 and then, without realising the paradigm shift, started to practice a Constructivist Learning Theory – in name at least. It was also indicated (see Section 2.8.2.3) that the learning theory affected professional identity as well as the quality of instruction provided. Following the instructions of the SANDF Chief Human Resources (South African Department of Defence, 2015b) to improve the quality of instruction provided to and by SANDF military instructors, collaborative instructivism as an educational construct was developed. It is also foreseen that improving the competence and professionalism of the military instructors will lead to the re-establishment of the PMII.

Before embarking on the development of the educational construct of Collaborative Instructivism, the concept of learning must first be understood. In the ensuing discourse, behaviourism, cognitivism, and constructivism as learning theories will be investigated, integrated and reduced to two learning theories, viz. objectivism, also known as instructivism, and constructivism. The educational construct known as collaborative instructivism follows next, based on Sweller's Human Cognitive Architecture (HCA) and his Cognitive Load Theory (CLT), as well as Cronjé's Two-Dimensional Objectivist/Constructivist Model. Gagné's conditions of Learning Theory and his nine events of instruction, Vygotsky's socio-constructivism, Knowles' Adult Learning Theory, Papert's constructionism, as well as team-teaching, also known as co-teaching, will be contributing theories that will also be investigated.

2.8.1 A definition of learning

Before an educational construct, such as collaborative instructivism, can be debated, the concept of learning must be defined. However, Schunk (1989), supported by Ertmer and Newby (1993) as well as De Houwer, Barnes-Holmes and Moors (2013), states that in spite of the importance of learning, stakeholders either hold separate views on the matter of definition and practice, or provide an abundance of different definitions and fail to settle on a common definition (see examples in Table 2.4). Ertmer and Newby (1993) are nonetheless of the opinion that, in spite of the semantic differences between definitions, commonalities can be found.

Table 2.4: Examples of definitions of learning

AUTHORS	DEFINITION
ROBERT M. GAGNÉ	"A change in human disposition or capability that persists over a period of time and is not simply ascribable to processes of growth" (1985, p. 3).
ALBERT BANDURA	"Learning is largely an information processing activity in which information about the structure of behavior and about environmental events is transformed into symbolic representations that serve as guides for action" (1986, p. 51).
MARTIN A. SIMON	"Learning is the process by which human beings adapt to their experiential world" (1995, p. 115).
M.M. BRAUNGART & R.G. BRAUNGART	*Learning* is defined […] as a relatively permanent change in mental processing, emotional functioning, and/or behavior as a result of experience" (2008, p. 52).
DALE H. SCHUNK	"Learning is an enduring change in behavior, or in the capacity to behave in a given fashion, which results from practice or other forms of experience" (2014, p. 3).
JAN DE HOUWER, DERMOT BARNES-HOLMES & AGNES MOORS	"[C]hanges in the behavior of an organism that are the result of regularities in the environment of that organism" (2013, p. 633).

AUTHORS	DEFINITION
US ARMY	"Cognitive, affective, and/or physical process where a person assimilates information, and temporarily or permanently acquires or improves skills, knowledge, behaviours, and attitudes" (Department of the Army, 2017, p. 45).

Although the US Army's (Department of the Army, 2017) definition of learning is quite detailed and fits well within a military environment, the definition of learning as provided by De Houwer et al. (see Table 2.4), which calls for a functional definition of "ontogenic adaption" (2013, p. 633), can be regarded as a particularly generic description and is accepted as the framework for the definition of learning for this study. De Houwer et al. (2013) explain certain words in the definition even further. 'Behaviour' is regarded as all responses to conscious and subconscious processes of the nervous system. A 'regularity' is considered as a single stimulus or multiple stimuli occurring multiple or single/multiple times respectively. Lastly, the 'changes' as a 'result' of 'regularities in the environment' confirms the causal relationship between the regularities and the change in behaviour. Adding these explanations to the framework, learning can thus be described as follows (see Figure 2.5):

> **Learning** comprises changes in <u>responses</u> to conscious and subconscious processes of the nervous system of an organism (the <u>learner</u>) caused by a single <u>stimulus</u> occurring multiple times or multiple stimuli occurring a single or multiple time in the environment of that organism.
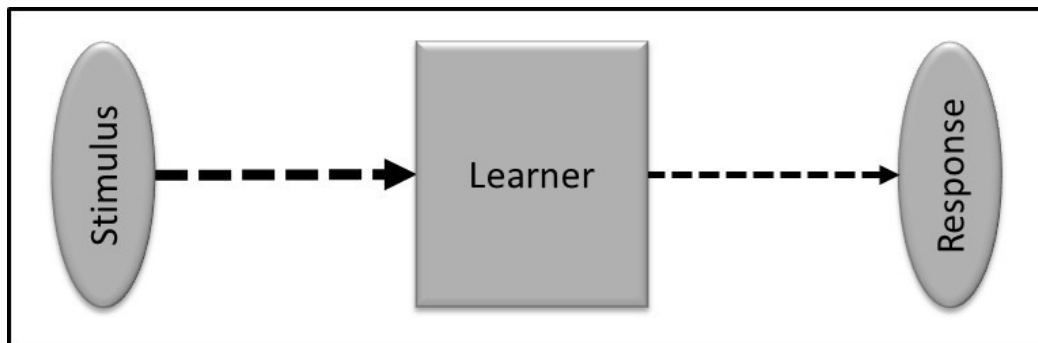
Figure 2.5 Learning according to De Houwer et al. (2013)

2.8.2 Learning theory

With learning explained, the concept of a learning theory, which provides "instructional strategies, tactics and techniques" (Ertmer & Newby, 1993, p. 44), as well as three primary learning theories (behaviourism, cognitivism and constructivism) will be explored. But first, a brief explanation of epistemology and its effect on a learning theory is required. Further discussion regarding epistemology are found in Chapter 3.

Epistemology is the philosophical study of the nature of knowledge (how I know what I know) and although there are several epistemological stances such as objectivism, constructivism, modified dualism and subjectivism (see Section 3.2), objectivism and constructivism are regarded as the two opposite poles of an epistemological continuum (Bednar, Cunningham, Duffy & Perry, 1992; Johnson, n.d.; Vrasidas, 2000). The proposal of an epistemological continuum will be entertained for the sake of this discussion, but will be refuted later in this study (see Section 2.8.2.4). Objectivism is the view that knowledge is absolute, realistic and stands separate from human perspectives. In educational terms, it implies that learners are provided with objective real-world facts to assimilate without any attempt to interpret or construct own knowledge. They are also required to confirm this knowledge through assessment. At the opposite extreme of the objectivist-constructivist continuum (Bednar, Cunningham, Duffy & Perry, 1992), constructivism, also known as interpretivism or subjectivism, states that knowledge is inseparable from the human being and is a construct of his perceptions, created through his own experiences and perceptions (Johnson, n.d.; Jonassen, 1991).

The 'Theory of Learning' or 'Learning Theory' (Ertmer & Newby, 1993; Weegar & Pacis, 2012) is often substituted by expressions such as 'educational philosophy' (Pegues, 2007), 'educational practice' (Johnson, n.d.), 'educational philosophy' (Cronjé & Burger, 2006), 'approach to learning (and teaching)' (Vrasidas, 2000), and several more. Braungart and Braungart provide a comprehensive, though concise, description to define a learning theory, namely "a coherent framework of integrated constructs and principles that describe, explain, or predict how people learn" (2008, p. 52). This will be the definition of a learning theory used in this study. The first of the three primary learning theories to be considered is behaviourism.

2.8.2.1 Behaviourism

Behaviourism (Schunk, 2014; Gluck, Mercado & Myers, 2016) originated in the 1920's when John B. Watson, using Pavlov's Classical Conditioning Theory, as well as Thorndike's "law of effect" and his Theory of Learning, known as 'connectionism', to construct the concept of human behaviourism. This concept concerns itself with the stimulus, the response and the relationship between the two and states that learning takes place when a specific, correct response is exhibited based on a specific stimulus. It focuses on observable and quantitative responses, which comprise performance, not knowledge, that is strengthened by practice or reinforcement (Ertmer & Newby, 1993). Several types of behaviouristic learning methods exist, of which Pavlov's classical conditioning, Skinner's operant conditioning and Bandura's modelling or observational learning are still used in, amongst others, nursing and health care education (Braungart & Braungart, 2008). Behaviourists therefore believe that learning consists of responding to environmental stimuli, while memory, creative thinking and problem solving are not attended to. By repetition or reinforcement, the stimulus-response action improves and can even become automatic and permanent, however, without the stimulus, the response gradually extinguishes (Ertmer & Newby, 1993). It must, however, be stated that Bouton and Moody (2004), quoting theorist Edward Tolman, postulate that learning could not only be a stimulus leading to a behavioural response without any cognitive process taking place as well. From the above explanation of behaviourism, it is clear that it deals exclusively with reality and is therefore underpinned by an objectivist epistemology.

Since antiquity until mid-1200, which was called the "Era of the Muscle" by Dupuy (1987, p. 200) through to the "Era of Gunpowder" from 1250 until 1800 (1987, p. 200) until today, military training comprised a substantial number of behaviourist training activities (Swain, 2008). In the military of the 21st century, behaviourism is still applied using 'chaining' or automatic execution of procedures to train for events where quick reaction is required, for example, the execution of battle drills. Battle drills are defined as "a collective action rapidly executed without applying a deliberate decision-making process" (Department of the Army, 1992, p.273) and are intended to execute critical actions without orders with the aim of saving time and lives. A battle drill is repeatedly

practiced by executing the series of actions, initiated by real or simulated stimuli. Good work is rewarded and poor performance punished – typical operant conditioning.

Behaviourism appealed to psychologists for its deterministic, qualitative nature. However, in the 1950s, one of the disadvantages of the Behaviourist Theory, namely, the view that all learning comprises habit-forming without any creative thought, could no longer be tolerated as it could not fully explain the intricacies of human behaviour. Chomsky, a linguist, Estes, Bower, Miller, and other psychologists started to explore mathematical psychology and human memory, focusing on complicated mental processes and challenging the behaviourist views. Their research lead to a new theory, namely, cognitivism (Ertmer & Newby, 1993; Gluck, Mercado & Myers, 2016).

2.8.2.2 Cognitivism

Cognitivism (Schunk, 2014; Ertmer & Newby, 1993), which gained prominence in the mid-1950s to the mid-1960s, shares some similarities with behaviourism, such as the focus on the environment, as well as the procedure of practice with corrective feedback, both leading to and reinforcing the response of the learner. However, cognitivism differs from behaviourism in the sense that it concerns the communication of information by a knowledgeable person and emphasises mental processes, which lead to a response. It regards the learner as an active member of the learning process, involved with knowledge acquisition, formatting, understanding, storage and retrieval. Memory is important in cognitivism as learning is viewed as the storing of information in memory in a methodical manner (Ertmer & Newby, 1993). Cognitivism, as in the case of behaviourism, deals with objective reality and is therefore supported by an objective epistemology. The theories of four prominent scholars, Piaget, Gagné, Bandura, and Merrill, affect this study.

Piaget is regarded as a cognitive psychologist and is well-known for his theory on cognitive development, which paved the way for cognitivism with an emphasis on acquiring and understanding knowledge. His theory also led to the constructivist learning theory (see Section 2.8.2.3).

Gagné, is a cognitive educationist (Hannum, 2007), in spite of the fact that he is also regarded as a behaviourist (Weegar & Pacis, 2012). He presented the following

theories, which are all of importance to this study and specifically to collaborative instructivism.

The elements of the learning event and the conditions of learning. Gagné postulated that the occurrence of learning, which he calls a "learning event" (see Figure 2.5 and Figure 2.6), happens when a stimulus (or multiple stimuli) stimulates the senses of a learner. Inputs, prompted by the stimulus, are also recovered from the learner's memory and together the stimulus and the retrieved memory lead to an action, known as a response or as a change in performance by the learner. The previously learned information, residing in the memory, is called the internal conditions for learning, while the external conditions for learning comprise factors such as the instructor and various instructional techniques. The nature of the instructional technique is determined by the required learning outcome (Gagné & Briggs, 1979).
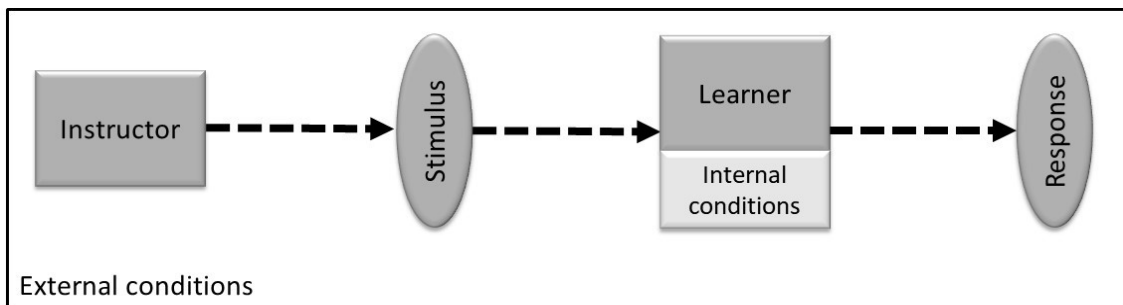
Figure 2.6: The elements of the learning event according to Gagné (1985)

Learning outcomes. According to Gagné and Briggs (1979), there are five possible learning outcomes from a learning event, falling under three domains: the cognitive, psychomotor, and affective domains. The five outcomes encompass intellectual skills, cognitive strategies, verbal information, motor skills, and attitudes. All of the learning outcomes are relevant to military training as the description and examples in Table 2.5 illustrate (see also Figure 2.7).
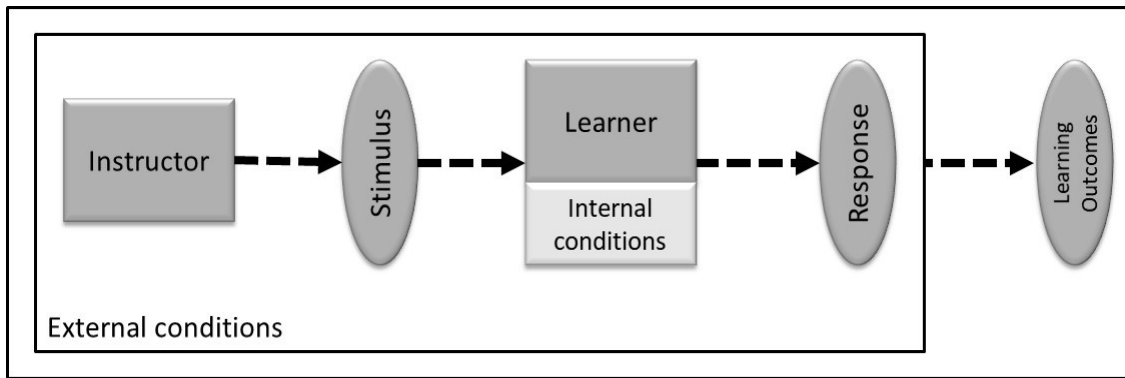
Figure 2.7: Learning event with outcomes (Gagné, 1985)

The events of instruction. Gagné suggests that during a learning event several sub-events occur, which interact with or influences the learner to learn. He proposes that the content of these sub-events, which are communications with the learner, vary according to the learning outcome. The learning outcomes are described in Table 2.5, while the events of instruction, according to Gagné (1985) are listed and briefly explained in Table 2.6 .

Table 2.5 Learning outcomes with descriptions and military examples

LEARNING OUTCOME	DOMAIN	DESCRIPTION AND EXAMPLE
INTELLECTUAL SKILLS	Cognitive	The ability to use rules and symbols to interact with the environment. Example: reading and applying the prescripts in battle orders to successfully effect the battle
COGNITIVE STRATEGY	Cognitive	Using the method of memory recall Example: using an acronym to remember the factors which must be taken into account when planning an attack.
VERBAL INFORMATION	Cognitive	Acquiring and learning information that can be shared verbally. Example: describing the principles of war.
MOTOR SKILLS	Psychomotor	Executing physical actions with precision, smoothness and at the right time. Example: shooting a rifle accurately.

LEARNING OUTCOME	DOMAIN	DESCRIPTION AND EXAMPLE
ATTITUDE	Affective	The internal state of the learner, which effects his choices or actions. Example: using the manoeuvrist approach instead of the attritionist approach when planning and executing military operations.

Table 2.6: Gagné's nine events of instruction (1985, p. 170)

EVENT	DESCRIPTION
GAIN ATTENTION	The learner's interest is aroused by means of stimulating verbal or non-verbal communication, such as a thought-provoking question, an interesting fact, music and video, amongst others. Provide the learner with surprise or novelty in order to activate neural receptors.
PROVIDE THE OBJECTIVE	By providing the objectives for the learning event, specifically in the shape of a competency-based outcome, the learner is motivated and an expectation for learning is created.
STIMULATE RECALL OF PRIOR LEARNING	By asking questions about, demonstrating or practising relevant prior learning, short-term memory (see Section 2.8.3.1) is activated and learning is facilitated.
PRESENT NEW CONTENT	The new content is presented in a manner using different media and instructional methods, which provides the appropriate stimuli for effective learning.
PROVIDE LEARNING GUIDANCE	The learner is supported in preparing the information for storage in long-term memory (see Section 2.8.3.1). The instructor stimulates the effort by providing examples such as case studies.

EVENT	DESCRIPTION
ELICIT PERFORMANCE	The learner now practices the new knowledge in order to confirm understanding and to enhance retention.
PROVIDE FEEDBACK	As the learner practices the new knowledge, he should be assessed with regard to his performance and feedback must be provided. The feedback need not be formal but could even be by means of a smile or a nod.
ASSESS PERFORMANCE	Assessing performance confirms that learning has indeed taken place.
ENHANCING RETENTION AND TRANSFER TO THE WORKPLACE	Retention is enhanced by continued application of knowledge or skills using a variety of novel tasks to improve performance. These tasks must preferably be associated with the work environment.

Gagné's theories provide insight into the practical application of cognitivism as a learning theory. Bandura's Social Cognitive Theory and his insistence that mediational processes are essential for cognitive learning elaborate on and even enhance Gagné's postulations.

Bandura's Social Learning Theory, later called the Social Cognitive Theory, involves learning by interaction between the person, behaviour and the environment, known as the reciprocal causation model, and observational learning. The learner observes the behaviour of a model, i.e. receives information from the model and then responds to it by either imitating the behaviour, or refraining from imitation, or displaying other specific behaviour. Observational learning can also reduce self-restraint with regard to unacceptable behaviour such as violence, for example, by playing violent video games or watching violence in movies or on television (Grossman, 2001). Bandura therefore combines behaviourist and cognitivist beliefs by staying with the impulse-response process but postulating that observational learning - behavioural responses through imitation – cannot happen without mediational processes taking place (Bandura, 2005).

Merrill provided an instructional approach in 2002, based on what he called the First Principles of Instruction. Merrill believed that the First Principles, being present in most instructional design models, provide a blueprint for good instruction (Hannum, 2007).

The first of Merrill's First Principles is problem-centredness, where learners should be engaged in real-world problems in order to stimulate learning. The second principle, activation, postulates that learning is stimulated when existing knowledge is used to underpin (activate) new knowledge. Information or knowledge recall should be avoided and replaced by demonstrating experience. Demonstration, learner guidance and the use of media stimulate and promote learning according to the third principle. Application, the fourth principle, states that the application of new knowledge, specifically as a variety of problems to be solved, followed by feedback, stimulates learning. The integration of new knowledge in the everyday life of the learner to stimulate and confirm learning is the fifth and last principle (Merrill, 2002).

Combining the theories of Gagné, Bandura and Merrill (see Figure 2.8), three activities become clear: the presentation of the content, by whatever means; the practising and assessment thereof by application, guidance and performance eliciting; and the presence of mediational, i.e. mental, processes.

All the above theories distinguish cognitivism from behaviourism, but also combine cognitivism and behaviourism – an important submission in this study. Given the mention made by Gagné, Merrill and Bandura of methods and media, which in essence defines educational technology (see Section 2.6.2), the learning event (see Figure 2.9) can graphically be depicted as the instructor, using media and various instructional techniques, all elements of the external conditions for learning, providing a stimulus (or multiple stimuli), which stimulates the senses of the learner. Inputs, prompted by the stimulus, are also recovered from the learner's memory. Together, the stimulus and the retrieved memory lead to an action known as a response by the learner, leading to learning outcome.
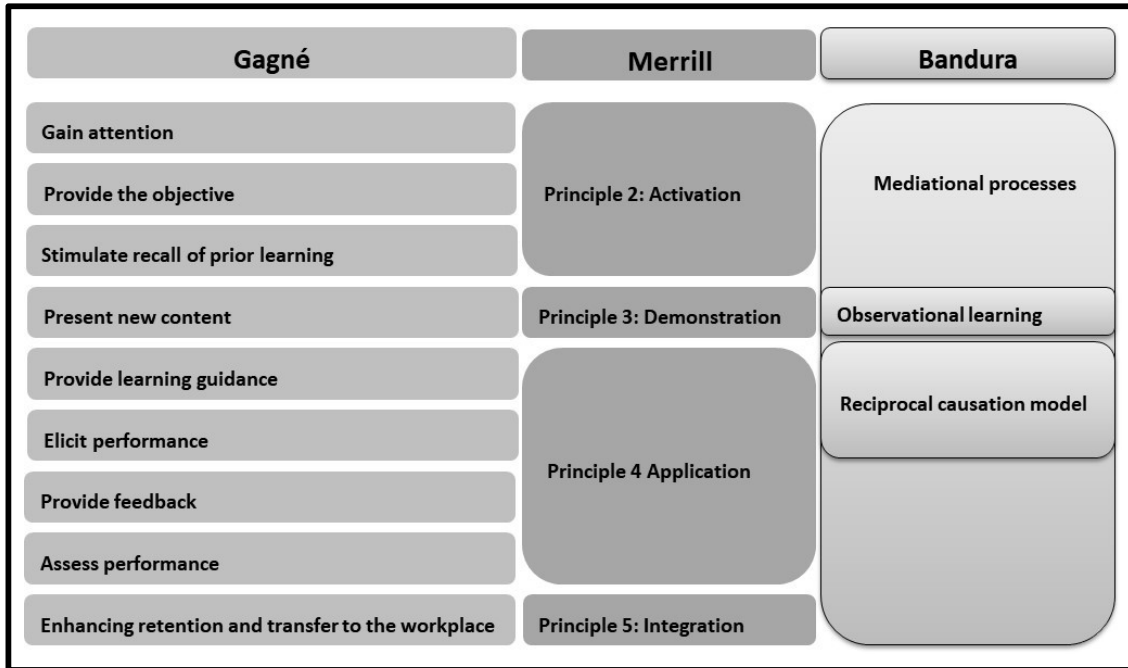
Figure 2.8: Comparing the theories of Gagné (1985), Merrill (2002) and Bandura (1986)
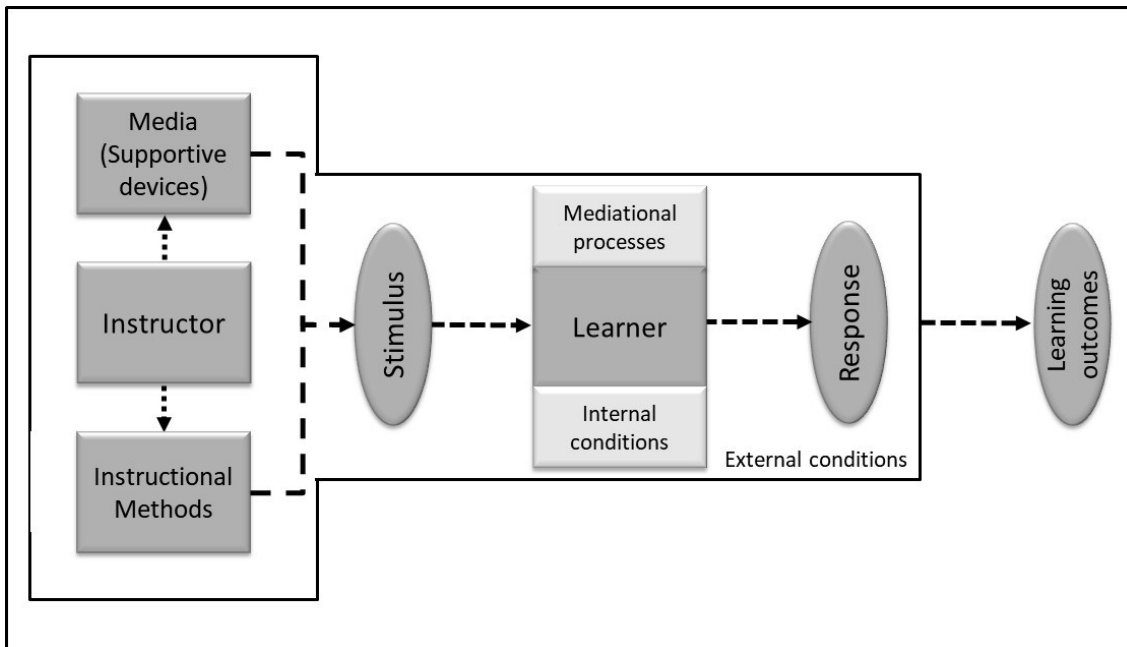
Figure 2.9: The learning event based on the theories of Gagné (1985), Merrill (2002) and Bandura (1986)

According to Halff, Hollan and Hutchins (1986), cognitivism plays a significant role in the military environment. They site tactics, training systems, maintenance and aircraft control as but a few of a myriad of diverse tasks in the military for which courses must be presented to a wide range of students. Using tactics as an example, a commander must be able to do situational assessment, which includes the ability to use detailed knowledge of the organisation and capabilities of own forces and enemy forces and the ability to 'read' a two-dimensional map. In other words, he must be able to construct a mental representation of three-dimensional terrain based on a two-dimensional topographical map. He must also be able to plan his actions in order to execute his mission, informed by the situational assessment, and then test and improve it by means of a manual or computer-based simulation, commonly known as a 'war game'. Next, the execution of the plan must be explained to his subordinates, followed by logistical preparations and often a rehearsal of the plan. Finally, the plan is executed, led and controlled by the commander (South African Department of Defence, 2013). This includes constant re-assessment of the situation and re-planning the next actions. Halff et al. (1986) agree that commanders require advanced thinking skills in order to plan, organise, control and lead effectively in combat, particularly during irregular warfare with non-state-participants with no rules or doctrine, and during full-spectrum operations, also known as the "three-block war"[16]. They also concur that a cognitivist approach to the learning of cognitivist skills to the point where it becomes automated or second nature is required. However, it is also agreed that new technology-based approaches are required in order to save time and reduce the need for instructors.

2.8.2.3 Constructivism

Constructivism, as a learning theory, proposes that knowledge is a construct of and by the learner based on his own experiences. Knowledge is therefore constructed and not absorbed (Slabbert, De Kock & Hattingh, 2009; Johnson, n.d.; Ertmer & Newby, 1993; Schunk, 1989). According to the Constructivist Learning Theory, there is no stimulus – response action, only construction through reflection and abstraction (Ertmer & Newby, 1993). The Constructivist Learning Theory is informed by a constructivist/interpretivist/subjectivist epistemology, which states that knowledge is

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[16] The "three block wars" refers to an article by General Charles C. Krulak (United States Marine Corps) in which he described the types of actions to be expected and decisions to be made by even a junior commander on the modern battle field (1999).

inseparable from the human being and is a construct of his perceptions, created through his own experiences and perceptions (Jonassen, 1991; Johnson, n.d.). Three scholars laid the foundation for constructivism as a learning theory, namely, Dewey, Piaget, and Vygotsky. Papert added another dimension to constructivism and called it 'constructionism'.

Dewey was of the opinion that "[a]n ounce of experience is better than a ton of theory simply because it is only in experience that any theory has vital and verifiable significance" (Slabbert, De Kock & Hattingh, 2009, p.46). Dewey made two primary contributions to constructivism, firstly his view that authentic learning is achieved through immersion in real-life experiences, which led to Kolb's concept of experiential learning, and secondly, his opinion that reflection on the real-life experience aids authentic learning (Slabbert, De Kock & Hattingh, 2009). In this regard, Slabbert et al. quote Dewey as saying that "[t]hinking is a method of reconstructing experience, a method of reflecting on experience; it is a uniquely human activity and is our only guide to further action" (Slabbert, De Kock & Hattingh, 2009, p. 46).

Piaget studied the development of children and concluded that knowledge is not something which is taught, but which is constructed through experience by the individual and through interaction with his environment. Piaget's theory of constructivism, however, ignored influencing factors such as individual preferences and perspective, as well as the use of media (Ackermann, 2001).

Vygotsky, a Soviet psychologist, used to be a cognitivist, but could not accept the hypothesis that learning could happen as an individual activity. His view, known as social constructivism, is that all cognitive functions are initiated and influenced by social interaction, that learning is not a response to stimuli, but rather a response to the interpretation of stimuli, mediated by physical and abstract 'tools' and that culture and language are essential for cognitive development (Vygotsky, 1978). This view gave rise to the 'Zone of Proximal Development' (ZPD) Theory, which Vygotsky himself explains as follows:

> The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers (Vygotsky, 1978, p. 86).

The ZPD theory led to the concept of the 'more knowledgeable other' (MKO), which describes the adult and more capable peer (Vygotsky, 1978), as well as the concept of scaffolding, which entails MKOs helping a less knowledgeable person to achieve his goals. In practical terms, Vygotsky's ZPD theory suggest that learning should be a social, collaborative activity, utilising scaffolding and real-world application. This view is supported by Slabbert et al., who regard the learning process as "radically socio-constructivist" (2009, p. 57), as well as by Sirious et al. (2008), who call the social influence, which includes language and stimuli by facial recognition on brain development, 'ensocialment'. Ensocialment also entails developmental stimulation by the MKO according to Vygotsky's ZPD theory.

Socio-constructivism leads to collaborative learning and, according to Harris and Harvey (2000), team teaching results in collaborative knowledge construction. Thus a short discussion on team teaching, also known as co-teaching or collaborative teaching (Hanusch, Obijiofor, & Volcic, 2009) is appropriate. Numerous definitions for team teaching exist, but, according to Wenger and Hornyak (1999), it is two or more teachers who share the responsibility for a group of students. The sharing of responsibility is determined by, amongst others, the expertise of each teacher and provides the student with multiple perspectives, increased participation in the learning event, and improved evaluation of student performance (Anderson & Speck, 1998). Team teaching is obviously not only constructivist by nature, but could also include objectivist practices, the effectiveness of which are attested to by researchers such as Wenger and Hornyak (1999), Anderson and Speck (1998), Harris and Harvey (2000), Chanmugam and Gerlach (2013), as well as Hanusch, Obijiofor and Volcic (2009), all with different audiences. Military instructors, often allocated in teams and consisting of a senior in rank and several lower ranking instructors, to groups of soldiers to train and team teaching are often used (Department of the Army, 2016).

In the educational policy of the SANDF, it is stated emphatically that adult learning, also known as andragogy, must be one of the pillars of military training. Knowles, known as the father of andragogy, is of the opinion that

> The parallels between moderate views of constructivism and andragogy are rather striking. Both stress ownership of the learning process by learners, experiential learning, and problem-solving approaches to learning. However, andragogy and the

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more extreme views of constructivism are not compatible (Knowles, Holton & Swanson, 2005, p. 193).

Knowles' six principles of adult learning (Knowles, Holton & Swanson, 2005, p. 141) are: the learner's need to know, self-directed learning, the learner's prior experience and readiness to learn, the learner's learning orientation, and his motivation to learn (Huang, 2002). These principles point so strongly to socio-constructivism that Knowles' andragogy can be regarded as an inseparable result thereof. Adult learning will consequently not be discussed as a separate approach.

Papert was a constructivist and confirmed the theories of Piaget and Vygotsky. He therefore believed that knowledge is constructed in a social environment, supported by other people, material sources, culture and society. However, Papert had an additional view of constructivism, which caused him to coin the term 'constructionism'. Constructionism still emphasises the process of learning through the construction of own knowledge, but adds to it the appropriation of own knowledge through experiencing and experimenting by using physical entities and artefacts (appropriation tools), such as computers and plastic building blocks (Papert, 1990; Ackermann, 2001).

It was shown that behaviourism (see Section 2.8.2.1) and cognitivism (see Section 2.8.2.2) are applied in military training. Constructivism is also relevant, for example, in the training of senior personnel in higher cognitive skills, such as the application of the principles of war in the planning of an operation. By using constructivist techniques, for instance, collaborative learning, which is based on Vygotsky's social constructivism, action learning and simulations (war games), students can construct their own knowledge and meaning of the principles and how to apply these in operational planning. In the US Army, the constructivist approach to the teaching of military subjects, combined with technology-enabled learning, is increasingly being taught and implemented (Department of the Army, 2011a) (Department of the Army, 2016). In the SANDF, in spite of expressing the need for all three learning theories in education policy, military instructors were trained in instructivism from 1973 until 2000, but for the past 17 years only in the constructivist approach (South African Department of Defence, 2012). This led to uncertainty and a lack of confidence amongst military

instructors, who now called themselves 'facilitators' instead of instructors, which inevitably led to a degradation of the PMII.

2.8.3 Instructivism and/or constructivism

During the discussion of the three learning theories, behaviourism, cognitivism and constructivism, the objectivist epistemological stance of behaviourism and cognitivism was confirmed (Bednar, Cunningham, Duffy & Perry, 1992), as well as the constructivist/interpretivist/subjectivist epistemology of constructivism. Johnson (n.d.) refers to the educational application of the objectivist learning theories as instructivism, and the constructivist/interpretivist/subjectivist educational application as constructivism. It was also stated that the two stances are, for the time being, regarded as the two extremes of an objectivist-constructivist continuum (Johnson, n.d.; Bednar, Cunningham, Duffy & Perry, 1992). Bednar et al. (1992, p.19) clearly affirm that "it is inconceivable to mix epistemologies in an instructional program". If this is the case, then all instructional design must be either one of the two and one cannot combine instructivism and constructivism. However, researchers such as Kirschner, Sweller and Clark (2006) refute the effectiveness of a purely constructivist view. Cronjé's two-dimensional objectivist-constructivist model (Cronjé, 2005; Elander & Cronjé, 2016) shows that effective instruction should consist of a combination of the two learning theories, rather than one or the other. However, in order to further discuss a blended objectivist-constructivist view, one must have an understanding of Sweller's human cognitive architecture, his Cognitive Load Theory and of neuroconstructivism.

2.8.4 Sweller's human cognitive architecture (HCA), Cognitive Load Theory (CLT) and neuroconstructivism

To appreciate Sweller's HCA and CLT, one must first have an understanding of the Human Memory Model of Atkinson and Shiffrin (1968). According to the Multi-Store Model of Atkinson and Shiffrin, human memory consists of three components: the sensory registry, also known as the sensory memory; the short-term store or short-term memory, which acts as a working memory as well; and a long-term store or long-term memory. Although there are numerous diverse models that attempt to explain memory, all agree that memory comprises three basic processes, viz. the encoding of

information in a format that allows <u>storage</u> or retention in the brain and the <u>retrieval</u> of the stored information to be used where required.

The <u>sensory register</u> receives information from the environment via the five senses. Grivas and Letch (2016) are of the opinion that the input from each of the senses are sent to its own specific sensory register, located in different areas of the brain, where it remains for 0.2 to 0.4 seconds in the case of visual inputs or 3 to 4 seconds in the case of auditory inputs before it vanishes. Some inputs, however, remain for further processing through a process which Gagné calls "selective perception" (1985, p. 53). This is where the learner ignores certain inputs and attends to others, which then become inputs to the short-term memory. For example, while advancing through enemy terrain, soldiers would hear all the sounds of nature, as well as sounds created by their own forces walking, breathing, coughing, the rattling of equipment, and so forth. The distinctive thump of a mortar round dropped in a mortar tube some distance away, however, would immediately be attended to, as it could mean that the soldiers would be under mortar fire soon. All other sounds would be ignored and would disappear as the soldiers concentrate on the sound of the potentially life-threatening mortar (Grivas & Letsch, 2016; Gagné, 1985).

The <u>short-term memory</u>, located in the prefrontal cortex, receives information in encoded format from the sensory memory. According to Gagné (1985), information in the short-term memory is stored primarily in acoustic form (the learner hears the information internally) and articulatory form (the learner hears himself saying the information), but acknowledges the existence of other forms of short-term memory, such as the visual form, (the learner sees a visual image). Short-term memory can hold seven at the most or two items at the least at any time in memory and it keeps information for 15 to 30 seconds, unless it is uninterruptedly repeated – a process known as rehearsal - in which case it will remain in memory longer. Memory is lost due to decay, which is when the item of memory is not rehearsed and fades away, or by displacement, when the item of memory is replaced by another item. Memory capacity can also be increased by using a method known as 'chunking', where information, for example, the letters SDFGHJ are grouped together as chunks, SDF and GHJ, which would then be remembered as two items of information instead of six.

Moreover, short-term memory serves as <u>working memory</u>, where encoded information from the sensory memory and retrieved information from long-term memory are combined and analysed. Here, problems are solved and information is prepared for long-term memorising (Grivas & Letsch, 2016). It is a mental workplace and is referred to as the "seat of consciousness" (Andrade, 2001, p. 72). Given its restricted capacity, the short-term/working memory has several limitations. During research done by Leach and Griffith (2008) following parachuting fatalities due to the failure of parachutists to execute emergency recovery procedures known as 'no pull', the issue of working memory resource depletion came to the fore. According to the processing efficiency theory of Eysenck and Calvo (1992), worry, anxiety and interfering thoughts can limit working memory volume by occupying much needed working memory capacity, i.e. increase the cognitive load of the working memory to the point of cognitive overload, resulting in reduced performance (Kirsh, 2000; Leach & Griffith, 2008; De Jong, 2010). Leach and Griffith (2008) also speculate that alternatively, worry and anxiety might deactivate communication between short-term and long-term memory. According to Ericsson and Kitsch (1995), though, the working memory restrictions do not apply when retrieving information from the long-term memory for the purposes of processing or combining. This led to a theory of "long-term working memory", which is a mechanism based on the use of long-term storage of information.

Long-term memory, found throughout the cerebral cortex of the brain, consists of several types of memories (See Figure 2.10) and has limitless capacity, which is never lost. Retrieval, also known as recall, of information to the working memory is only influenced by the ability to recall, not the loss of memory (Gagné, 1985). Explicit memory, also called biological primary knowledge (Sweller & Sweller, 2006) is information that is consciously encoded, stored and retrieved and consists of episodic memories, which are autobiographic memories of personal experiences and semantic memories that consist of acts, knowledge and expertise. Implicit knowledge – which Sweller and Sweller call biological secondary knowledge (2006) - alternatively, does not require conscious retrieval and the learner is not even aware that learning has taken place, for example, learning to speak. Two sub-memories exist, the first of which are procedural memories, which are motor skills that are executed automatically without deliberately thinking about it. Secondly, classically conditioned memories are

acquired through repetitive exposure to a stimulus, resulting in a response, which include emotions and reactions such as fear and anxiety.
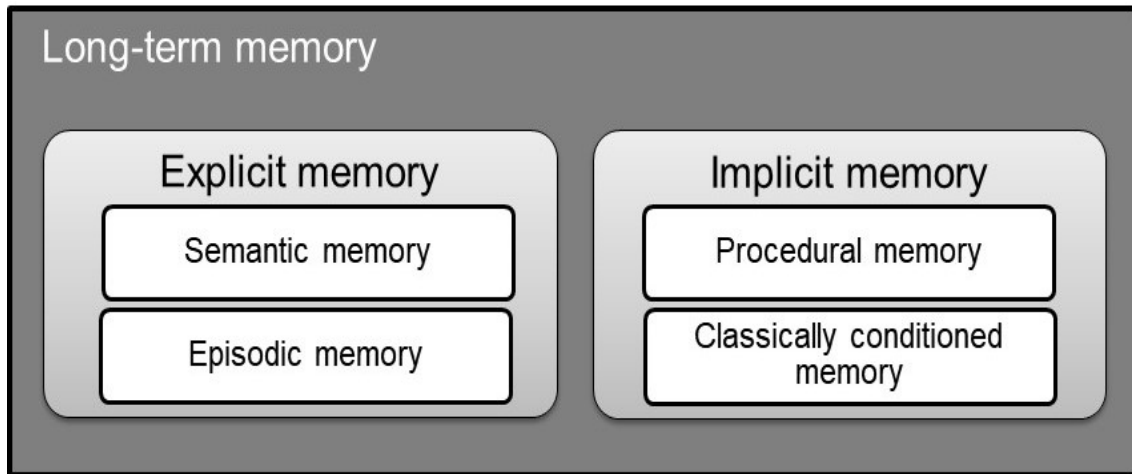
Figure 2.10: Types of long-term memories (Grivas & Letsch, 2016)

In view of the Atkinson-Shiffrin Multi-Store Model (1968), Sweller conceived the idea of HCA and CLT (Sweller, 1994). He defines HCA as "[t]he manner in which structures and functions required for human cognitive processes are organized" (Sweller, 2003, p. 370) and compares it to a natural information processing system by using five principles (Sweller, n.d.; Sweller & Sweller, 2006; Ericsson & Kitsch, 1995). The principles and their description are summarised in Table 2.7.

Table 2.7: The five principles of Human Cognition according to Sweller (n.d.)

PRINCIPLE	CONCISE DESCRIPTION
THE INFORMATION STORE PRINCIPLE	Although human long-term memory has a vast amount of information, it does not only exist as a memory, but is central to all cognitive activities. The huge quantity of information in the long-term memory is used for problem-solving, among other things. However, problem-solving skills are domain-specific.

PRINCIPLE	CONCISE DESCRIPTION
THE BORROWING AND REORGANISING PRINCIPLE	Once acquired, information in the long-term memory must be preserved and increased. This is done through visual or auditory transmission from one individual to another, i.e. knowledge borrowing or transfer. Mirror neurons, firing in the same manner as when action is taken or observed hearing an auditory description of the action, confirms the value of imitation as a learning mechanism (see Section 2.8.2.2.).
RANDOMNESS AS GENESIS PRINCIPLE	When knowledge transfer is not available to acquire new knowledge, a problem-solving technique must be used, in which case either knowledge to solve the problem is available, or a process of random generation, followed by effectiveness testing, must be used. This process entails the random generation of possible solutions to the problem, each followed by effectiveness testing, during which ineffective solutions are rejected and increasingly effective solutions are accepted.
THE NARROW LIMITS OF CHANGE PRINCIPLE	Knowledge creation and alterations are done in small, incremental modifications, each one assessed for effectiveness, in order to prevent long-term memory damage. This protection is achieved by the limited working memory capacity.
THE ENVIRONMENTAL ORGANISING AND LINKING PRINCIPLE	The limitations of the restricted working memory are overcome when interacting with the complex environment by transferring huge amounts of organised information from the long-term memory to the working memory through constructs such as chunking, schema formulation and so-called long-term working memory, where an endless amount of organised information can be processed in order to interact with the environment.

Sweller's five principles of human cognition have a profound effect on learning and instruction, as explained in Sweller's CLT. The CLT is described as being "concerned with the manner in which cognitive resources are focused and used during learning and problem-solving" (Chandler & Sweller, 1991, p. 294), followed by a later definition stating that CLT is "[a]n instructional design theory based on our knowledge of human cognitive architecture" (Sweller, 2003, p. 70) and a 2006 definition maintaining that CLT is "an instructional theory that uses versions of the cognitive architecture described here to generate instructional procedures" (Sweller & Sweller, 2006, p. 453). CLT therefore provides insight into the cognitive process of learning and the design of instructional procedures to facilitate effective learning.

Learning (defined in Section 2.8.1) is achieved through two primary methods, namely, schema acquisition and automation. Schema acquisition is the process where knowledge of a similar nature is grouped together to form one schema. Apart from knowledge schemas, there are problem-solving schemas as well. Problem-solving schemas consist of problems that are grouped together based on their problem-solving method (Sweller, 1994). Automation in applying a complex cognitive skill with minimal thought refers to executing it without thinking about it or controlling it. Automation only comes with experience and practice. Both schema acquisition and automation decrease the cognitive workload in working memory (Sweller, 1994).

Instruction (defined in Section 2.6.1) creates three types of cognitive load: extraneous cognitive load; intrinsic cognitive load; and germane cognitive load (Sweller, 2003; De Jong, 2010). Extraneous cognitive load is produced by the instructional method, intrinsic cognitive load is associated with the complexities of the content being learnt, and germane cognitive load is caused by the learning process. The three types of cognitive load add to the total load of working memory, which implies that ineffective instruction and complex content, or a combination of both, can lead to cognitive load, even overload, thereby leaving insufficient working memory capacity for germane cognitive load, resulting in learning not taking place. Using effective instructional methods, both intrinsic and extraneous cognitive load will be decreased, leaving sufficient capacity for germane cognitive load to ensure effective learning (Sweller, 2003; De Jong, 2010). This confirms the importance of effective instructional techniques based on HCA and CLT.

Constructivists, however, have a different view of the neuroscientific process of learning, which, morphologically speaking, entails stimulated changes in the brain and the generation of new neurons (Karmiloff-Smith, 2012). According to this view, known as neuroconstructivism, human learning from as early as the foetal stage is a "continual process of 'trial and error'" leading to increased well-being (Slabbert, De Kock, & Hattingh, 2009, p. 55). Learning by "trial and error", as described by Slabbert et al. (2009), is in effect active learning, defined by Wolfe (2006) as learning that involves the learner in learning activities, which is constructivist by nature. By providing minimal, if any, guidance to the learner (Kirschner, Sweller & Clark, 2006), he tries to construct a solution to a problem and then experiences the effect of the solution. Based on his experience, he attempts to re-construct a solution, this time increasing the effectiveness of the attempt. As he repeats the process, various areas of the brain are stimulated, leading to changes in the brain and the construction of numerous new neural networks, thereby increasing learning.

One can conclude therefore that the constructivist approach to learning relates to Sweller's randomness as genesis principle, but gives little, if any, attention to the borrowing and reorganising principle. Kirscher et al. (2006), however, could not find any evidence from scientific research to support the effectiveness of constructivist methods with minimal instruction, i.e. that Sweller's randomness as genesis principle is superior to the borrowing and reorganising principle. The research has in effect indicated that, based on HCA and CTL, instruction (read instructivism) provides superior results to constructivist methods such as problem-based learning and experiential learning (2006).

As indicated in Section 2.4, the current application of the constructivist approach led to the degrading of the SANDF instructor's competencies, military ethos and discipline. This consequently detracts from two of the characteristics of a profession, namely, the theoretical and practical body of knowledge and the unique ethic (McKinlay, 1970; Nuciara ,1994), thereby undermining professional identity and subsequently PMII.

One of the main causes of the objectivist-constructivist anomaly is the objectivist-constructivist continuum view held by Vrasidas (2000), Johnson (n.d.) and Bednar, Cunningham, Duffy and Perry (1992), which states that the two stances are regarded as the two extremes of a one-dimensional continuum. In addition, Bednar et al. (1992,

p.19) uphold the opinion that "it is inconceivable to mix epistemologies in an instructional program". This is supported by Slabbert et al., who posits that the practice of first learning theory and then the application thereof is a "crucially important misconception" (2009, p. 56). Cronjé (2005), alternatively, holds a different view.

2.8.5 Cronjé's two-dimensional objectivist-constructivist model

Vrasidas' objectivist-constructivist continuum implies that a learning event is either objectivist or constructivist and the more constructivist it gets, the further it moves away from objectivist and *vica versa*. Cronjé (2005) postulates that this continuum is flawed. This stance is based on the inability of this simple model to allow simultaneous, effective combination, and the integration of the two approaches. Cronjé continues to propose a two-dimensional model with objectivism and constructivism at right-angles to one another, allowing for a learning-event to utilise both approaches without one being dependant on the other (see Figure 2.11). The model, as a matrix, is divided into four quadrants. The low objectivism/low constructivism quadrant suggests that no planning or facilitation of learning in any form take place here, and all learning happens by chance, typically leading to implicit knowledge. In the construction quadrant, learning takes place through methods applying primarily the constructivist approach.
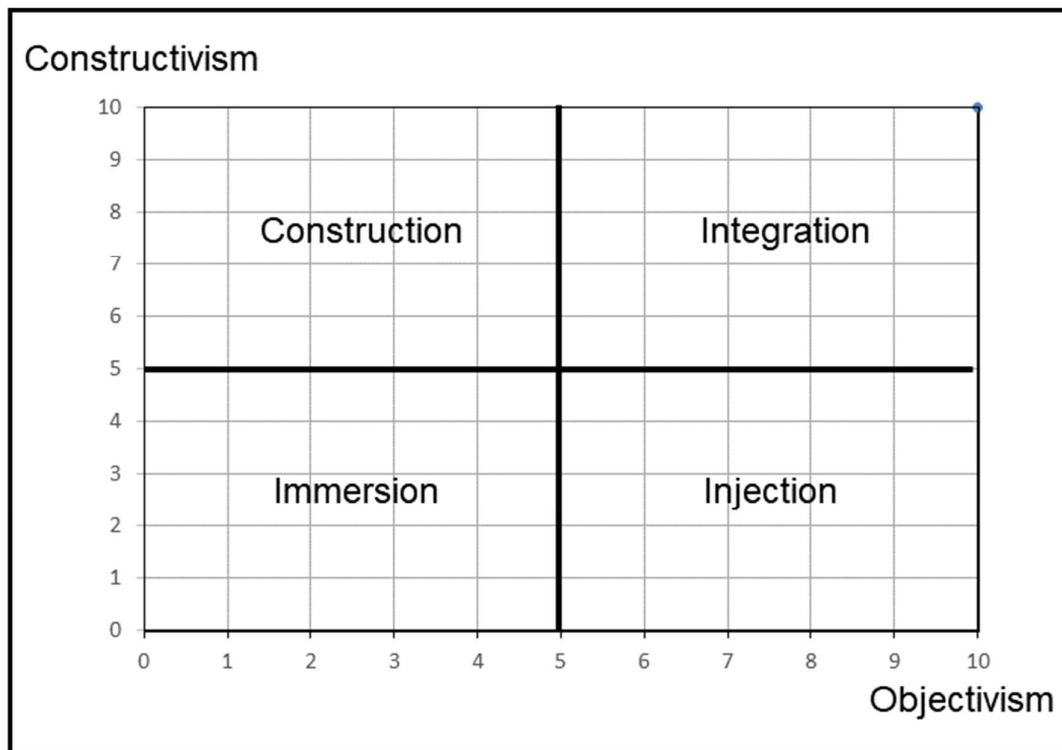
Figure 2.11: Cronjé's Two-Dimensional Model (Cronjé, 2005)

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Learning would be more authentic, but it could be exorbitantly time-consuming. Learning in the injection quadrant happens through direct instruction and is "lean, mean and efficient" (Cronjé, 2005, p. 8). Lastly, the integration quadrant is where instruction and construction are integrated to achieve goals and outcomes.

The feasibility of Cronjé's model was tested and reported on by Burger (Cronjé & Burger, 2006), Brittz (Cronjé & Brittz, 2005) and, notably, Elander (Elander & Cronjé, 2016). Elander investigated the integration of objectivist and constructivist components of university courses by course designers and developers in the US and found that all courses reported a shown integration of objectivist and constructivist elements. The percentage of cases found in the various quadrants was 53.8% in the Injection Quadrant, i.e. high objectivist and low constructivist, 36% in the Integration quadrant, indication of high objectivist and high constructivist, with only 6.3% of the cases falling in the high constructivist, low objectivist Construction quadrant and, predictably, 3.8% of the cases found in the low objectivist, low constructivist Injection quadrant (Elander & Cronjé, 2016). In all the above cases, the researches came to the same conclusion, which was that the objectivist and constructivist approaches can be integrated. Figure 2.12 indicates how the model can be applied in the military environment.

2.8.6 Collaborative instructivism

The second conceptual framework, collaborative instructivism, was motivated by the research problem and a specific research question, namely, how can collaborative instructivism be described in a military context? The following suppositions, based on theories investigated in Section 2.8.2 to Section 2.8.5, inform the construction of this framework (see Figure 2.13 and Figure 2.14). These suppositions are not intended to be definitive, but are drawn from the literature with a view to informing the process of creating a conceptual framework that is useable in this context.

2.8.6.1 Supposition 1

Not only can objectivist and constructivist practices be combined and integrated, but the integration thereof leads to more effective and efficient learning (Cronjé & Burger, 2006; Johnson, n.d.).

Figure 2.12: Cronjé's model, applied in the military environment

2.8.6.2 Supposition 2

Socio-constructivist practices, blended with instructivist practices, provide an effective solution for effective and efficient learning, even with modern technology and media (Dalbani, 2014; Moallem, 2001).

2.8.6.3 Supposition 3

Collaborativism, as explained by Leidner and Jarvenpaa (1995), is the approach where individuals interact with others, sharing information and experience. This is done primarily for shared understanding, but also leads to better communication, listening skills, and participation. Panitz agrees by stating that "[c]ollaboration is a philosophy of interaction and personal lifestyle where individuals are responsible for their [own] actions, including learning, and respect the abilities and contributions of their peers" (1999, p. 3). Collaborativism also leads to techniques, such as collaborative teaching or team teaching. Collaborativism and collaborative learning should not be confused with cooperative learning. Both Panitz (1999) and the US Marine Corps (Schatz et al.,

2012) concur that cooperative learning is interaction with the purpose of accomplishing an end-product or objective through people working together in groups.
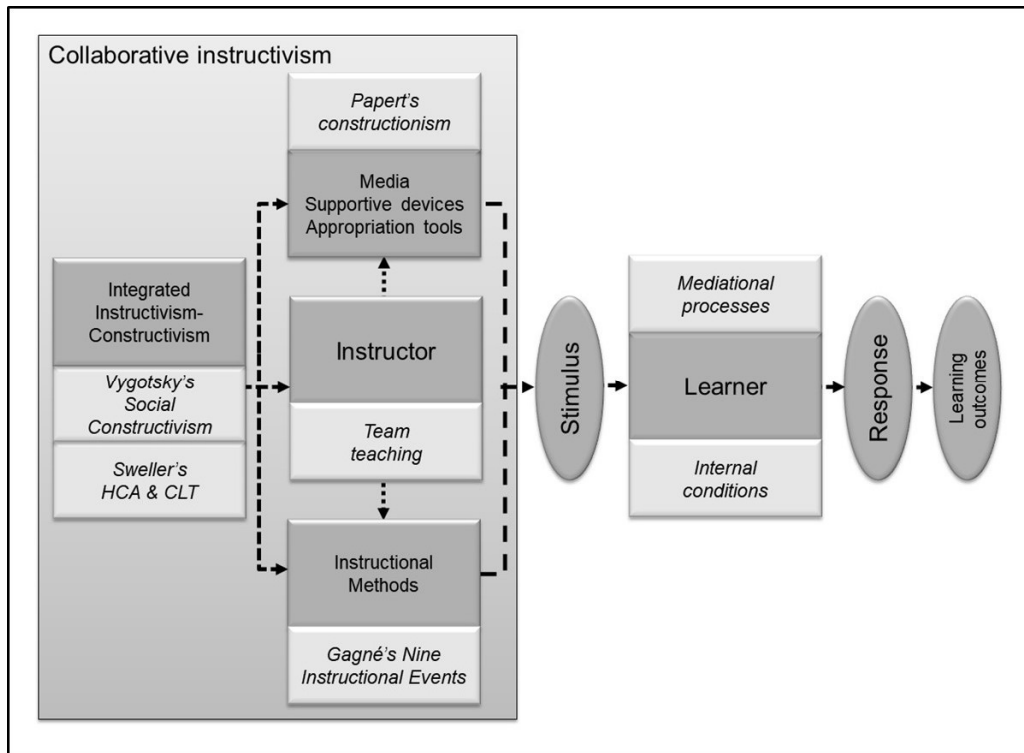
Figure 2.13: Conceptual framework of collaborative instructivism
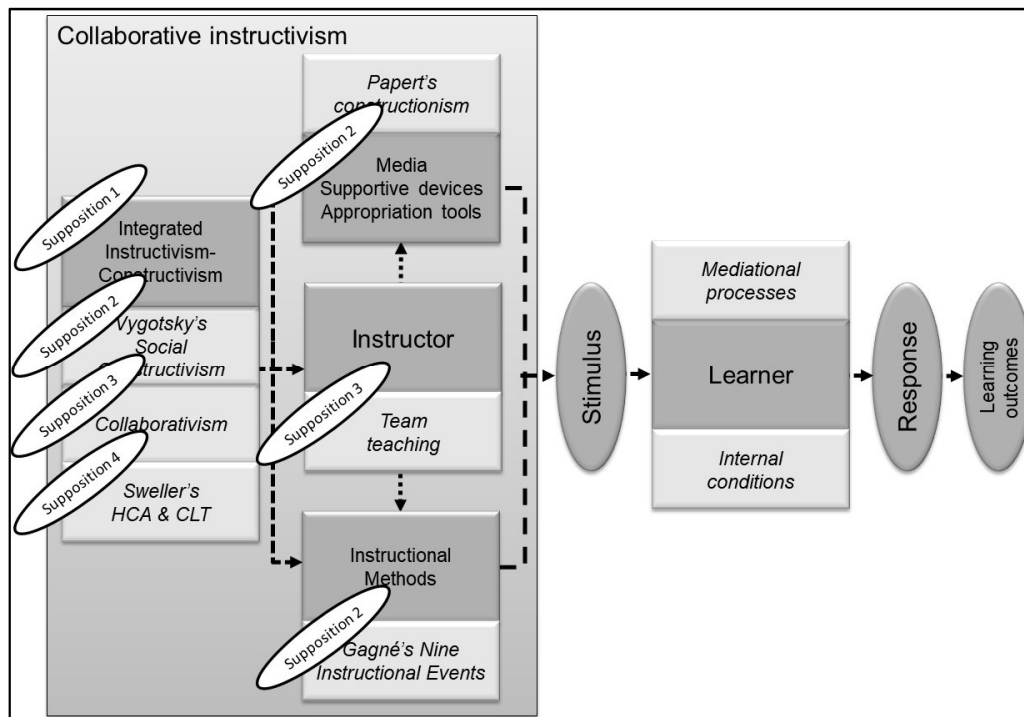
Figure 2.14: Suppositions informing the conceptual framework of collaborative instructivism

2.8.6.4 Supposition 4

Collaborative learning is based on the Social Interdependence Theory, stating that common group goals lead to interdependence, promoting socio-constructivism, cognitive development and Behavioural Learning Theory. The latter is found in operant conditioning and imitation within the group (Johnson, Johnson & Smith, 1998). As described, collaborative learning is based on both objectivist and constructivist practices, which supports Sweller's HCA and CLT (Sweller & Sweller, 2006), and would therefore contribute to more effective and efficient learning.

2.8.6.5 Supposition 5

Team teaching, also known as collaborative teaching, provides the opportunity for improved collaborative learning and other instructional practices.

2.8.6.6 Supposition 6

In view of the monitory and temporal advantages of educational devices, the application of collaborative learning through Papert's constructionism contributes even further to the effectiveness of instruction and learning (Papert, 1990; Ackermann, 2001). It is clearly not a question of objectivism/instructivism or constructivism, but objectivism/instructivism *and* constructivism. Combining the theories of objectivism/instructivism and collaborativism, in the context of training instructors in the SANDF, collaborative instructivism can be defined as follows (see Figure 2.13):

> Collaborative instructivism is an educational approach where learning is facilitated by giving learners comprehensive information and guidance through instruction. This is done in order for them to effectively and efficiently construct their own mental representations utilising collaborative methods and supportive devices.

2.8.7 The effect of collaborative instructivism on elements of the PMII

In the PMII conceptual framework with its sub-identities, influencing factors and identifying indicators (see Figure 2.4), the effect of the perceived degradation of the instructor's competencies, military ethos and discipline (see Section 2.6.2) can be seen, which undermine at least two of the characteristics of a profession (McKinlay, 1970; Nuciari, 1994). These are the theoretical and practical body of knowledge, i.e.

professional competence, and the unique ethic (see Section 2.4). The PMII elements supporting these characteristics could similarly be affected negatively.

The conceptual framework of collaborative instructivism is thus based on the integration of instructivist and collaborative learning practises according to the two-dimensional objectivist-constructivist model of Cronjé. This further supports Vygotsky's socio-constructivism, Sweller's neuroscientific theories, Papert's constructionism and is executed by means of team teaching and Gagné's nine instructional events. Table 2.8 indicates the possible effect of the current situation on the PMII elements per characteristic, as well as the possible remedial effect of applying collaborative instructivism. On the one hand, the breakdown of the military instructor's competencies, for example, influences the teacher, warrior and leader sub-identities and his military technical competence. On the other hand, by applying collaborative instructivism, the teacher, warrior and military professional sub-identities and influencing factors, professionalism and warriorism, are affected.

2.8.8 Conclusion with regard to the development of the collaborative instructivism conceptual framework

Reviewing the existing literature with regard to collaborative instructivism started with the concepts of learning and learning theory, followed by discussions regarding the three primary learning theories (behaviourism, cognitivism and constructivism). The discussions included the views of well-known proponents of the respective theories. Investigating the epistemological stance of each of the learning theories led to the two major approaches, objectivism and constructivism, assumed to be the two extremes of a one-dimensional continuum. However, in view of the research done by several educational researchers, Cronjé's two-dimensional objectivist-constructivist model was accepted, leading to the construction of an educational construct known as collaborative instructivism. Collaborative instructivism is an attempt to combine the best of two dimensions in the Cronjéan objectivist/constructivist model (Cronjé, 2005; Elander & Cronjé, 2016). This was done in order to construct an educational construct that would allow the military instructor to apply collaborative techniques, such as team-teaching, as well as instructivist techniques, for example, lecturing and demonstrations. This would then be done in a unique technologically advanced military

environment in order to facilitate behaviourist, cognitivist and constructivist learning at the right place and right time and in the most effective manner. The ability to achieve this is the challenge of the future SANDF military instructor.

Table 2.8: Possible links between the elements of PMII due to the current situation and the implementation of collaborative instructivism

ELEMENTS OF THE PMII		LINKS BETWEEN PMII AND THE CURRENT SITUATION		LINKS BEWTEEN COLLABORATIVE INSTRUCTIVISM AND ELEMENTS OF THE PMII	
		BREAKDOWN OF THE MILITARY INSTRUCTOR'S COMPETENCIES.	BREAKDOWN OF THE UNIQUE ETHIC OF THE MILITARY INSTRUCTOR.	IMPROVED EDUCATIONAL CONSTRUCT	IMPROVED QUALITY OF INSTRUCTION
SUB-IDENTITIES	Self				
	Teacher	X[a]		X[a,d]	X[d]
	Warrior	X[a]			X[a,d]
	Leader	X[a]	X[b]		X[d]
	Military professional		X[b]	X[b,d]	
INFLUENCING FACTORS	Individualism				
	Professionalism		X[a]	X[a]	
	Warriorism		X[a]		X[c]
	Idealism				
IDENTIFYING INDICATORS	Military technical competence	X[a]	X[a]		X[d]
	General military competence	X[a]	X[a]		X[d]
	Military ethical conduct		X[a,b]	X[a,d]	
	Leadership and character		X[b]	X[d]	X[d]
	Teaching and learning competencies	X[a]			X[d]

a: McKinlay (1970)
b: Nuciari (1994)
c: Franke (1999)
d: A causal relationship exists

2.8.9 Conclusion

The aim of the literature review was to provide two conceptual frameworks, namely, the PMII and collaborative instructivism frameworks. The research was directed by the research problem and the research questions (see Figure 2.15). The conceptual framework of the PMII was developed from first principles and provided three main elements: the sub-identities, influencing factors and identifying indicators. The collaborative instructivism conceptual framework was developed from several learning theories using the input-response model of De Houwer et al. (2013). The conceptual framework of the PMII, read with the conceptual framework of collaborative instructivism, will now be used to develop the codebook as it served as the framework for the thematic networks analysis.
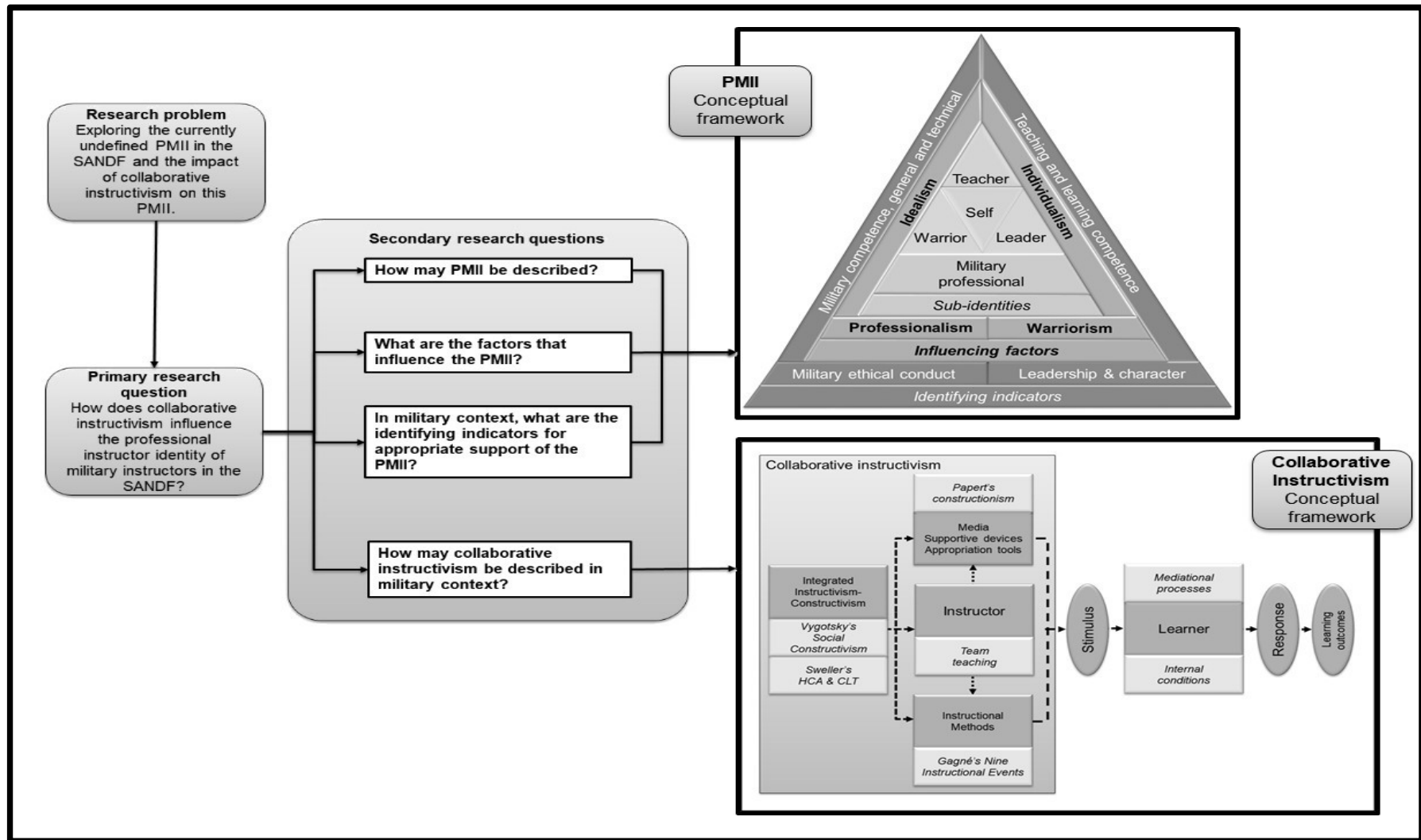
Figure 2.15: Development of two conceptual frameworks – completed

CHAPTER 3 RESEARCH METHODOLOGY

3.1 INTRODUCTION

The late Colonel Trevor N. Dupuy (US Army, retired), once referred to by the Pentagon as the expert at estimating casualties (Dupuy, 1990a), proposed a set of 23 so-called 'attrition verities'. These verities are based on the observation and analyses of 601 historical battles between 1600 and 1973. One of the verities postulates that "more effective forces inflict casualties at a higher rate than less effective opponents" (Dupuy, 1990a, p. 99). Combat effectiveness contributes to the combat power of a force (see Section 1.1.1), which leads to one of Dupuy's "timeless verities of war", namely that "superior combat power always wins" (Dupuy, 1987, p. 6). Combat effectiveness, according to Dupuy, is a function of leadership, morale, training and experience. Training is provided by military instructors and it is therefore a fair assumption that effective training is a function of the quality of instruction provided by the military instructor, as well as manpower, quality, and discipline, to name but a few (Dupuy, 1987). Both Scholtz (2013) and Dunnigan (1988) agree with Dupuy's view and both confirm the effectiveness of the training of soldiers of the SADF (see Section 2.6.2).

In September 2015, the SANDF Chief Human Resources decided that the current level of training provided by military instructors should be enhanced by applying the competency-based learning theory known as collaborative instructivism (South African Department of Defence, 2015b). In view of this decision, supported by Dupuy's hypothesis, the rationale of this research is confirmed, namely, to investigate and formalise PMII and the possible improvement thereof by introducing collaborative instructivism as a future educational construct. This research is necessary in order to enhance the combat effectiveness of the SANDF, thereby keeping our soldiers alive.

The aim of this chapter is to provide a comprehensive explanation and description of the research methodology used, as depicted in Figure 3.1. The research philosophy, being the worldview of the researcher, influenced the method used to collect data and the analyses of the data. This is followed by the approach, providing all the processes used to execute the research. The research problem and primary research question initialised the research, followed by the research design, indicating that the research

was executed in a qualitative exploratory manner using case study research as a strategy. After various <u>methods of collecting data</u> were debated, conversing and interviewing were selected, and the data was <u>analysed</u> using a thematic analysis. To enhance the rigour of the study, four standards of rigour, namely, <u>credibility, transferability, consistency, and confirmability</u> are explained and utilised. Lastly, the details of the requirements for, and the <u>ethical measures</u> taken during the research, are given.
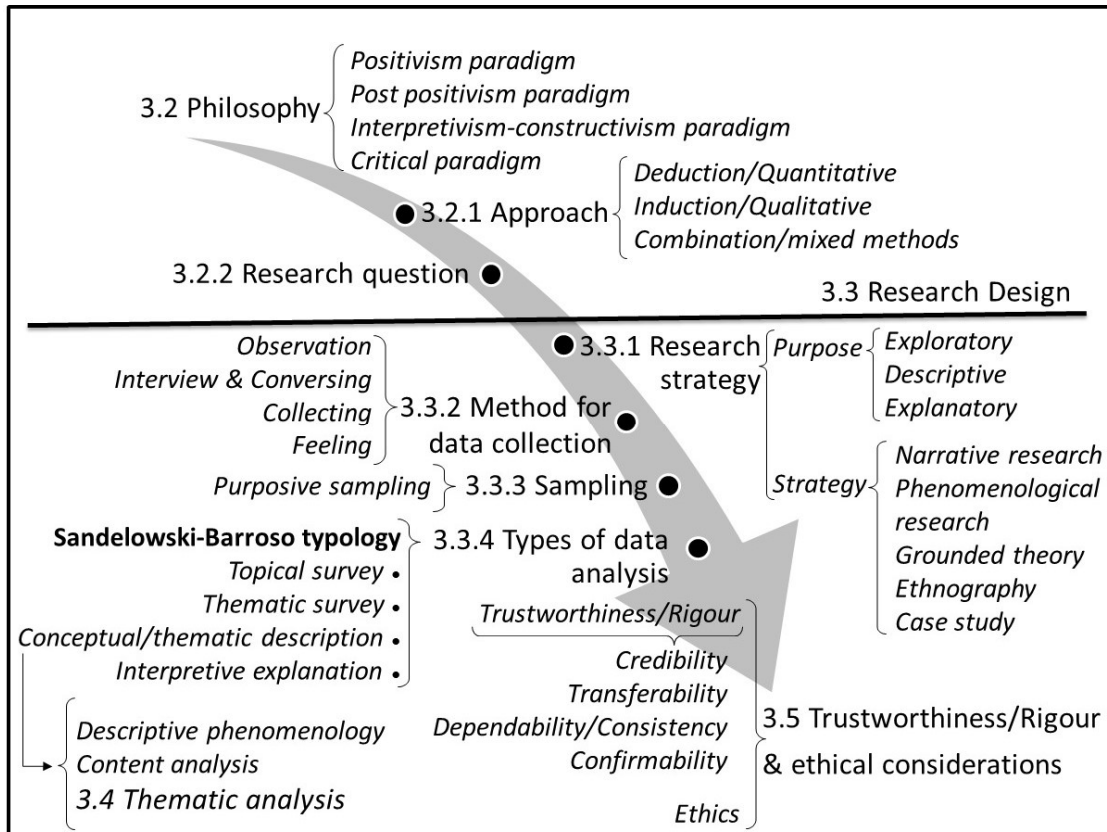
Figure 3.1: Research methodology

3.2 RESEARCH PHILOSOPHY

Deciding how to do research, which method to use to collect data, and how to analyse the data is not simply a judgement between qualitative, quantitative or mixed methods, influenced by time, money or resources, but is rather a manifestation of the worldview of the researcher. Different research methods provide different results, which makes the selection of the most appropriate methods of data collection, sampling and analysis of the utmost importance. The worldview of the researcher, consisting of the philosophies underpinning qualitative and quantitative research methods, can be

defined by using a paradigm framework. The paradigm framework consists of the researcher's ontology (his beliefs about reality), epistemology (how he knows what he knows), and chosen methodology (how he acquires knowledge) (Hathaway, 1995; Tuli, 2010). The number of paradigms and the descriptions thereof is as abundant as the authors writing about it. Creswell (2014), for example, cites four worldviews, namely, post positivism, constructivism, the transformative view, and pragmatism. Petersen and Gencel (2013) replace transformative with advocacy/participatory. Scotland (2012) quotes only three paradigms: scientific, interpretive and critical. After examining these variations, I decided to further analyse the four paradigms provided by Guba and Lincoln (1994), Mack (2010) and Thuli (2010).

The <u>positivist paradigm</u>, also called the scientific paradigm, underpins the quantitative approach and supports the view that the researcher observes an objective reality. The positivist also believes in the scientific method and does research with the purpose of hypothesis testing, using quantitative methodologies. Positivism assumes that social actions are ruled by causal laws. Human behaviour is also reported, explained and predicted as facts that are apart from human notions, using highly standardised tools, including questionnaires and tests, which provide quantifiable data. The ontological view of the positivist researcher would be objectivist, also known as realist. Objectivism, or realism, assumes that there is an independent reality that is external to the researcher and consists of objects in space, which can be detected by one's senses and can be measured and predicted. The positivist's epistemological assumptions, being the interpretation of "how we know what we know" (Crotty, 1998, p. 3) or the meaning of knowing something, is objectivist, also known as empiricist, or positivist. This means that the objectivist/empiricist researcher views knowledge as objective and acquired through deductive means from a theory or hypothesis. He does research to gain a scientific explanation because he believes that truth is possible. Criticism of the use of the positivist paradigm for research in the social sciences includes the view that the outcome of such research, given human thought, perceptions and judgement, can never be objective, precise or the absolute truth (Mack, 2010; Tuli, 2010).

The interpretivist paradigm, often known as the constructionist or even <u>interpretivist-constructivist paradigm</u>, was formed in reaction to the criticism of the positivist

paradigm in social research. This paradigm proposes that the researcher has to interpret, experience, construct and explain the world in his interaction with humans and social systems. He has to construct his own meaning and applies qualitative methodologies in an objective manner for the purpose of gaining a deeper understanding of the research problem. He uses methods such as focus group discussions and interviews to obtain original, rich and detailed accounts, quotations and experiences. The ontological view of the interpretivist-constructivist researcher is that of constructionism (also called constructivism), which posits that reality is a human construct - the product of social interaction and processes. Interpretivism is the epistemological view of the interpretivist-constructivist. This means that knowledge is constructed through observation, analysis and interpretation of evidence. This leads to the limitation of the paradigm, i.e. the lack of objectivism, as the involvement of the researcher in the research inevitably leads to subjectivism (Mack, 2010; Tuli, 2010).

According to Tuli (2010), and confirmed by Asghar (2013), researchers prefer to structure their research based primarily and often exclusively on either the positivist or interpretivist-constructivist paradigm. Several scholars and academics, such as Mach (2010) and Asghar (2013), as well as Guba and Lincoln (1994) do not ignore the latest paradigms, which are post positivism and critical theory. To ensure a comprehensive and appropriately informed research methodology for this study, post positivism and critical theory, as possible paradigms, were also investigated.

The post positivist paradigm is a reaction to the criticism against the use of positivism in a social environment, based on the positivist premise that knowledge is objective. Popper maintains that there is no absolute truth, and proposes small adjustments to positivist methodologies to be used for research in the social sciences (Mack, 2010). The ontological view of the post positivist paradigm, according to Guba and Lincoln (1994), is critical realism, which maintains an objective reality but recognises its probabilistic and imperfect nature. According to Guba and Lincoln (1994), post positivist epistemology is modified dualism, which acknowledges the approximation of reality. The post-positivist researcher therefore views knowledge as striving towards objectivity and is acquired through quantitative means, concentrating on the falsification of hypotheses. Post positivism, however, still suffers from the same limitation as positivism, namely, the inability to provide objective outcomes from an

environment consisting of highly subjective human perspectives, views and interpretations (Mack, 2010; Guba & Lincoln, 1994).

The last paradigm to be discussed is the critical paradigm, often referred to by its underpinning thesis, Critical Theory. The critical researcher's aim is to change, transform or emancipate human behaviour, being the outcome of "illegitimate, dominatory and repressive factors" (Cohen, Manion & Morrison, 2007, p.26), applying his politically and economically grounded research. There are three criteria for a critical theory, viz. that it must explain what is wrong with the current reality, it must recognise the actions to change the unacceptable current reality, and it must identify norms for criticism and transformation (Asghar, 2013). The critical paradigm is supported by a historical realist ontology, which proposes that society defines its own reality by means of media, society itself, and institutions. The epistemological assumptions of the critical paradigm are subjectivist by nature, assuming that knowledge is socially constructed by power and expresses power, not the truth. The critical paradigm is limited in application by its elitist attitude and the subjective influence of politics (Mack, 2010; Cohen, Manion & Morrison, 2007; Asghar, 2013; Guba & Lincoln, 1994; Scotland, 2012).

By way of thorough consideration of the four paradigms, as summarised in Table 3.1, I was able to determine the worldview according to which this research should be conducted. As a devoted post-positivist, trained in operations research / quantitative management, which is a quantitative discipline, I envisaged the execution of this research within the post-positivist paradigm. Although this paradigm views reality as external to the researcher and objective, it recognises that the objectivity is flawed and its modified dualist epistemology allows for an approximation of reality. However, during the lectures on collaborative instructivism, I observed that the concept of a professional identity is either not addressed in the SANDF, or when it is discussed, it is a foreign and unpopular topic and is unpredictable due to varying perceptions and views. It became evident, no matter how strictly the scientific method were applied, it would not provide an outcome that one would be able to describe as objective or the truth (Hathaway, 1995; Cohen, Manion & Morrison, 2007). This state of affairs left me with few choices for the philosophical underpinning of my research – a critical

paradigm or an interpretivism-constructivist paradigm. A taxonomy of research paradigms is presented in Table 3.1.

Table 3.1: A taxonomy of research paradigms

PARADIGM	ONTOLOGY	EPISTOMOLOGY	METHODOLOGY
POSITIVISM	Objectivism; Realism.	Objectivism; Empiricism; Dualism.	Quantitative (experimental/hypothesis confirmation).
INTERPRETIVISM-CONSTRUCTIVISM	Constructionism; Constructivism; Relativism.	Constructivism; Interpretivism; Subjectivism.	Qualitative (dialectic).
POST-POSITIVISM	Critical realism.	Modified dualism; Objectivist.	Quantitative (modified experimental/ hypothesis falsification).
CRITICAL THEORY	Historical realism.	Subjectivism.	Qualitative (dialectic); Quantitative.

It was my aim to improve the quality of military instructors in the SANDF. However, the organisation itself, by virtue of its establishment by the Constitution of the Republic of South Africa and the requirement to "be structured and managed as a disciplined military force" (Republic of South Africa, 1996, Section 200.(1)), is in a sense repressive by nature. The task of the SANDF to kill and the task to die rightfully contradict Section 11 of the Bill of Rights of the Constitution of the Republic of South Africa, namely, the right to life (Republic of South Africa, 1996, Section 11). Furthermore, as servants of the state (see Section 2.5.5), soldiers should not be involved in any form of politics, be it party politics or organisational politics, in any way (Heinecken, 1997). To apply a critical paradigm according to the three criteria provided in Asghar (2013) to do research in any armed force could be construed as challenging authority, insubordination or disregarding the chain of command. This left only the interpretivism-constructivist paradigm as the possible philosophical foundation for this research.

The role of the researcher in the interpretivism-constructivist paradigm is to interpret, experience, construct and explain the world while interacting with humans. Therefore, the researcher is, while interacting in a 'world' where professional identity is still being

discovered, discovering it along with the subjects of his research. Constructing new knowledge is therefore done in unison between the researcher and the researched. In view of this argument, I decided to align my research with the interpretivism-constructivist paradigm. As previously stated, this decision was taken in spite of a personal inclination towards post-positivism and quantitative methodologies. Honouring this decision throughout the study was thus very difficult indeed. According to Dwyer and Buckle (2009) the relationship between the researcher and the researched is either as an insider or an outsider to the community of the researched. Although I shared competencies and membership of the same military unit with the community of researched, being their Commanding Officer and researcher, excluded me from the community. I therefore regard myself as an outsider to the community of researched.

3.2.1 Approach

According to Creswell (2014, p. 3), the research approach provides the "plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation." Saunders, Lewis and Thornhill (2009), as well as Trochim (2006), Scotland (2012) and O'Reilly (2012) site two main approaches, namely, a deductive approach and an inductive approach. Trochim (2006) is also of the opinion that both approaches could be used in combination.

The deductive approach is based on scientific principles and explains relationships between variables. This implies the use of quantitative data from a pre-selected, statistically determined sample size (Saunders, Lewis & Thornhill, 2009), which moves in a top-down manner from theory to hypothesis, to observation, to confirmation (Trochim, 2006). The inductive approach uses specific observations and identifies patterns, which leads to a hypothesis and the construction of a theory. In contrast with the deductive approach where the researcher is not part of what is being researched, the inductive researcher participates in the research process, collecting qualitative data (Trochim, 2006; Saunders, Lewis & Thornhill, 2009).

A second school of thought, however, uses quantitative, qualitative and mixed methods as the three approaches, and views deduction and induction as research

styles or research logic informing the three approaches (Creswell, 2014; Ormston, Spencer, Barnard & Snape, 2014). Creswell explains the qualitative research approach as solving human problems by using case studies and using the data collected to inductively construct a theory. The quantitative research approach uses statistical techniques to analyse numerical data in order to test theories in a deductive manner. The mixed methods research approach combines the qualitative and quantitative approaches to provide a result that is more inclusive than the separate approaches (Creswell 2014; Bryman, 2006).

Several researchers differ from both 'modularised' views of the research approach. Tashakkori and Teddlie (2003) propose a combined approach where researchers will be at ease using both, or any, of the qualitative and quantitative research approaches. O'Reilly (2012) proposes, from an ethnographic point of view, that qualitative researchers regard the social environment as too complicated to apply rigid hypothesis testing, and therefore rejects the deductive research approach. However, O'Reilly states that the inductive research approach can also not be applied in its purest form as all researchers are prejudiced with preconceived views of reality. She subsequently proposes an iterative-inductive approach (2012), which suggests applying deductive and inductive techniques at the same time, i.e. building a theory, testing the theory, reflecting on the outcome, improving the theory, and so forth.

Omwuegbuzie and Leech (2005) regard the only effective approach to research being a mixed methods approach. They also suggest that researchers move away from quantitative and qualitative research and apply "methodological pluralism" instead, referring to "exploratory and confirmatory methods" (Onwuegbuzie & Leech, 2005, p. 268). This can be regarded as a continuum, ranging from developing theories (exploratory approach) to the testing of theories (confirmatory approach).

However, in spite of the new and innovative hypotheses with regard to the research approach, the current academic discourse is still overwhelmingly in favour of the traditional inductive/deductive and qualitative/quantitative approaches. The research approach in this study could therefore have been informed by one of three approaches, namely, inductive/qualitative, deductive/quantitative and combination/mixed methods. Yin (2011) provides five features of qualitative research. In terms of this study, the following three features are important.

3.2.1.1 Qualitative research represents the views and perceptions of the participants in the research

As alluded to in Section 3.2, the unfamiliarity of the concept of a professional identity in the SANDF has resulted in different views and perceptions, which would be well represented by an inductive/qualitative approach.

3.2.1.2 Qualitative research covers the contextual conditions of participants

In this study, it is exactly the position within which the participants found themselves when discussing professional identity.

3.2.1.3 Qualitative research contributes to new insights in human social behaviour

Given the fact that members of the SANDF are not accustomed to the concept of professional identity, the research required a new understanding of the concept and the effect thereof on military instructor behaviour. Qualitative research is ideally suited for this purpose.

Given Yin's features of qualitative research, the inductive/qualitative research approach seemed to be the most appropriate for this study (Saunders, Lewis & Thornhill, 2009; McMillan & Schumacher, 2006; Creswell, 2014). The chosen research paradigm, namely interpretivism-constructivist, with its constructivist ontology and subjectivist epistemology, being the philosophical anchors underpinning qualitative inquiry (Ponterotto, 2005), confirms the use of the <u>inductive/qualitative research approach.</u>

3.2.2 Research question

McMillan and Schumacher (2006), as well as Mouton (2001), are of the opinion that the research question initialises the research. Richie et al. (2014) provide the features of good research questions, namely, that it should be "clear, intelligible and unambiguous, focussed, but not too narrow, capable of being researched through data collection; not questions which require the application of philosophy rather than data [and] feasible, given the resources available" (2014, p. 49).

The primary or main research question is found in the research problem (Mouton, 2001), which in this case was to explore the currently undefined PMII in the SANDF and the impact of collaborative instructivism on this PMII (see Section 1.3). The primary research question, which initiated the rest of the research process (Mouton, 2001; McMillan & Schumacher, 2006, Bak, 2004) is therefore confirmed as being the following:

How do military instructors in the SANDF COLET perceive the relationship between collaborative instructivism and the professional instructor identity?

The following secondary questions refined the primary research question:

1. *How can collaborative instructivism be described in a military context?*

2. *How can PMII be described?*

3. *What are the perceived factors that influence PMII?*

4. *In a military context, what are the identifying indicators for the appropriate support of PMII?*

Bearing the research paradigm and research questions in mind, the elements of the actual execution of the research, known as the research design, will now be determined.

3.3 RESEARCH DESIGN

The research design (See Figure 3.1), although sometimes regarded as a singular concept (Singh, 2007), provides the practical elements for the execution of the research (Lewis & McNaughton Nicholls, 2014). These practical elements include the research strategy, sampling, methods for data collection and methods of data analysis. According to Saunders et al. (2009), it provides the broad plan for answering the research questions. The first element of the research design, namely the research strategy, will be discussed next.

3.3.1 Research strategy

The research strategy can be divided into two components, the purpose and the strategies utilised to carry out the research. The research <u>purpose</u> is determined by

the research question and the manner in which it is to be answered, namely, in an exploratory, descriptive, or explanatory manner (Saunders, Lewis & Thornhill, 2009) and based on either a quantitative (Singh, 2007) or a qualitative perspective (Marshall & Rossman, 1999).

From both a quantitative and qualitative view, an exploratory study provides the researcher with new insight into or understanding of the problem in an environment where responses may not be statistically measurable. It is not a hypothesis-testing process and its results cannot be generalised, but rather, it explores new ideas or patterns and is executed by means of literature searches, individual interviews or focus group discussions (Saunders et al., 2009).

In quantitative terms, a descriptive study provides enumerated characteristics of an issue or event and uses descriptive statistics. Results are measured as they are, without attempting to determine any relationships between variables (Singh, 2007). Qualitative descriptive research is disregarded by some researchers, but Lambert and Lambert (2012) are of the opinion that it is viable and acceptable and is used to determine the nature of events, using individual interviews, focus group interviews and observations, and is analysed with the use of coding methods. Lastly, explanatory or causal research can also be executed using a quantitative or qualitative process. In quantitative terms, it would mean finding and explaining the causal relationships between variables (Singh, 2007) and doing hypothesis testing (Rubin & Babbie, 2009). Qualitative explanatory research would involve in-depth interviews, providing qualitative data (Rubin & Babbie, 2009).

Answering the research question of this research was intended to provide the researcher with understanding and insight into PMII and the influence of the new training method on PMII. It investigated a new concept and was therefore executed in an exploratory manner.

Creswell (2014) is of the opinion that a researcher should, with credible motivation, decide on an appropriate research strategy to use. He also cites lists of as much as 28 different qualitative strategies, but quotes only five that are most frequently listed and utilised by researchers, namely, narrative research, phenomenological research, Grounded Theory, ethnography and case study research (Creswell, 2014, p. 14).

Narrative research entails the use of narratives of the lives of the participants to develop a chronological sequence, and phenomenological research involves descriptions of the lived experiences of the participants. Given the descriptive nature of both strategies, neither are applicable for this research (Creswell, 2014). Grounded Theory research requires the data collected and analysed to generate a theory-based conclusion or one grounded on the data, not on preconceived deductions and conclusions from *a priori* research or reviews or from the researcher's predetermined ideas (Gläser & Strauss, 2006; Charmaz, 2006; Rich, 2012). Ethnography is a lengthy process whereby the researcher immerses himself in the social environment of the participant in order to observe, describe and explain the culture of the participants without prejudice ((Saunders et al., 2009; Yin, 2011; Creswell, 2014). Both strategies, Grounded Theory and ethnography, including auto-ethnography, have need of an environment free of preconceived opinions and are therefore not suitable for this research.

Case study is a research strategy that facilitates a thorough understanding of a person or situation, and answers 'why', 'what' and 'how' questions exceptionally well. It is therefore ideally suited for exploratory studies. There are different reasons for developing case studies, one being to develop new theories or ideas about an organisation, especially where it is a deserving case. In the case of this research, the issue of PMII is unique and until now unexplored. The exploratory nature of the effect of collaborative instructivism on PMII compliments the use of a case study as the research strategy (Creswell, 2014; Ritchie, Lewis, McNaughton, Nicholls & Ormston, 2014). Having decided on a qualitative exploratory purpose and the use of case study research as the strategy, the method for data collection, the sampling method and types of data analysis need to be confirmed in order to complete the research design.

3.3.2 Method for data collection

This research was undertaken as an exploratory case study within an interpretivist-constructivist paradigm, with an inductive/qualitative research approach. The methods for data collection were therefore limited to conversing and interviewing, observing, collecting, and feeling (Yin, 2011; Ritchie et al., 2014). Given the uniqueness of the research regarding PMII, the methods of collecting documented evidence and sensory awareness had no relevance on a perceptual construct such as PMII. Observation

would have been a suitable method, specifically if used in cooperation with interviewing and conversing. Observing and assessing the instructors before and after the retraining period (see Section 3.3.2.1) would have provided an excellent opportunity to assess the effect of collaborative instructivism. Unfortunately several factors influenced the decision not to use observation as a method for data collection. Firstly, the researcher was the general officer commanding (also known as the 'Commandant') of the participants, as well as the instructor implementing collaborative instructivism. Subsequently, all possible participants could have been regarded as a captive audience and a systematic observational study by their commanding officer might not have provided very revealing results. The researcher could also have been regarded as biased depending on the result of the research findings. Secondly, both the possible participants and the appointed research assistant were pressed for time. Courses to be presented and attended, which neither the researcher and assistant, nor the participants, had any control over, prevented any research, other than that which was executed, to be done. Lastly, the statutory retirement of the researcher from the SANDF and unforeseen transfers of some of the participants further impeded any further or additional research.

Given the above restrictions under which the research had to be completed, it was decided to use <u>conversing and interviewing</u> in two forms as the method for data collection, namely, qualitative focus group discussion and qualitative expert interviews (Yin, 2011).

3.3.2.1 Qualitative focus group discussion

Boddy (2005) explains that during focus group discussions, participants are brought together to discuss a topic as in-depth and as widely as needed. He is of the opinion that a discussion is facilitated in a constructivist manner, allowing more freedom to the participants. Ritchie et al. (2014) postulate that data is generated by group members listening to others and reflecting on their opinions, thereby considering their own position. This was the main reason for the use of this method as I was of the opinion that most of the participants would be more willing to express themselves when in a group than during an individual interview with either the researcher or an assistant. The suspected unwillingness was due to the language proficiency of individual members and the relative unfamiliar topic of PMII. A focus group discussion also leads

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to spontaneity arising from the social context, which was what was anticipated to happen and what indeed happened in this group. Ritchie et al. (2014) also state that the interaction with other group members, in this case friends and colleagues, presents a "more 'natural environment than that of the individual interview" (Ritchie, Lewis, McNaughton Nicholls & Ormston, 2014, p. 213).

As I was, at the time of the execution of the focus group discussion, the commanding officer of the participants, a research assistant conducted the semi-structured focus group discussion. He was a former commanding officer of the SANDF Military Psychological Institute (MPI), a senior officer in the SA Military Health Service, holds a PhD in Industrial Psychology and has conducted numerous focus group discussions in the course of his career in the SANDF.

3.3.2.2 Qualitative expert interviewing

The expert interview is an efficient and concentrated method for gathering data, saving time and effort and obtaining information that otherwise might have been inaccessible (Bogner, Littig & Menz, 2009). As Bogner et al. (2009) caution interviewers to distinguish between true and perceived expertise, we again used purposive sampling, using participants with a proven record of expert knowledge and being in a position of expertise. Based on the views of Gläser and Laudel (2009) in their discussion of 'good' and 'bad' experts, the experts were subjectively and qualitatively judged with regard to their performance as experts and it is my opinion as a researcher, informed by a minimum of four years cooperating with the chosen participants in their current and previous positions, that they possessed the ability to perform in their fields of expertise. I also decided to conduct semi-structured interviews with the training experts. Having retired 14 months ago, I had no influence over the interviewees and there are no ethical issues, such as the interviewees being a captive audience or our relationship creating an imbalance of power (Ritchie, Lewis, McNaughton Nicholls & Ormston, 2014). I subsequently acted as the interviewer.

In spite of both methods being semi-structured, meaning that no structured questions were pre-prepared, the discussion with "operators" and interviews with "experts", were intended to provided supporting and complementary data-sets. Sampling the participants was therefore extremely important..

3.3.3 Sampling

As a qualitative research project, non-probability sampling (Ritchie, Lewis, McNaughton Nicholls, & Ormston, 2014), specifically purposive sampling, also known as criterion-based sampling, was used to select the participants in the focus group discussion as well as for the interviews. Purposive sampling, according to Yin (2011) and Ritchie et al. (2014, p. 113), provides respondents who "have particular features…which will enable detailed exploration and understanding of the central themes and questions".

3.3.3.1 Qualitative focus group discussion

The population from which the participants were chosen, consists of approximately 1700 military instructors (South African Department of Defence, 2018a), stationed at various units throughout South Africa. They have been trained per SANDF requirements at several colleges, including SANDF COLET and the SA Air Force College, as well as at SA Army corps schools, such as the Infantry School and the School of Armour. A sample frame, or a list of all possible participants, was subsequently identified (Ritchie, Lewis, McNaughton Nicholls, & Ormston, 2014). Since knowledge of training methods was required to provide informed views on military identity and its improvement, the sample frame included all military instructors and civilian instructors. This sample therefore had already trained military instructors of the SANDF, were trained in methods of facilitation, and were students in the retraining programme, presented by myself, as the Commandant of SANDF COLET. The sample consisted of 20 of the 27 instructors based at SANDF COLET. The members not attending were occupied by ordered tasks, sick leave and other activities. The sample thus consisted of 20 instructors, of whom 13 agreed to participate in the focus group discussion. This is slightly more than the six to eight participants suggested by Richie et al. (2014), or the eight to 12 participants proposed by Boddy (2005). However, the interviewer allowed the sample size (13 participants) for the focus group discussion, as this size is within the standard practice of the SANDF MPI (L.A. Meyer, personal communication, 12 February 2019). In terms of the demographic composition of the SA DOD, as applied at the SANDF COLET, the DOD policy states that "[t]he Defence Force is broadly representative of the people of

South Africa, with due consideration being given to matters of equity, including gender and otherwise enabled persons" (South African Department of Defence, 2015, pp. 11-2). The SANDF COLET, however, has no Indian members and the number of members per armed service, that is, SA Army, SA Air Force, SA Navy and SA Military Health Service, is determined by the Services themselves. Although I had little control over the demographics of the members at the SANDF COLET, as well as over the members who were willing to participate in the focus group, the group is broadly representative of South African demographics and comprised of members of three of the four Services (see Table 3.2). Their ranks ranged from junior NCO (Sergeant) to senior officer (Colonel), their academic training from Grade 12 to a Master's degree and their educational training ranged from the SANDF COLET programmes to post graduate qualifications in education.

Table 3.2: Characteristics of the focus group participants

CHARACTERISTICS		NUMBER OF PARTICIPANTS
RACE	African	9
	White	4
	Coloured	0
	Indian	0
GENDER	Male	7
	Female	6
SERVICE	SA Army	8
	SA Air Force	1
	SA Navy	1
	SAMHS	0
	Civilian	3
MUSTERING	Combat	7
	Combat support	2
	Support	1

The focus group discussion took place on 05 August 2016 in a spacious lecture room at the SANDF COLET. In order to minimise the effect of rank, both the research assistant (interviewer) and the participants wore civilian clothes. According to Yin (2011), a qualitative focus group discussion follows a conversational approach,

allowing two-way conversation and is facilitated by open-ended questions. The research assistant followed this approach and facilitated the discussion by briefly introducing PMII and guiding the discussion with regard to the topic. The discussion, which lasted for three hours (breaks excluded) was audio recorded and transcribed by the research assistant himself.

3.3.3.2 *Qualitative expert interviews*

The qualitative expert interviewing was done with three officers, using purposive sampling. The population consisted of all former military instructors, being senior officers and WOs, recently or currently serving in senior staff positions, being or having been able to direct training in the SANDF. The population size is in excess of 50 members, stationed at various geographically dispersed headquarters. In view of the research pertaining to military instructors, the sample comprised of officers who are military training experts and who have or had an influence on the training of military instructors. There were fewer than ten members of the population who complied with the sampling requirements. Given the availability of members for interviewing, as well as the number of directing posts where the incumbent has an effect on departmental policy, a final sample of three participants was interviewed. One participant was a senior military instructor and former training staff officer and the other two participants were senior educational directors in the SANDF (See Table 3.3). Demographics were not taken into account as I had no control over the present incumbents in the various posts. The aim of the interviews was to obtain methodological triangulation (Flick, 2007) (See Section 3.5.1.1) and to acquire an expert view of the process at the SANDF COLET as held by the educational policy managers.

The interviews took place in different venues, determined by the circumstances of the interviewees. Interviewee 1 attended a military course at the time of the interview and was only able to spend limited time with me in a restaurant on 21 February 2018. Both Interviewee 2 (27 February 2018) and Interviewee 3 (21 February 2018) were in office attending to daily activities and preferred to have the interview conducted in their respective offices. Each interview was audio recorded and transcribed by a third party with no interest in the findings.

Table 3.3: Interviewee profile

INTERVIEWEE PROFILE	INTERVIEWEE 1	INTERVIEWEE 2	INTERVIEWEE 3
RACE	Coloured	White	White
GENDER	Male	Male	Female
SERVICE	SAMHS	SA Army	SAMHS
MUSTERING	Combat support	Combat	Support
STATUS/RANK	Senior officer	General officer	General officer
EXPERIENCE	17 years as military instructor	30+ years as military instructor	28 years as military instructor
ACADEMIC QUALIFICATIONS	B-degree (education) Post-graduate diploma (HR management)	B-degree (military science) M-degree (security studies)	Ph D (education)

3.3.4 Types of data analysis

Hesse-Biber (2007, p.341) declares that "the ability to see what is in the data" when doing qualitative data analysis is excedingly difficult. Furthermore, the opinions with regard to the methods of quantitative data analysis are as abundant and diverse as the researchers discussing the topic. Easterby-Smith, Thorpe and Jackson (2012) quote six systems for analysis of qualitative data involving language namely, content analysis, grounded analysis, social network analysis, discourse analysis, narrative analysis and conversation analysis. Fox (2004) provides three approaches to qualitative data analysis, viz. thematic analysis, Grounded Theory and discourse or conversational analysis. Ryan and Bernard classified qualitative text analysis in accordance with the purpose of the text, for example, text as a proxy for experience or as object for analysis. Different methods of analysis are subsequently listed of which whole-text analysis, which includes coding, meets the need of this research. Ryan and Bernard (n.d.) state that the methods included in whole-text analysis are, amongst others, Grounded Theory, schema analysis, classical content analysis and analytic

induction. Vaismoradi, Turunen and Bondas (2013) mention only two methods of analysis: content analysis and thematic analysis as qualitative descriptive methods for data analysis.

Having illustrated the existence of a number of views regarding the methods for qualitative data analysis, one can well understand Sandelowski and Barroso's statement that there are numerous

> Studies in which the findings do not fit the stated method […] because what constitutes adherence to method is still a subject hotly debated by qualitative researchers […] What constitutes a grounded theory to one scholar might be nothing more than a content analysis to another (2003, p. 906).

In an attempt to alleviate this problem, Sandelowski and Barroso (2003) postulated a typology that is analytically useful in distinguishing between findings, irrespective of the analytic method used. The typology (see Figure 3.2) is modelled as a continuum of data transformation, ranging from descriptive (on the left) to interpretive (on the right) (Sandelowski & Barroso, 2003; Vaismoradi, Turunen & Bondas, 2013). On the descriptive end of the continuum, the level of pure description, i.e. lack of data transformation, leads to no real findings, whereas on the opposite, interpretive end, one finds data transformation to such an extent that it eventually produces theories or explanations of phenomena.
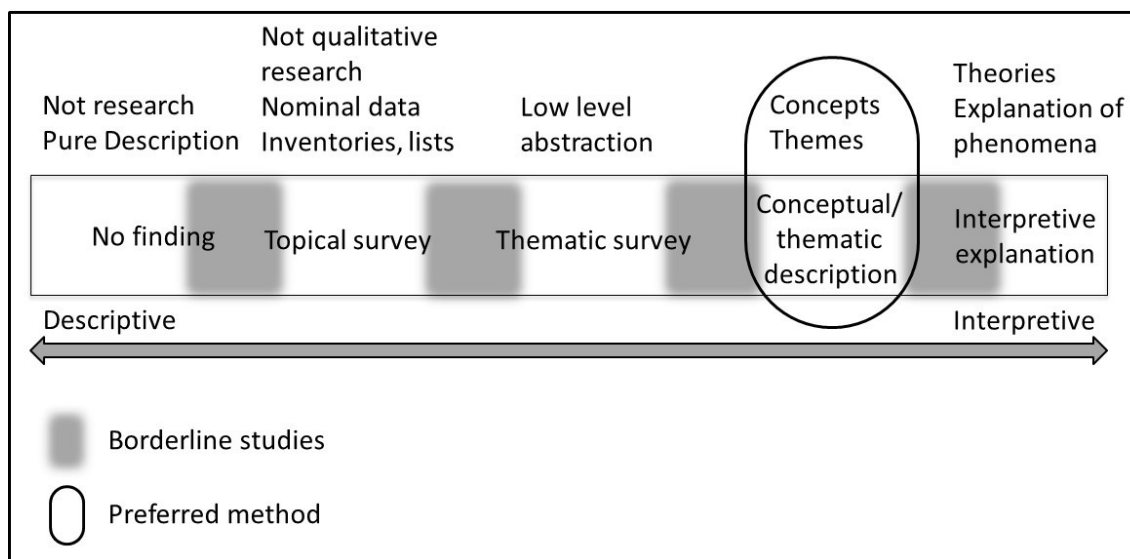
Figure 3.2: The Sandelowski-Barroso typology (2003, p. 908), as adapted by me

On the interpretive side of the typology approaching interpretive explanation, one finds conceptual/thematic description. In this area, the analysis of data leads to concepts or themes moving toward "interpretively integrating portions of data" (Sandelowski & Barroso, 2003, p. 913). This research finds itself in the conceptual/thematic descriptive area of the typology and, according to Vaismoradi et al. (2013), this is the area where one would typically find methods such as descriptive phenomenology, content analysis, and thematic analysis. As was previously stated (see Section 3.3.1), phenomenology is not applicable to this research, therefore content analysis and thematic analysis were the two options to be considered. Content analysis is described as the coding and categorising of large amounts of data, determining trends and patterns, and producing data such as frequencies and relationships that can be analysed further using quantitative techniques (Rayn & Bernard, n.d.; Vaismoradi, Turunen & Bondas, 2013). Thematic analysis is described by Braun and Clark (2006) as a method to determine commonalities in the comments or discussion with regard to a subject and to interpret these commonalities in order to answer the research question. Due to the flexibility of the method and the various ways in which the data could have been analysed, specifically in terms of what suited the research question and the uncertain nature of the data, I decided to use a thematic analysis.

3.4 THEMATIC ANALYSIS

Braun and Clark define thematic analysis as "a method for identifying, analysing and reporting patterns (themes) within data" (2006, p. 77). They are of the opinion that in spite of comments that thematic analysis "is a poorly demarcated and rarely acknowledged…qualitative analytic method" (2006, p. 77) it is, in effect, a method by itself. Applying thematic analysis, the researcher actively, flexibly and consistently analyses the data, applying a process which leads to themes. Themes are described as constructs that encapsulate important concepts in the data that are associated with the research question. Attride-Stirling (2001) agrees with the views of Braun and Clark and provides a method to execute thematic analysis, using a web-like method which she calls thematic networks analysis.

The process of thematic networks analysis extracts themes at different levels from the data and systematically combines them into higher-order themes. There are three classes of themes, starting with the lowest order theme, known as basic themes, which are synthesised from the textual data using codes and discussions in the data. Combining basic themes, which are related in terms of similar topics, and a process of abstraction, the next level of themes, called organising themes, is created. Organising themes is therefore based on basic assumptions. The organising themes lead to the constructs that capture the important concepts in the data, which are associated with the research question. These over-arching constructs are known as global themes. The three levels of themes can be graphically depicted as a thematic network (see Figure 3.3) (Attride-Stirling, 2001).
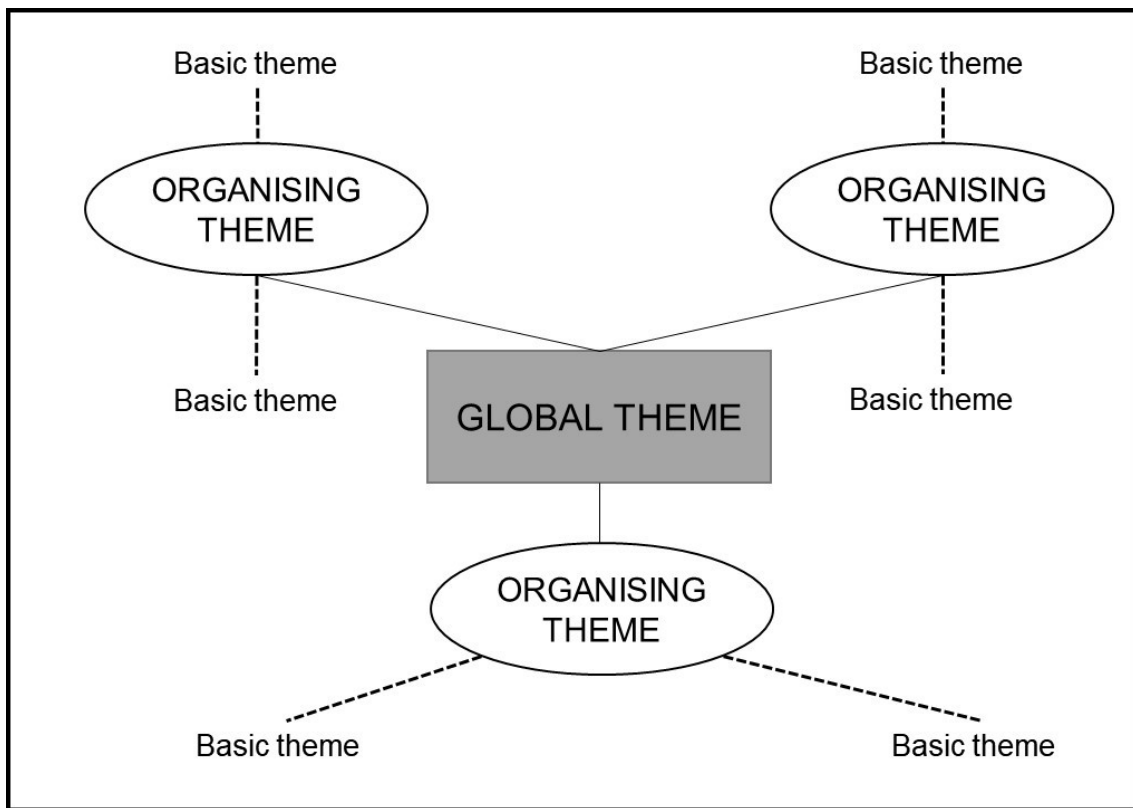
Figure 3.3: A thematic network

Executing a thematic networks analysis requires a three-phase, six-step process described by Attride-Stirling (2001). Although she admits that there exist numerous methods of data analysis, this method is suitable for the development of a thematic network. Several similar methods were investigated, such as the formal analysis process of Ritchie et al. (2014), the six-phase analytic process to construct a thematic

map by Braun and Clark (2006) and, as applied by Jugder (2016), the Miles and Hubermann Model as described by Ibrahim (2012) and lastly the thematic networks analysis process by Attride-Stirling. I found the thematic networks analysis process to be well-structured and following a logical sequence. I subsequently decided to use the thematic networks analysis process by Attride-Stirling (2001) as the data analysis method for this research. As the process makes use of coding, which is one of many ways of qualitative data analysis, the process of coding and codebook construction will now be discussed. Thereafter, the thematic networks analysis process, as applied to this research, will be described.

Coding is the allocation of codes to sections of data with the purpose of data reduction, simplification, transformation and reconceptualisation (DeCuir-Gunby, Marshall & McCulloch, 2011). Codes are defined by Saldaña as "word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (2009, p. 3). Miles and Huberman describe it as a "word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (1994, p. 56). Codes are listed, defined and described in a codebook. The codebook for this research was a catalogue containing the codes and a description thereof. According to DeCuir-Gunby et al. (2011), the codebook can be developed in three ways. Firstly, by deriving it from the data during the coding process, known as the data-driven method; secondly by developing it *a priori* by analysing the relevant theory, i.e. the theory-driven method; or thirdly by compiling the codebook *a priori* by using the research questions to create the codes, known as the structural method. Using the theory-driven method, the PMII conceptual framework (see Section 2.6.3) led to the three elements of PMII and its associated codes, whereas the conceptual framework of collaborative instructivism (see Section 2.8.4) led to its related codes (see Figure 3.4). The codebook was finalised by a description of each code, using the information from Tables 2.1, 2.2 and 2.3. (See Appendix A, Table A1). The thematic networks analysis process consists of three stages each with a series of six steps (See Figure 3.5). The stages, as applied in this research, are as follows.
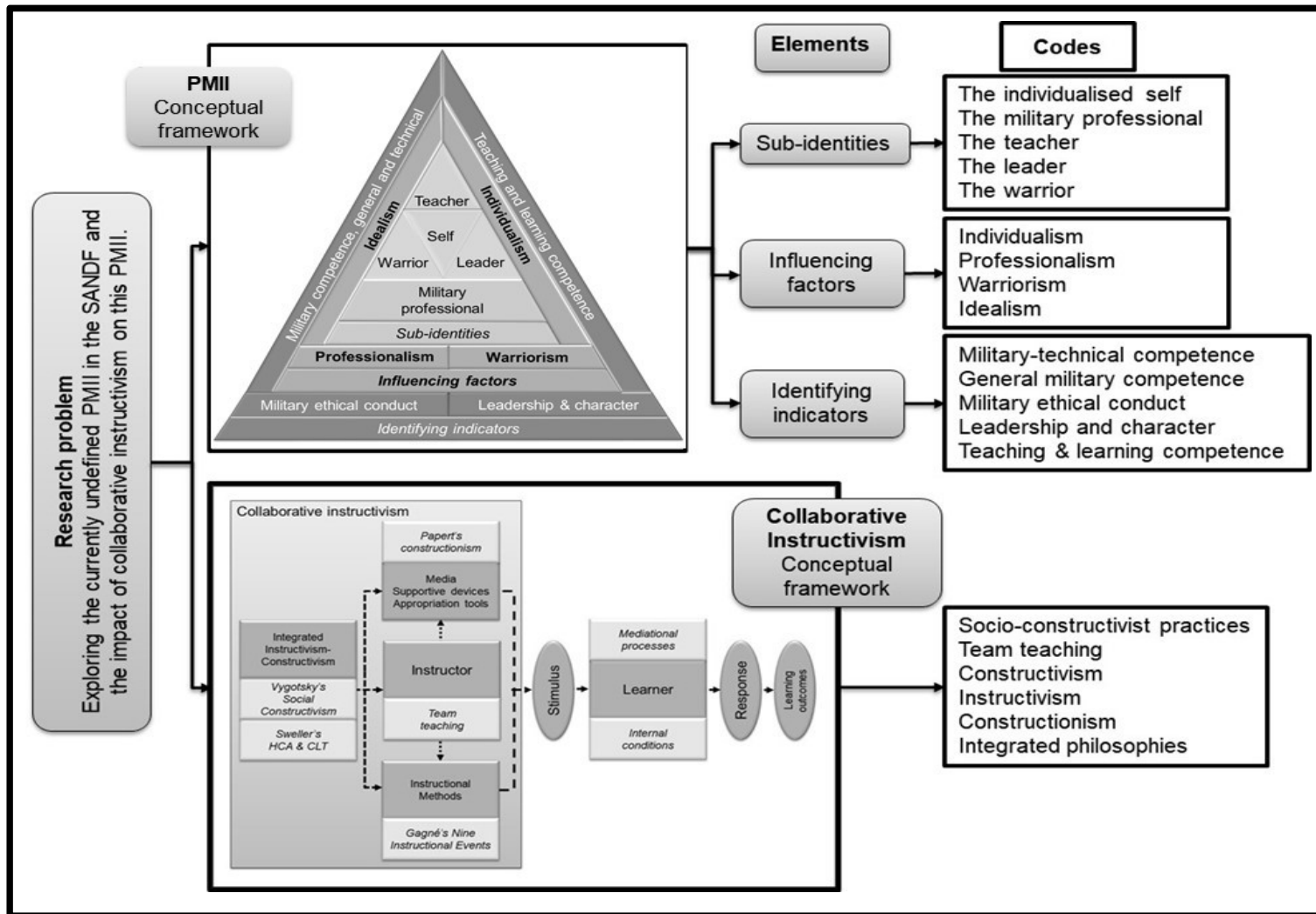
Figure 3.4: Theory-driven development of the codes
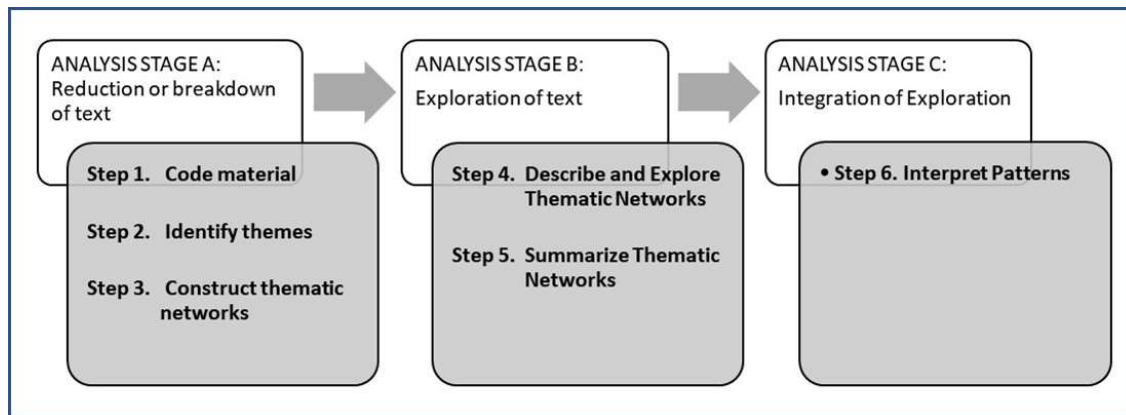
Figure 3.5: Thematic networks analysis process (Attride-Stirling, 2001, p. 391)

3.4.1 Analysis Stage A: reduction or breakdown of text

This stage consists of three steps, namely, coding the material, identifying themes and constructing the thematic networks. The steps per stage as executed are described in the following sections.

3.4.1.1 Step 1: code the material

Before the data could be coded, the codebook was drafted. The focus group discussion and the three interviews were coded separately with the same codes using ATLAS.ti.

3.4.1.2 Step 2: identify the themes

Analysing the text segments associated with each code, the underlying idea or meaning per segment was extracted and rephrased into condensed, specific statements known as basic themes (See Figure 3.3).

3.4.1.3 Step 3: constructing the networks

Next, the basic themes were rearranged into groups of similar or near-similar issues and each group was described by one or more descriptive names or short phrases. This constituted the organising themes. The basic themes and organising themes were analysed and global themes were constructed based on how the subordinate themes were grouped. This stage and step were completed by illustrating the thematic network according to the template provided (See Figure 3.3) and by confirming that the themes, as well as the text segments were mutually supportive

3.4.2 Analysis Stage B: exploration of the text

This stage contains two steps, namely, describing and exploring the network, and lastly, by summarising the network.

3.4.2.1 Step 4: describing and exploring the networks

Using the text segments as evidence, the networks were described and explored with the purpose of finding even deeper meaning in the networks.

3.4.2.2 Step 5: summarise the network

The description and exploration were concluded by a summary, per network, of the findings of the describing and exploring procedures.

3.4.3 Analysis Stage C: Integration of Exploration

This stage contains only one step (**Step 6**), which involved the combination of all the deductions from the network summaries, as well as related theory, coming to conclusions in response to the research questions.

3.5 TRUSTWORTHINESS AND ETHICAL CONSIDERATIONS

With the research design completed, all that needs to be shown is that the design led to trustworthy data and that it was ethically executed. Trustworthiness (Lincoln & Guba, 1985), also called 'rigour' (Ary, Jacobs & Sorensen, 2010), involves four standards (Ary, Jacobs, & Sorensen, 2010): credibility, transferability, dependability/consistency, and confirmability. Ethical considerations involve the maintenance of ethical standards and consist of the principles of informed consent, voluntary participation, privacy, and confidentiality and benevolence (University of Pretoria, n.d.; Mouton, 2001).

3.5.1 Trustworthiness/Rigour

When discussing the trustworthiness/rigour of qualitative research, as it will be referred to from now on, opinions regarding which measures and how they are to be used are divided (Merriam, 2009). Given the difference between the positivist and interpretivist-constructivist philosophical views, the research methods applied and the fact that the

one works with facts and statistics, while the other works with people and their views, makes measures such as reliability and validity irrelevant in qualitative research (Guba & Lincoln, 1985, as cited in Merriam, 2009). Concepts such as reality and the repeatability of qualitative research are also questioned.

In response to the difference in views regarding trustworthiness/rigour in qualitative research, Lincoln and Guba (1985), as well as Ary, Jacobs and Sorensen (2010), propose four standards of trustworthiness/rigour: credibility, transferability, dependability/consistency, and confirmability (Shenton, 2004; Merriam, 2009). These standards were used to deal with the trustworthiness/rigour of this study.

3.5.1.1 Credibility

According to Merriam (2009), credibility can be compared to internal validity and is an indication of the truthfulness of the research findings, compared to reality. The question of what constitutes reality itself, from a constructivist point of view, makes credibility difficult to prove. However, Ary et al. (2010), as well as Shenton (2004) find that there are several credibility enhancing measures, which will promote confidence in the research done. These measures, as applicable to this research, are structural corroboration, referential adequacy, theoretical adequacy, and control of bias (Ary, Jacobs & Sorensen, 2010).

Structural corroboration uses different sources of data and different groups to confirm the data gathered – a process also known as triangulation. In the case of this research, there were two sources of data: a focus group discussion and three individual interviews. There were also two groups of participants, namely, military instructors and policy managers. In terms of the focus group, purposive sampling was used. As only willing participants were involved, I had no control over the participants from the purposive sample of military instructors that eventually participated. However, as far as the sample from the small population of military instructors from the SANDF COLET is concerned, it was a random group. In terms of referential adequacy, it is required to confirm that the researcher's view corresponds with what the participants said. This was done by frequently using low-inference descriptors, namely, verbatim quotes, to confirm the coding and theme-building process. Pertaining to theoretical adequacy, pattern matching confirmed that the data received

corresponded to the theoretical prediction of PMII and collaborative instructivism. For example, all of the elements of PMII, i.e. the sub-identities, influencing factors and identifying indicators, based on theoretical investigation, were voiced during either the focus group discussion or the three individual interviews, or both. Controlling bias in this case of a researcher who is a trained educator, serving for 35 out of 42 years in the military training environment, could only be done through reflexivity. This meant that I frequently had to reflect on and acknowledge my own biases and purposefully had to correct these (Ary, Jacobs & Sorensen, 2010).

3.5.1.2 Transferability

The criterion of transferability equates to external validity and concerns the extent to which the result of the research is applicable in other situations, i.e. generalisability. Given the size and specialised field of research, the question is asked whether transferability is possible in qualitative research. Extrapolation, instead of generalisation, and comprehensive description and information is often suggested (Shenton, 2004; Merriam, 2009; Ary, Jacobs & Sorensen, 2010). To enhance the transferability of this research, descriptive adequacy was firstly applied through the detailed description of the concepts and context, as well as the detailed information regarding the participants, which is provided, obviously within the restrictions of anonymity. This research is specific in the sense that it addresses a group of educators in the specialised field of warfare, thereby threatening transferability – the so-called 'selection effect'. However, the selection effect was diminished by the similarity of information from similar studies, although very few, done in Norway (Johansen, 2013) and Israel (Ben-Dor, Pedahzur, Canetti-Nisim, Zaidise & Perliger, 2008). As indicated in Section 3.5.1.1., although I, as the researcher, could be regarded as biased, it was controlled through frequent reflection on the processes and procedures used (Ary et al., 2010).

3.5.1.3 Dependability/Consistency

Dependability, also known as consistency, implies repeatability and providing similar results when the research is repeated (Shenton, 2004). It also means the tracking and explaining of the variation between results (Ary et al., 2010). Once again, in the constructivist approach, reality is relative and there would not be a similar research

event that could provide similar results. Within the research event itself, the researcher can strive for consistency by using so-called overlapping methods, such as focus group discussion and interviews – as was done in this research (Shenton, 2004). It is, however, important that an audit trail, a detailed description of the method applied in the research, is left in order to facilitate similar research in any comparable environment, but with its own specific results. The audit trail should also include the raw data, documents used in the coding process, and the findings. This research reports in detail on the research design (Chapter 3), the data gathered and its analysis (Chapter 4), and the reflection and conclusions based on the findings (Chapter 5). This will facilitate any similar research, not only in a military, but in any educational environment. Triangulation, as already discussed in Section 3.5.1.1, also confirms dependability/consistency (Ary et al., 2010).

3.5.1.4 Confirmability

Confirmability involves neutrality and objectivity in the acquisition and analysis of the data and findings. Shenton (2004) suggests leaving a comprehensive audit trail that will show and convince observers of the confirmability of the research. This research reports exhaustively on the research design and data analysis, convincing the observer of the neutrality of the researcher, in spite of my specialised background, and the objectivity of the processes followed to gather and analyse the data.

Given the current academic debate on the issue of trustworthiness/rigour of qualitative research, the four criteria of Lincoln and Guba, also comprehensively discussed in Ary et al. (2010) could be used effectively to describe and motivate the trustworthiness/rigour of this research and data. Ethical considerations regarding this research are to be deliberated next.

3.5.2 Ethical considerations

Before starting with the research, ethical clearance was requested from and granted by the Ethical Committee of the Faculty of Education of the University of Pretoria, as well as the SANDF. The following ethical matters, based on the principles of informed consent, voluntary participation, privacy and confidentiality and benevolence (University of Pretoria, n.d.; Mouton, 2001) were also considered and addressed during the research.

3.5.2.1 Informed consent

Mouton (2001) explains that the participants in any research have the right to know what the research is about. The research assistant informed the participants in the focus group discussion thoroughly about the subject that they were about to discuss. Similarly, I updated the three interviewees about the research done thus far and the concepts of PMII and collaborative instructivism.

3.5.2.2 Voluntary participation

The UP Code of Research Ethics clearly states that "[a]n agreement to take part in research is considered to be valid consent only if it is given voluntarily" (University of Pretoria, n.d. p. 26). All participants were legal adults and volunteers who completed letters of consent. No participant was ordered by me, as Commandant, to attend the focus group discussion or to undergo an interview. The interviewees were at any rate serving members while I was retired with no authority over any serving member.

3.5.2.3 Privacy and confidentiality

I was the general commanding officer of the participants in the focus group discussion until my statutory retirement on 28 February 2017. To eliminate any ethical issues with regard to conducting the focus group, a research assistant was appointed. He is a registered industrial psychologist who, in spite of also being in the SANDF, was unknown to the participants. Although the participants were known to me, anonymity with regard to the inputs in the discussion was guaranteed by the research assistant who transcribed the discussion and did not identify any of the participants. In the expert interviews, all three interviewees requested anonymity and are therefore not identified in the research documents. Furthermore, the transcription of the interviews was done by a third party who had no interest in the research.

3.5.2.4 Benevolence

Although the research was done in a strict military environment, it was attempted to create an atmosphere of benevolence while executing the discussion and interviews. The focus group discussion, for example, was conducted in civilian clothes to prevent intimidation by uniform and rank. The three interviewees were all former colleagues of

mine and were seasoned instructors. The relation between us was professional and rank was not a restricting factor.

3.6 CONCLUSIONS WITH REGARD TO THE RESEARCH METHODOLOGY

This chapter described the research methodology applied to explore the currently undefined PMII in the SANDF and the impact of collaborative instructivism on this PMII (see Figure 3.6).
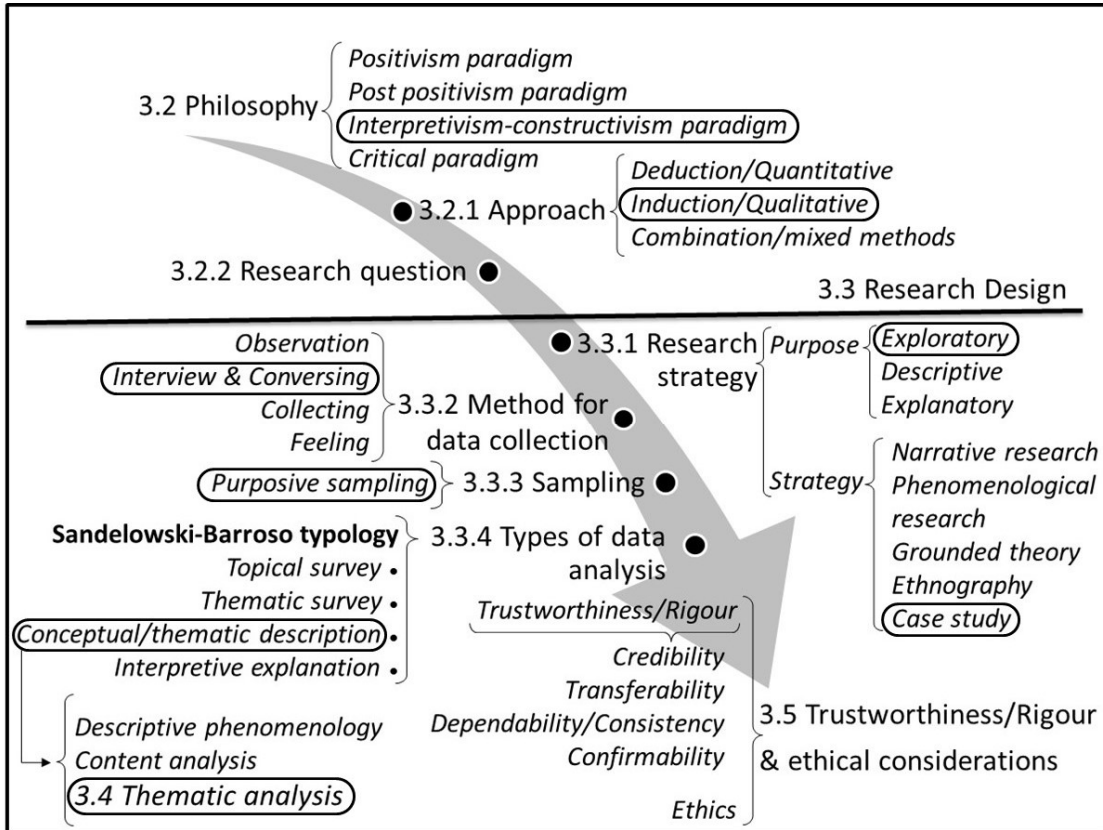
Figure 3.6: The research methodology, concluded

The interpretivist-constructivist paradigm and inductive/qualitative approach led to the research design. The research design encompasses the research strategy with its exploratory purpose and case study as strategy. It also states conversing and interviewing as methods of data collection and the use of thematic analysis, specifically thematic networks analysis, as a data analysis method. Lastly, the trustworthiness/rigour of the data was motivated and ethical considerations discussed.

With the research methodology declared and concluded, the research was conducted, the results of which are analysed and extensively discussed in the next chapters.

CHAPTER 4 RESEARCH RESULTS

4.1 INTRODUCTION

Attride-Stirling is of the opinion that "[i]f qualitative research is to yield meaningful and useful results, it is imperative that the material under scrutiny is analysed in a methodical manner, but unfortunately there is a regrettable lack of tools available to facilitate this task" (2001, p. 386). In view of Attride-Stirling's concern, Chapter 3 described the processes to effectively acquire and analyse the data for this research.

This chapter will first provide an overview of the methods of data collection (focus group discussion and interviewing), followed by the report on the coding process, and the results of the thematic networks analysis. These discussions are all done within a framework constructed by the research problem and the resultant conceptual frameworks of PMII and collaborative instructivism. The nomenclature pertaining to the focus group discussion and the interviews, which will be used during the following deliberations, is explained in Table 4.1.

Table 4.1: Nomenclature when referring to the focus group discussion and interviews

EVENT DESCRIPTION	INDICATOR
FOCUS GROUP DISCUSSION	FGD
INTERVIEW WITH INTERVIEWEE 1	INT1
INTERVIEW WITH INTERVIEWEE 2	INT2
INTERVIEW WITH INTERVIEWEE 3	INT3
EXAMPLES OF REFERENCE TO A QUOTATION FROM AN EVENT: **FGD, P.5: 110** indicates the focus group discussion transcription, page 5, line 110 **INT2, P.1: 21** indicates the interview with Interviewee 2 transcription, page 1, line 21	

4.2 OVERVIEW OF THE METHODS OF DATA COLLECTION

In conducting the research, I came to the conclusion that, given the interpretivist-constructivist philosophy and qualitative/instructivist approach that was followed, conversing and interviewing would be the best method of data collection, and that thematic analysis would be the best type of data analysis. Having fully described both the method and type in Chapter 3, an overview of the execution of the interviewing and conversing methods used will now be provided. The complementary nature of the two methods and resulting data-sets are clearly visible in the development of the organising themes and the global themes. The supportive and complementary character of the two data collection methods, even though it was executed in a semi-structured fashion, is even more visible in the discussion of the main conclusions (see Section 5.4)

4.2.1 Focus group discussion

Using a purposive or criterion-based sample of military instructors, the characteristics of the identified group and the view of Ritchie et al. that the interaction with other group members, in this case friends and colleagues, presents a "more natural environment than that of the individual interview" (Ritchie, Lewis, McNaughton Nicholls & Ormston, 2014, p. 213), led me to the decision to use the focus group discussion technique (Boddy, 2005) rather than individual interviews. As indicated in Section 3.3.2, it was a diverse group with the only common denominator being that they were all instructors at the SANDF COLET undergoing a retraining programme. Contrary to the prerequisite stated by Eliot and Associates (2005), namely that the participants should not know one another, they were all colleagues and knew one another fairly well.

The semi-structured discussion with 13 participants was conducted by a research assistant (see Section 3.3.3). The assistant was well-versed in group facilitation techniques, being an experienced industrial psychologist. The discussion was based on the thematic focus, which was structured as a question, namely "Who am I as an instructor and what contributes to my professional instructor identity?" (FGD, p.1: 7). He noted the inputs during an initial brain-storming session on a flipchart (FGD, p.1: 24 – p.7: 121). This was then followed with a discussion of all the inputs. The research assistant transcribed the discussion and I received a copy thereof (see CD: Research

documents). Anonymity with regard to who said what was maintained throughout and it is therefore not possible to identify the participants, not even as Participant 1 or Participant 2. An observation of some concern, not related to, but influencing the data, is the inability that the participants showed in expressing themselves concisely and clearly in English. Taking into consideration that English is the second language of most of the participants, but also the fact that they are teaching other instructors in subjects on NQF Level 4, 5 and even 6, the lack of vocabulary and grammatical dexterity is disturbing. This issue is also alluded to in research conducted by Esterhuyse (2006). The following quotes from the focus group discussion serve as examples:

> Ja…that comes when you…you having group of learners, students or call it what you want, and then maybe in the psychomotive domain whereby you can say hi "Boeta", not that way, this way, and then if you do it…you know when I say…coaching throughout the process whatever the process it might be. And then he can rely or say: "Wow that man said that if I do this way and that way and avoid maybe this way since we do this and this and maybe waste of time and" …and…then…ja (FGD, p.9: 181).

> Because in the process there is this person who want to know that and then you give…you are having that information because of that lack of humbleness. I will never get it right to come to you…because, ja, I will be cut to pieces. [another respondent] I think what I meant there was…you are not all that when you are walking into the class and you qualify and you are…what are all these other things…and you have the "papiere teen die mure" and you know…the knowledge (FGD, p.23: 515).

> Because if you are not humble it means you are arrogant. And somebody who was…somebody who was being interviewed this morning and you are asking about this…the voice thing…and then just say this will teach some people to be humble and not to be arrogant. And immediately…so when you are talking about humble…say ja…every time you are not humble, people will like…you will always he is arrogant so we will show him also like... [another respondent] ja. [previous respondent] you know…and they will try to drag you down, so ja will be doing that…ja (FGD, p.24: 543).

Given the protracted and often interrupted manner into which the discussion often relapsed, the quotations that follow may be longer than usual in order to convey the full message.

4.2.2 Interviews

After conducting the focus group discussion, my statutory retirement, the transfer of members from COLET and other work-related commitments, prevented the research assistant rendering future services and it became difficult to gain access to any further information. Furthermore, the information required regarding the implementation of the programmes would probably not have been divulged by the members as it could have been regarded as disloyal to the unit and its new Commandant.

The interviews with the three participants were conducted in diverse circumstances. Interviewee 1 attended a military programme, which restricted the time available for the interview. It was subsequently held late afternoon in a rather noisy restaurant. Movement and noise were disturbing, but the interview was carried out – although it was rather short. Interviewee 2 and Interviewee 3 both requested to be interviewed in their offices.   Both interviews were conducted without interruption. Based on the thematic focus of the interviews, namely to acquire an expert view of the process at the SANDF COLET, all three interviewees provided information that was well-structured and honest, founded on their expert opinion. I also concluded that theoretical saturation occurred during the three interviews, making further interviewing unnecessary.   The three interviews were then transcribed and copies of the three transcriptions were handed to me (see CD: Research documents). Having motivated and described the focus group discussion and the expert interviews, an overview of the data analysis type to be used, specifically thematic networks analysis, follows next.

4.3 APPLYING THEMATIC NETWORKS ANALYSIS

The interpretivist-constructivist philosophy and qualitative/inductivist approach led to thematic analysis as the best type of data analysis. I also decided to use a specific method of thematic analysis, namely, thematic networks analysis (Attride-Stirling, 2001). The process of thematic networks analysis is fully described in Section 3.4 and demonstrated in Figures 3.3 and 3.4. An *a priori*, theory-driven codebook (see Section 3.3.4) was prepared with 20 codes in the codebook. Three clusters of the codes were derived from the PMII conceptual framework and one cluster from the collaborative instructivism conceptual framework. The clusters are also named as 'families' in Atlas.ti. The conceptual frameworks, with their clusters and related codes, constituted

a coding framework (Attride-Stirling, 2001) (see Figure 3.4), which was used to code each of the transcriptions separately using the ATLAS.ti program. Following the thematic networks process of Attride-Stirling (2001), the basic themes were developed by coding the transcriptions, then analysing <u>text segments</u> from the quotations associated with each code. The analysis resulted in summarised, restructured and condensed distinctive statements. These statements constituted the first level themes, known as basic themes (see Table 4.2 and Figure 4.1). The result of this code-to-theme process is recorded in Appendix B, Tables B1, B2, B3 and B4.

Table 4.2: Basic themes per event

EVENT	NUMBER OF BASIC THEMES
FGD	14
INT1	8
INT2	12
INT3	8

The next step was the reorganising of the basic themes in groups of similar or near-similar issues and labelling the groups with descriptive names or phrases. These descriptive names provided the organising themes, which, when analysed along with the basic themes, provided a global theme (see Section 3.4, Analysing stage A, steps 1, 2 and 3, as well as Figure 4.2). The results of this step are provided in Appendix B, Tables B5, B6, B7 and B8. After the data reduction and breakdown activities, grouping themes and constructing organising themes, as well as global themes, the exploration stage followed next, during which the thematic networks were explored. These networks are graphically described in Figures 4.3, 4.4, 4.5 and 4.6.

4.4 EXPLORING THE THEMATIC NETWORKS

Four global themes were identified and will be discussed separately with the aim of finding deeper meaning in the networks (see Section 3.4, Analysing stage B, steps 4 and 5, as well as Figure 3.3). During this discussion, organising themes will be referred to as 'OT x', where 'x' would refer to its number (1 to 13) in its corresponding theme construction table and global themes as 'GT a', where 'a' would refer to its letter (A, B, C and D) in its corresponding theme construction table.
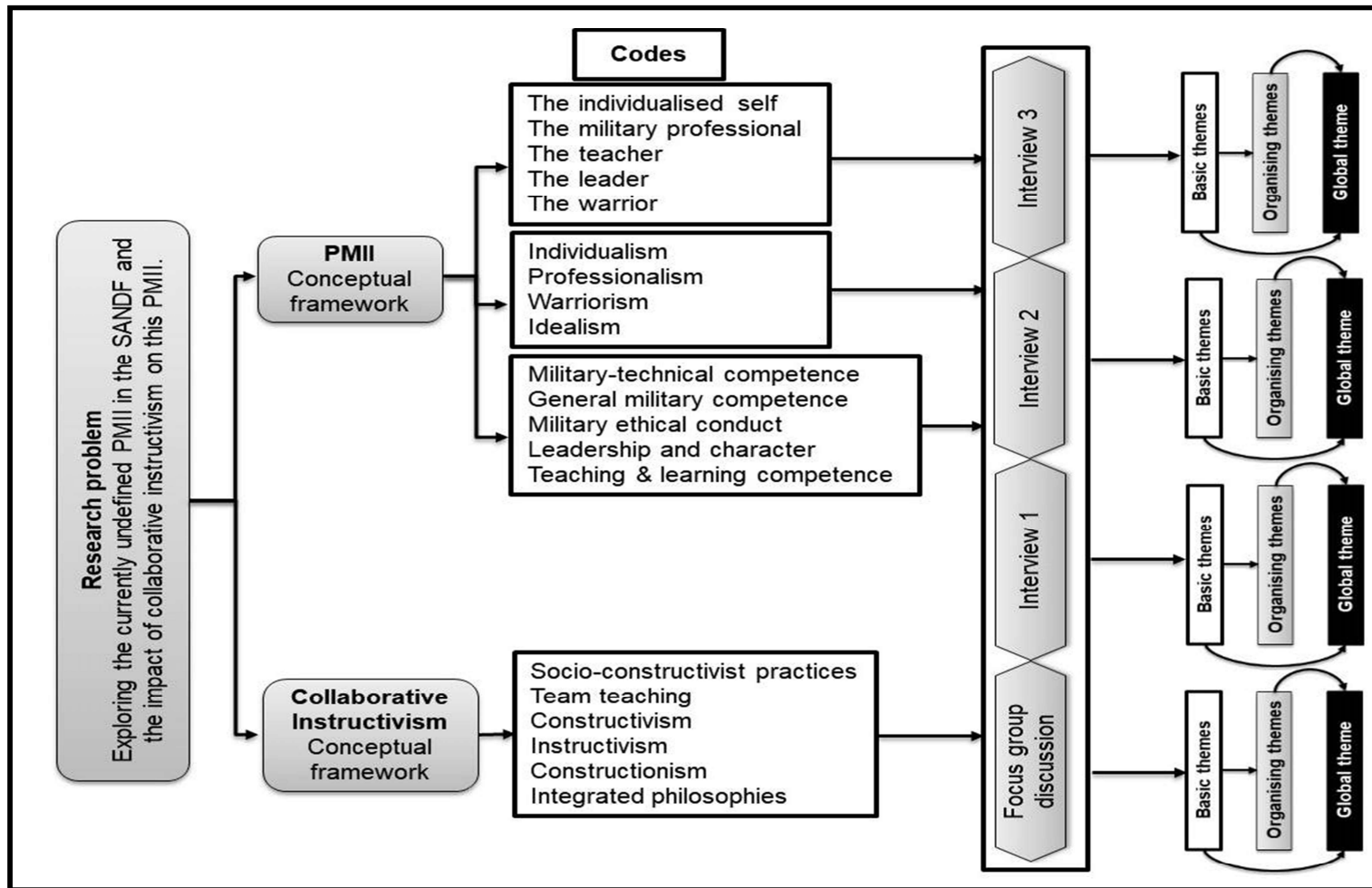
Figure 4.1: Theme construction

4.4.1 Global Theme A: PMII elements exist in the SANDF

The global theme 'PMII elements exist in the SANDF' (see Figure 4.2 and Tables A1 and A5) is derived from four organising themes, which stem from 14 basic themes. This network represents the current view of military instructors pertaining to PMII. Although not officially known, or even thought of as PMII or something similar, the discussion of the focus group indicated that the members did recognise the sub-identities, influencing factors and identifying indicators of a professional identity. Lack of knowledge and competence, as well as the influence of socio-political issues and thought prevent focused discussion on the subject. The global theme will now be discussed in terms of its organising themes.

4.4.1.1 Organising theme 1: The military instructor describes his sub-identities as the individualised self, teacher, leader and military professional

The participants identified sub-identities, excluding the warrior, but displayed a restricted view thereof. They identified the Self as a primary entity and inextricably part of the PMII.

> Ja. What I mean by that is that your personal background should reflect through your role as an instructor in class. So, you bring yourself to the class, very honest and you use the same traits. Through your personality to reflect back in your training or teaching style, instructor style (FGD, p.10: 151).

> Exactly…and that should be perfectly acceptable. If you want instructors to be individualised professional members, you have to accept the fact that I am not the same as he is…I don't think the way he does…I don't process information the way he does…he may do it better than me… (FGD, p.33: 575).

Although the name 'teacher' is used only twice in the total discussion, it was never in the context of a sub-identity. However, the term teacher was implied during a discussion of qualification versus competence – should the instructor, being a teacher, be officially qualified? Opinions were divided with regard to the earning of a formal qualification.
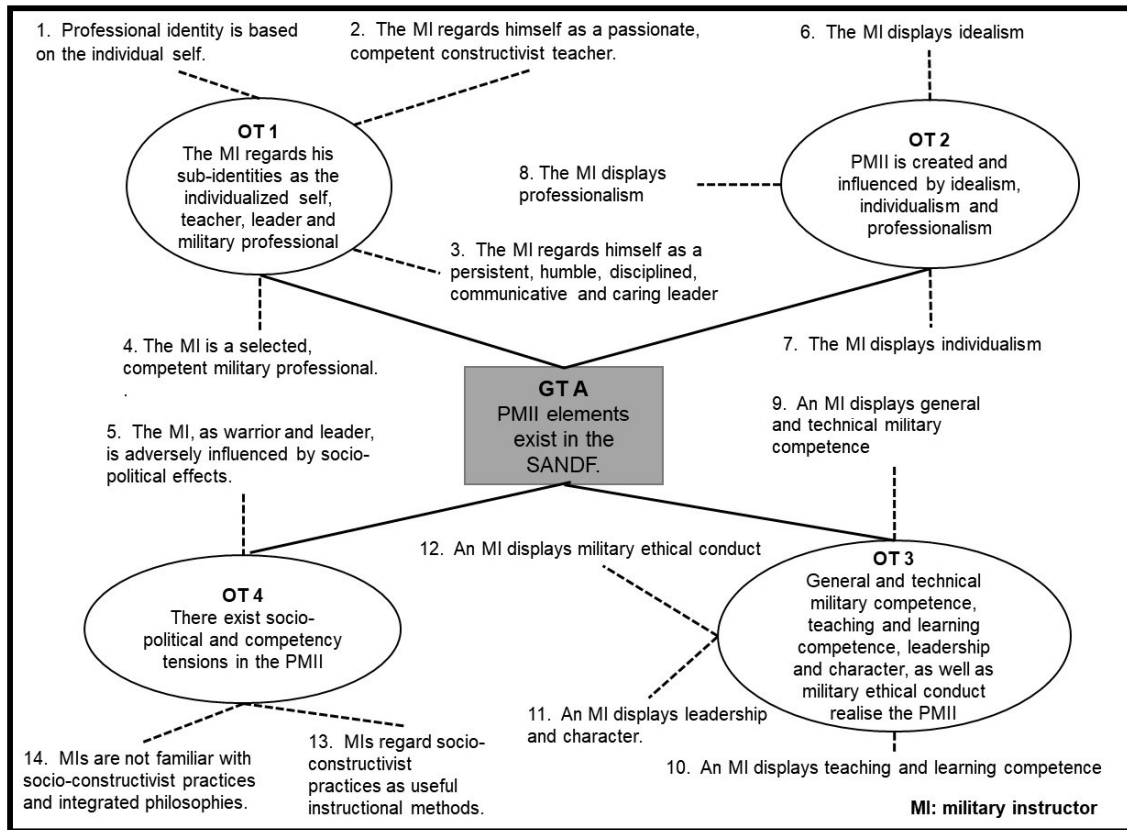
Figure 4.2: Global Theme A: PMII elements exist in the SANDF

I am saying you cannot call yourself an instructor without a qualification…I mean you cannot stand in front of people without the right one…you must be qualified…you must have the right documentation…you must have gone through the [ineligible] part…then you can claim to be an instructor (FGD, p.12: 197).

Not only that. You can do a course or anything, you can have a paper, it does not make you professional or it does not make you an instructor. It just says that I passed a test. It doesn't mean that I am truly competent and in a sense of how I understand those three words I fit that profile. [another respondent] I think having a qualification with a competency…if I have a qualification that says you have been practically tested as well and have been found competent, yes, I agree. But if it is just a piece of paper that says this but there has been no practical experience or practical implementation, then no (FGD, p.14: 230).

But OK, I don't think it is necessarily…we do not need to be certified as an instructor…you need to be certified in the competency you are going to be translating or teaching…OK…" (FGD, p.13: 218).

Certification in this case means receiving credits or a qualification from an accredited institution. This practice is in keeping with official policy on this matter, stating that the SANDF should present accredited learning programmes, which should support both individual career and personal developmental requirements (South African Department of Defence, 2015b). Unfortunately, this practice resulted in 'credit hunting' where programmes were attended for the sake of qualifications and not to acquire competencies. This custom negatively influences the training of military instructors as well.

> But it is just to guarantee you that If maybe you have to claim that you have got the qualification but the standard… it doesn't match with what you…what I see on the wall (FGD, p.16: 260).

However, the emphasis on educational competency throughout the discussion confirms the appreciation for the instructor as a teacher. Further recognition of the teacher can also be found in the reference to team-teaching. Not much was said about this, as most of the participants had heard about the concept only days before.

> You know, you are able to adjust and know where you are not the strongest and you either improve it or you get someone to stand in with your team teacher to take over that part of the lecture if you are not comfortable or if you know you your strengths don't lie there (FGD, p.74: 1379).

In terms of the role of leader, it is expected that he will display enhanced cognitive readiness and adaptability. The participants had some ideas regarding the attitude of a leader and the way in which he should conduct himself. Discipline, humility, compassion and constructivist thoughts were some of the characteristics that they would have liked to see in a leader. Discipline is the first characteristic mentioned.

> With regard to discipline, once again we need to set the example. We have already spoken about it but if you say this time you need to be there that time. You set the example. If you are not going to be disciplined, how can you expect your students to be. If you decide…if that day everybody must come in a certain dress but you dress differently, that is not discipline (FGD, p.47: 853).

Humility is the next characteristic.

> Because if you are not humble, it means you are arrogant. And somebody who was…somebody who was being interviewed this morning and you are asking about

this…the voice thing…and then just say this will teach some people to be humble and not to be arrogant (FGD, p.31: 543).

Constructivist thought, or rather the presence of a constructivist epistemology and the leader that endorses it appealed to this current military instructor as it is the current educational approach for the training that he received. Constructivist thought, specifically social constructivist thought, is not mentioned but implied by describing collaborative learning.

> However, one must be careful not to solve all problems for people. This comes in that it is the [unclear] questioning [unsure of the word as it is unclear] where you allow them to go through the process themselves and that in itself is a problem-solving technique. You realise they are not understanding something but you don't tell them what the answer is, you allow them to find the answer themselves. So, you have solved the problem by allowing them to solve the problem (FGD, p.50: 909).

> For instance we do the collaborative learning thing where you hand out…you hand out then…[another respondent] We would have heard the bells if the Commandant was here, [laugh] [first respondent] …where you hand out the material beforehand and the people prepare and the next day they come and they are in groups and they then actually present the class back to everyone in different groups. Ja, so you work with them jointly and share with them the power (FGD, p.55: 1002).

The military professional is the servant of the nation with strict organisational values, ethical conduct and discipline. The participants confirmed the ethos of being a servant of the nation as it is demonstrated in the organisation.

> You give a service to your students, but you are a servant of the organisation. [first respondent] Of the organisation, yes. [fourth respondent] You owe it to the organisation to teach the students. [fifth respondent] Exactly. The best way. [third respondent] And you provide a service to them (FGD, p.71: 1308).

4.4.1.2 Organising theme 2: PMII is created and influenced through idealism, individualism and professionalism

The participants did not realise that the three factors, namely, idealism, individualism and professionalism, are factors influencing PMII. It was, nonetheless, regarded as something that contributes to PMII.

Idealism encompasses elements such as altruism, patriotism, *esprit d'corps* and a military value system. Patriotism, exprit d'corps and loyalty were inferred in the following quotes:

> As an instructor, you know that you have a goal and you know that you need to achieve that goal whatever the means, whatever the time, whatever the effort. The point is that you stick to the plan, you are focused, and you make sure you achieve what you need to achieve and at the end of the day that is…your students learn (FGD, p.24: 407).

> Towards the organisation because…towards the organisation it is going to put the students in a just position. [another respondent] Yes. [first respondent] Automatically. [third respondent] You give a service to your students but you are a servant of the organisation. [first respondent] Of the organisation, yes. [fourth respondent] You owe it to the organisation to teach the students. [fifth respondent] Exactly. The best way. [third respondent] And you provide a service to them. [first respondent] Yes. (FGD, p.71: 1307).

Individualism indicates self-centredness and self-righteousness. The participants regarded it as follows:

> …and then he ended up designing two block programmes of the same course because it was to meet his own approach and also to meet my own approach for at the end we met the same planning ends. [another respondent] Exactly…and that should be perfectly acceptable. If you want instructors to be individualised professional members, you have to accept the fact that I am not the same as he is…I don't think the way he does (FGD, p.33: 573)

> I was actually meaning that people should be able to accept other people's point of views. And if now it you come to a stale point then you must go with the flow of the majority. That is democracy. And now…from my experience I have seen people been so dynamical and tyrants né, and in their way to…their way or no way. So, it is important that now you should be democracy… (FGD, p.35: 620).

Professionalism involves motivation for the task at hand and self-development. The participants described it as the resolve to execute a task.

> As an instructor, you know that you have a goal and you know that you need to achieve that goal whatever the means, whatever the time, whatever the effort. The point is that you stick to the plan, you are focused, and you make sure you achieve what you need to achieve and at the end of the day that is…your students learn (FGD, p.24: 407).

4.4.1.3 Organising theme 3: general and technical military competence, teaching and learning competence, leadership and character, as well as military ethical conduct realise PMII

Organising theme 3 involved the identifying indicators of PMII, which were briefly described by the participants, starting with their view concerning the general, technical, teaching and learning competence.

> So, you need to know more than what your students know or you need to be able to adapt and learn with them if there is a question asked that you don't know the answer to…work with your students to find the answer or you need to be able to access the information and that you need to be a specialist in your field. [another respondent] You need to know your subject. [third respondent] SME. [First respondent] Yes (FGD, p.35: 614).

> A "Specialist", what I meant with specialist is you need to know your subject, you need to know your job because when you are standing in front of a class and the students have got different levels of knowledge and experience you need to be able to answer their questions (FGD, p.35: 612).

As far as teaching and learning competence is concerned, the participants argued the merits of a qualification. Although some realised the fact that a qualification does not guarantee competence, they were predominantly of the opinion that teaching and learning competence can be equated to a qualification.

> I am saying that… we train instructors to be qualified professional… instructors. But now, the requirement is that now…for them…for them they must have those certificates. Now, at some stage up there, somewhere up there you cannot actually train someone to get a certificate while you don't have a certificate (FGD, p.17: 282).

Leadership and character, as well as military ethical conduct were all mentioned by the participants using the virtues of discipline, honesty and integrity to explain their views.

> With regard to discipline, once again, we need to set the example. We have already spoken about it but if you say this time you need to be there that time. You set the example. If you are not going to be disciplined, how can you expect your students to be. If you decide…if that day everybody must come in a certain dress but you dress differently, that is not discipline (FGD, p.47: 853)

OK, that is…that is inherent …it should be inherent to all instructors. It is the quality of being honest, you know. Display good morals, those types of things and doing the right thing when other people doesn't witness you doing the right thing (FGD, p.79: 1466).

Your yes is your yes, and your no is your no and it cannot be changed to suit the person, to suit the situation, and to suit your own circumstances. If you want people to learn something from you, you need to be trustworthy. They need to know that they are safe with you. That there are parameters, if they overstep the parameters, you need to take charge and sort it out and bring them back. There is nothing wrong with disciplining people or being autocratic, or being assertive when people are doing something wrong, because it is about the boundaries (FGD, p46: 842).

4.4.1.4 Organising theme 4: There exist socio-constructivist practices and competency tensions in PMII

In spite of the existence of the sub-identities of the self, the teacher and the leader, there are elements that detract from the positive effect that a properly defined and accepted PMII could have.

The first detracting factor is the anomaly in military thought regarding competence versus qualification, as can be seen in the discussion regarding this subject in Section 4.4.1.3. The outcome of the discussion was inconclusive, although it was stated that the 'hunting' of credits weakened the quality of military instruction, as was also concluded by the Chief Human Resources in 2015 (South African Department of Defence, 2015b).

The issue of democracy in the military is the second detracting factor, with participants arguing for a more democratic leadership style in the military. They, however, reluctantly realised that the military is not a democracy. This incongruity in thought led to a lengthy, inconclusive debate, which, as in the case of competence versus qualification, has an undermining effect on PMII.

Ja…No, I don't know, there are some people that…that their word is final. Now when I say critic… I was actually meaning that people should be able to accept other people's point of views. And if now it you come to a stale point then you must go with the flow of the majority. That is democracy. And now…from my experience I have seen people been so dynamical and tyrants "né", and in their way to…their way or no way. So, it is important that now you should be democracy… (FGD, p.35: 620).

I think the biggest mistake that we can make in this regard is to think that to be democratic is to agree with people. That is not it…but it is to give people a chance to air their opinion or whatever. You give them a chance, you don't deny them a chance whatever they want to say. But that does not mean that they are wrong for the fact that you want be democratic say…OK hey you will agree with me. No, never say you will agree with that. The fact of the matter is you give them a chance [to say whatever they want to say (FGD, p.36: 640)

Let me just first start by saying those two words, they can be democratic and also an autocratic. …More specially when we are dealing with weapons and those kind of things. We are not going to discuss that holding but why did I handle it…I prefer to hold it like…you know? You tell me: "Listen I am telling you, you do it this way", [another respondent] "Stop and klaar". [first respondent] I mean you will discuss that knowing know nothing and for that…for that part you don't even give him a chance…you know, just listen…listen…this is how it is going to be done, this is just the only way you do it… [another respondent] And you are autocratic (FGD, p.39: 709)

Yes…I understand that this are very sensitive because they oppose each other democracy and autocratic. But autocratic…autocracy actually must not when as an instructor. It is according to me…because we are subject matter experts and…the audience, the learners, that are…they don't know what is your plan because they don't, they can know the outcome but they are not there yet. They know…they don't understand the process. So, for you to be autocratic, say, you are a parent to them and you guide them to the positive…sometime they will criticise it, but they don't know that by them…by you taking them through those processes this actually, you are actually saving their lives. So be autocratic at that moment it is…it is actually for their own safety, for their own safety (FGD, p.41: 746).

4.4.1.5 Summary of the findings of the network of Global Theme A: PMII elements exist in the SANDF

The discussion with a focus group consisting of trained instructors at the SANDF COLET, where military instructors are trained, showed that the construct of a PMII does not exist and, as such, is not discussed or applied to improve the quality of instruction. PMII is unknown in the SANDF. However, the elements of PMII are known and occasionally thought about. Although more than 70% of the participants were trained as combat or combat support soldiers, the absence of a warrior ethos

emanating from the discussion was particularly obvious. The participants discussed their position in civilian terms and were concerned with qualifications and democratic management. Even the word 'soldier' was only used twice and the word 'warrior' was not mentioned at all. Subject matter expertise was regarded as important though.

Finally, it seems that the SANDF is following the trend of other modern armed forces (Heinecken L. , 2014; Esterhuyse, 2006) such as the Norwegian (Johansen, Laberg, & Martinussen, 2014), British (Dynes, 2014) and Israeli (Ben-Dor, Pedahzur, Canetti-Nisim, Zaidise, & Perliger, 2008) armed forces, where <u>modern individualism is perceived to be undermining professionalism and warriorism</u> (see Section 4.4.1.1) Individualism is characterised by four traits, namely, self-definition, the importance of personal goals as opposed to group goals, rationality against relatedness, as well as attitudes and norms (Triandis & Gelfand, 1998). It is also based on modern humanism and displays characteristics such as self-righteousness, opposition to authority, and a breakdown in values (Johansen, 2013). Individualism was evident in the focus group discussion based on the lengthy discussion of democracy, for example:

> And now…from my experience I have seen people been so dynamical and tyrants né, and in their way to…their way or no way. So, it is important that now you should be democracy… (FGD, p.35: 622)

It is also based on the self-righteousness and opposition to authority, as was subtly expressed in sarcastic remarks relating to the retraining that the participants were undergoing.

> Yes…I am who I am…And if you don't see your instructor pool like that you give them the tools, you teach them all these *five hundred methods of instruction*… (FGD, p.33: 579) (referring to the 37 methods of instruction instead of the five methods previously taught)

The conclusions regarding PMII have, so far, been provided by a specific group of instructors. The following interviews with educational experts and senior managers will shed further light on the matter.

4.4.2 Global Theme B: PMII is in dire straits

The global theme 'PMII is in dire straits' (See Figure 4.3 and Tables A2 and A6) consists of three organising themes and 8 basic themes. This network represents the view of a senior educator stationed at SANDF COLET. He was not part of the focus group discussion but had also undergone retraining. The network shows the concern of the interviewee that individualism has a negative influence on PMII and that nothing is done to enhance PMII, in spite of the fact that it can be done by adopting collaborative instructivism as a learning approach. Using the organising themes, these views will now be addressed.
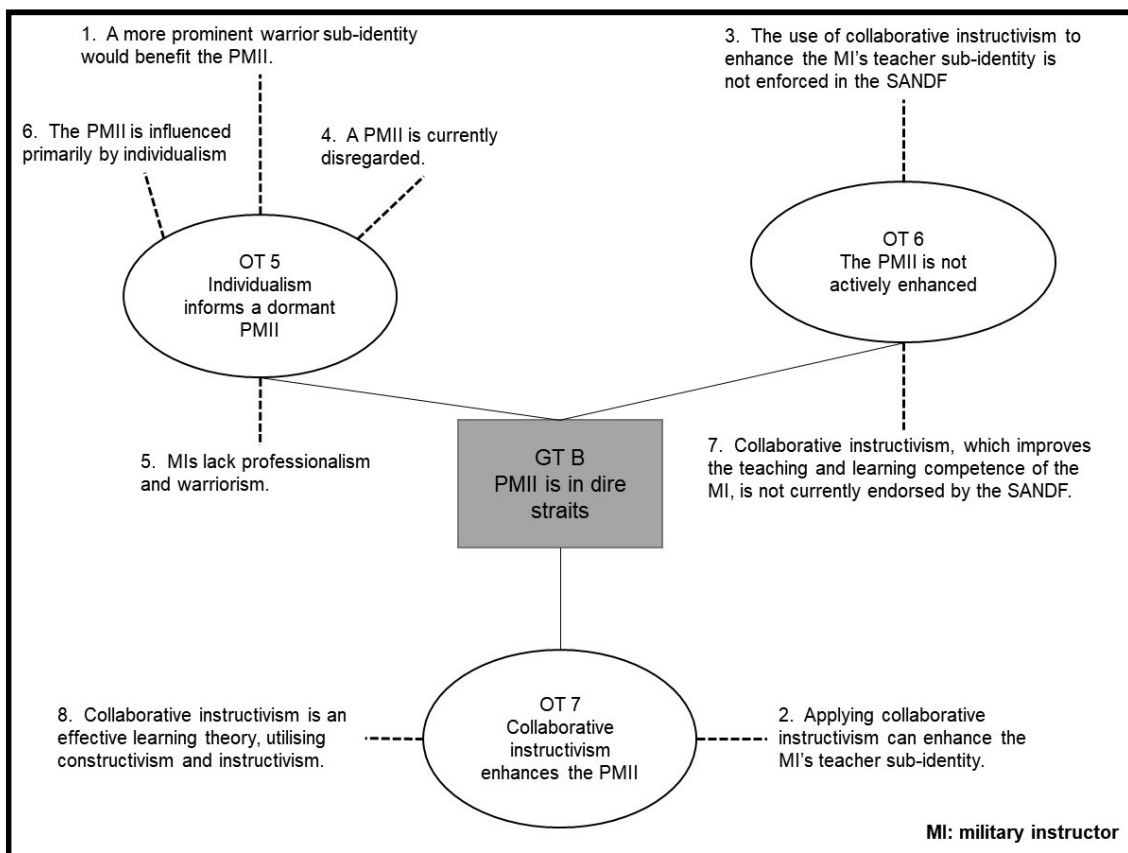
Figure 4.3: Global Theme B: The PMII is in dire straits

4.4.2.1 Organising theme 5: individualism informs a dormant PMII

This organising theme confirms the view of the focus group discussion, namely, that PMII is influenced primarily by individualism and that warriorism and professionalism are neglected.

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INTERVIEWER: ...uhm... having… having read through the and study the professional military instructor identity...uh...you… you mentioned earlier that that the whole issue of warriorism and being a warrior as a sub-identity was not prominent...uh...in… on previous. or did not come out prominent in previous interviews and in the focus group......uhm... do you have any view on that?"

INTERVIEWEE 1: ..uhm... I would say that...uhm... the warrior its… its...uhm... soldiers these days is more to do with work and getting paid than... being a warrior...uhm... in die Defence Force ... as a instructor...so I think also that...uhm...... being a warrior in the Defence Force there's a few people that's still instructors that's still...uh...with the warrior...uh...of the SANDF then but...they are... more to do with the work and getting paid part of it.

INTERVIEWER: Do you have any opinion on… on the lack of warriorism and the effect on… thereof on the PMII?

INTERVIEWEE 1: ...uhm... I think we must just...uhm... uplift that concept again within the Defence Force... I think...uhm... that will also improve training within the Defence Force as well (INT1, p.2: 28)

An important matter is the view of Interviewee 1 that individualism, as an influencing factor, is undermining warrorism and being a warrior. This confirms the result of the analysis of the focus group discussion, namely, that modern individualism seems to undermine professionalism and warriorism. He also commented that PMII, or something similar, has been dormant ("shot down") in the SANDF since 2000/2001.

INTERVIEWEE 1: With regard to the professional military identity, I think it's an area that's currently lacking in the Defence Force...uhm... it's been shot down I would say since 2000…2001...uhm... there's not much attention given to the military identity of the instructor (INT1, p.1: 9).

The year 2000 was also the time that the instructor training process in the SANDF COLET changed as the training of military instructors by civilian companies was allowed and the name 'instructor' was changed to 'facilitator' (see Section 2.6.2). It was the start of the "mechanistic…mark-sheet driven" era of instructor/facilitator training (Esterhuyse, 2006, p. 35). The unacceptable result of these changes was made known in 2010 already (South African Department of Defence, 2010) and again

in 2015 (South African Department of Defence, 2015b). The next organising theme indicates the actions taken in response to the afore-mentioned documents.

4.4.2.2 Organising theme 6: PMII is not actively enhanced

Based on the instructions issued in 2015 (South African Department of Defence, 2015b) to improve the quality of military instructors, a programme that was based on collaborative instructivism was initiated. According to the interviewee, it seems to have had an effect, and seems to be continuing.

> INTERVIEWER: After you did the collaborative instructivism...uh... programme which lasted for approximately...uh...three months uh... did it have any effect on the PMII, what is your view on that?

> INTERVIEWEE 1: ...uhm... it had an effect on...uh...instruction......uhm...... instructors were making use of this method...uhm... still...uh...last… last in 2017 as well they were still making use of this method and...uh...it was quite effective...uhm... I think going forward this will be a very good...uhm... method for instructors to make use of (INT1, p.2: 23).

However, the intensity and determination with which the programme was initiated seem to have dissipated.

> INTERVIEWER: You are currently still a member of the...uh...College of Educational Technology......uhm... what is your… your view on what is currently being presented at the college in… in terms of…uhm... collective instructivism instructi… collaborative constructivism...uhm... and the… the...uhm... focus on PMII?

> INTERVIEWEE 1:...uhm... currently on some of the courses...uh...this has been scaling down, but I must say on most of the instructors courses the instructors are still making use of it and you can see the difference when presenting this as a team (INT1, p.3: 39).

4.4.2.3 Organising theme 7: collaborative instructivism enhances PMII

As seen in Section 2.8.7, Table 2.8, collaborative instructivism as a comprehensive educational approach was developed with the intent of improving the quality of the military instructor. This was to be done by providing an improved educational construct and improved quality of instruction, leading to an enhanced PMII, which would result

in the development of quality military instructors. In this regard, the interviewee had the following opinion:

> INTERVIEWER: ...uh...the...uhm... the research that was done indicated, and this is my last question, the research indicated that...uhm... an improvement in the professional identity leads to a more professional instructor and a more effective instruction... do you have an opinion on that?

> INTERVIEWEE 1: Yes, I totally agree......uhm... if there's an improvement on that then…uh… they better training they say behind the...uh......uh......uh...a good instructor there's even a better uh...uh...student so I would say if we make improvement on this then...uh...it will be the way to go (INT1, p.3: 45).

4.4.2.4 Summary of the findings of the network of Global Theme B: PMII is in dire straits.

The findings of the network of global theme B: PMII is in dire straits come from an interview with a senior military instructor who was involved in the retraining process at the SANDF COLET, but was not involved in the focus group discussion. His first impression corroborates an observation made during the analysis of the previous global theme, namely, that <u>modern individualism is apparently undermining professionalism and warriorism</u> and by implication, undermining PMII. Based on the views of Interviewee 1, it can also be concluded that <u>PMII is not inculcated in the development of the military instructor</u>. Furthermore, the educational approach known as <u>collaborative instructivism, which could contribute to the enhancement of PMII, is wasting away.</u>

PMII, and the positive effect it could have on the quality of military instructors, is indeed in dire straits. The questions remaining pertain to why it is happening and how the situation could be reversed – both subjects of the following global themes.

4.4.3 Global Theme C: resistance to collaborative instructivism prevents improvement to PMII and military training

Global Theme C: resistance to collaborative instructivism prevents improvement to PMII and military training (See Figure 4.4 and Tables A3 and A7) is the network reflecting the opinion of Interviewee 2. This interviewee was an experienced military instructor and policy manager in the SADF and SANDF. This network is made up of three organising themes and 12 basic themes and provides insight into the apparent reluctance to utilise collaborative instructivism to enhance PMII.
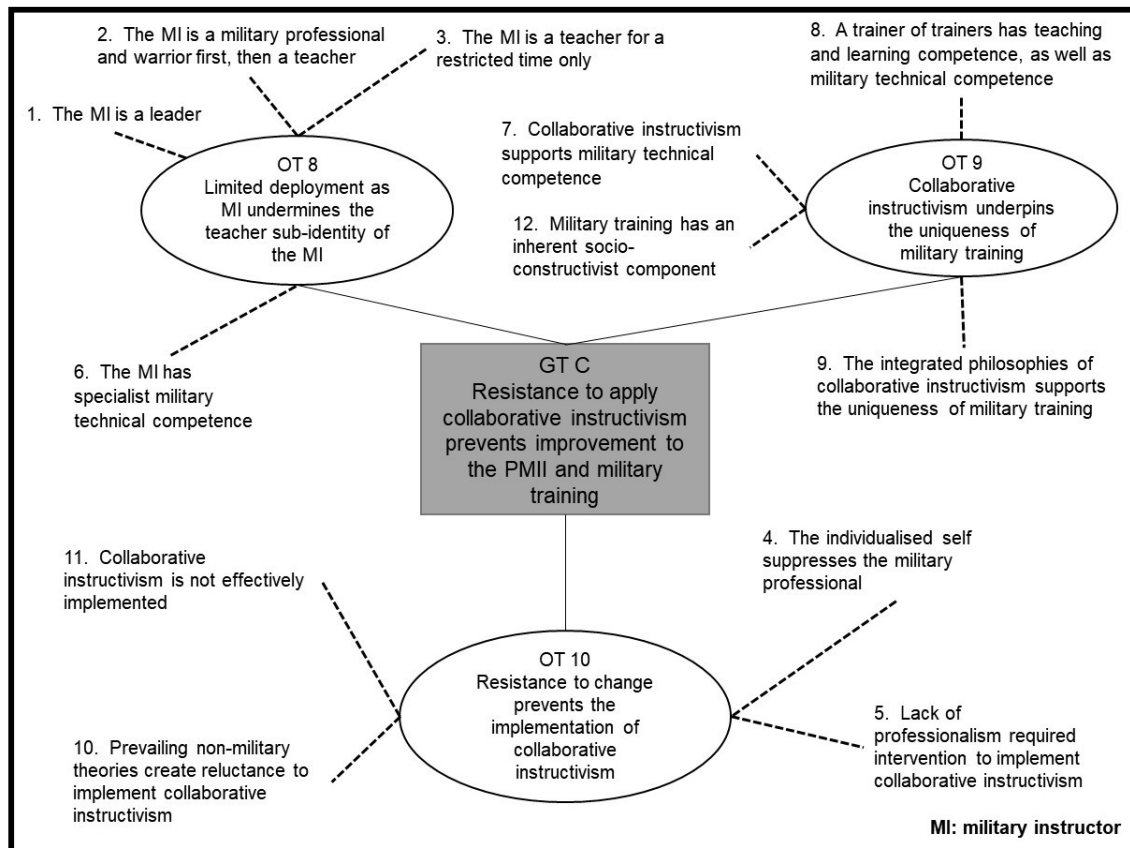
Figure 4.4: Global Theme C: resistance to collaborative instructivism prevents improvement to PMII and military training

4.4.3.1 Organising theme 8: limited deployment as military instructor undermines the teacher sub-identity of the military instructor

Interviewee 2 was the first participant to mention an important factor that specifically has an influence on the teacher sub-identity, namely, that any soldier in the SANDF acting as a military instructor does so for a limited period of time. His long-term identity

is therefore that of military professional – suggesting PMI before PMII (see Section 2.5). He thereby identifies the military professional as the primary sub-identity of PMII.

> I'd like to distinguish between professional instructor identity...uhm... in a military sense being subject to the professional identity of that individual as a military professional... first, in my view, firstly the instructor identity is subject to the professional identity whether that person is a pilot or a doctor or an infanteer or whatever... that is the...uhm... longer term determinant for the person's...uhm... identity and this view is based on my personal conviction that the person that is utilised as… as the instructor is not use… utilised in the military over an extended period of time in his or her career (INT2, p.1: 8).

> …I again think that the identity is predominantly determined by the individual at first as a professional soldier (INT2, p.1: 16).

Contrary to the less experienced instructors, who regarded the individualised Self as the primary sub-identity, the more experienced Interviewee 2, observed as an idealist, professional and warrior, viewed the military professional as a primary sub-identity.

4.4.3.2 Organising theme 9: collaborative instructivism underpins the uniqueness of military training

Interviewee 2 showed insight into the matter of PMII and the socio-constructivist nature of collaborative instructivism by connecting and describing war fighting, leadership and military training in terms of a series of collaborative interactions, which would eventually save lives.

> The military trains individuals first to be followed up by team training and group training and that process builds up until you have a fighting force or combat force - that is the unique phenomenon in the military and from that perspective, the collaborative component and the social component within training is…is extremely important within the military... (INT2, p.2: 27).

> The other component in the military that is vital...uh...and... once again, also unique is the aspect about leadership that, especially for rank bearing members in the military being trained, forms part of their training. The person is not just being trained to be...uhm... skilled and competent to do a specific job, but there's always the aspect of leadership because of the social construct of how the military functions. The third component is...uh...the mere fact that the military is supposed to train towards its core

business of warfighting, so to speak where life and death and the mandate to take life is at stake and the converse of that… also the reality that one may lose your life or the person next to you may lose life, so that puts a different emphasis on on how training is supposed to take place in the military and then that brings it back to… to the training theories and training approaches that will have to be taken in the, in the organisation. Collabora… collaborative instructivism to my mind has a very good fit with these uniquenesses in the military (INT2, p.2: 34).

4.4.3.3 Organising theme 10: resistance to change prevents the implementation of collaborative instructivism

In spite of his view of collaborative instructivism and the positive effect it will have on the quality of military instructors, Interviewee 2 finally had to share a disconcerting observation: collaborative instructivism is not applied effectively – if at all – due to resistance to change.

> ...uhm... it's my opinion, and supported by some observations that the...uhm... especially at COLET where it was supposed to be...uhm... put in practice from the trai, the trainer point of view...uh...it may not have been well understood but maybe the overriding factor is that the dominant theories at the time and still prevailing...uhm... are historical frames of reference that overshadows the realities that are imbedded within collaborative instructivism. So I'm afraid to say that I'm not very confident to think that the full implementation of collaborative instructivism as it was intend to be, is busy materialising out there and if...uhm... if not...uhm......uhm... reinvigorated it may fade away completely... unfortunately that's, that's my impression at the moment...uh...and as I've said, the main reason for that is it is overshadowed by existing frames of reference...uhm... that emanated from a non-military environment, not founded within the military, not suited with the military and in fact it may regress to the same framework that has led to Chief HR's decision ...uh...in 2015 to address the lack of expertise and competence amongst our instructors... we're not correcting the problem (INT2, p.3: 53).

Interviewee 2 confirmed the current situation, also alluded to by Interviewee 1, as follows:

> INTERVIEWER: You are currently still a member of the...uh...College of Educational Technology......uhm... what is your… your view on what is currently being presented at the college in… in terms of...uhm... collective instructivism instructi… collaborative constructivism...uhm... and the…the...uhm... focus on PMII?

INTERVIEWEE 1: ...uhm... currently on some of the courses...uh...this has been scaling down, but I must say on most of the instructors courses the instructors are still making use of it and you can see the difference when presenting this as a team (INT1, p.3: 42).

Interviewee 2 also mentioned that the SANDF COLET is not applying collaborative instructivism in the new 'three tier systems' of instructor training as it is supposed to (South African Department of Defence, 2018a). This is yet another indication that the further development of PMII is not happening:

…March 2017, I directly step in to enforce the implementation of the three tier system when COLET merely announced that they fall back to the previous programs of what used to be...uh...before the three tier system was even conceived... so we forced the implementation of Chief HR's instruction of 2015... however I may say that my impression currently is that ...uh...only the program names may have been changed and very little of the content of the programmes have ready been aligned, that's a concern at the moment......uhm... I'm waiting to have visibility on the actual curricula that were formalised for a… at least for the initial military instructor training program and shortly to come thereafter will be the advanced military instructor training program and once we have headquarters visibility on the contents of those actual curricula one can start to make real judgement on whether this thing is aligned with the new intention of whether it's merely same old …same old being presented under a new name... so it's a bit of a wait and see, but I think we're ready to step in (INT2, p.5: 89).

The SANDF COLET 'Guide for Clients 2018' (South African Department of Defence, 2018b) verifies the above statement by Interviewee 2 by using the programme names of the 'three tier system', namely, Initial Military Instructor, Advanced Military Instructor and Master Military Instructor, but filling it with the unit standard driven content previously taught. Collaborative instructivism is nowhere to be seen.

4.4.3.4 Summary of the findings of the network of Global Theme C: resistance to collaborative instructivism prevents improvement to PMII and military training

Interviewing Interviewee 2 resulted in global theme C: resistance to collaborative instructivism prevents improvement to PMII and military training. From the start, it was clear that the limited deployment time of soldiers as a military instructor affects PMII. The difference in view between Interviewee 2 and the focus group was noticeable, with the focus group displaying an individualistic approach to PMII, whereas the

approach of Interviewee 2 was influenced by idealism, professionalism and warriorism. Interviewee 2 also shared the view of Ben-Dor et al. (2008), which is that <u>collectivism in modern societies and armed forces is being replaced by individualism</u> and that the establishment serves the self and not *vice versa*. He is of the opinion that South Africa and the SANDF is following suit. This is to the detriment of PMII.

The similarity in approach between collaborative instructivism and military training, which is inherently socio-constructivist by nature, should contribute to the integration of this new educational approach in the training practices of the military instructor. However, due to the apparent inability to change from current to new practices, <u>the implementation of collaborative instructivism is not taking place</u>. Considering the instruction by Chief Human Resources (South African Department of Defence, 2015b) to improve the quality of military instructors - which can be done by improving PMII through the application of collaborative instructivism - and the current position as described by Interviewee 2, the question as to what should now be done still remains.

4.4.4 Global Theme D: institutionalise collaborative instructivism to improve military training

By analysing the interview with Interviewee 3, a well-trained educationist and former military instructor, the network of global theme D: institutionalise collaborative instructivism to improve military training, is presented (See Figure 4.5 and Tables A4 and A8). This network consists of three organising themes and 8 basic themes. Interviewee 3, who specialised in the training of trainers, and was a policy manager at the SANDF at the time of this study, had the final say on the issue with regard to PMII and collaborative instructivism.
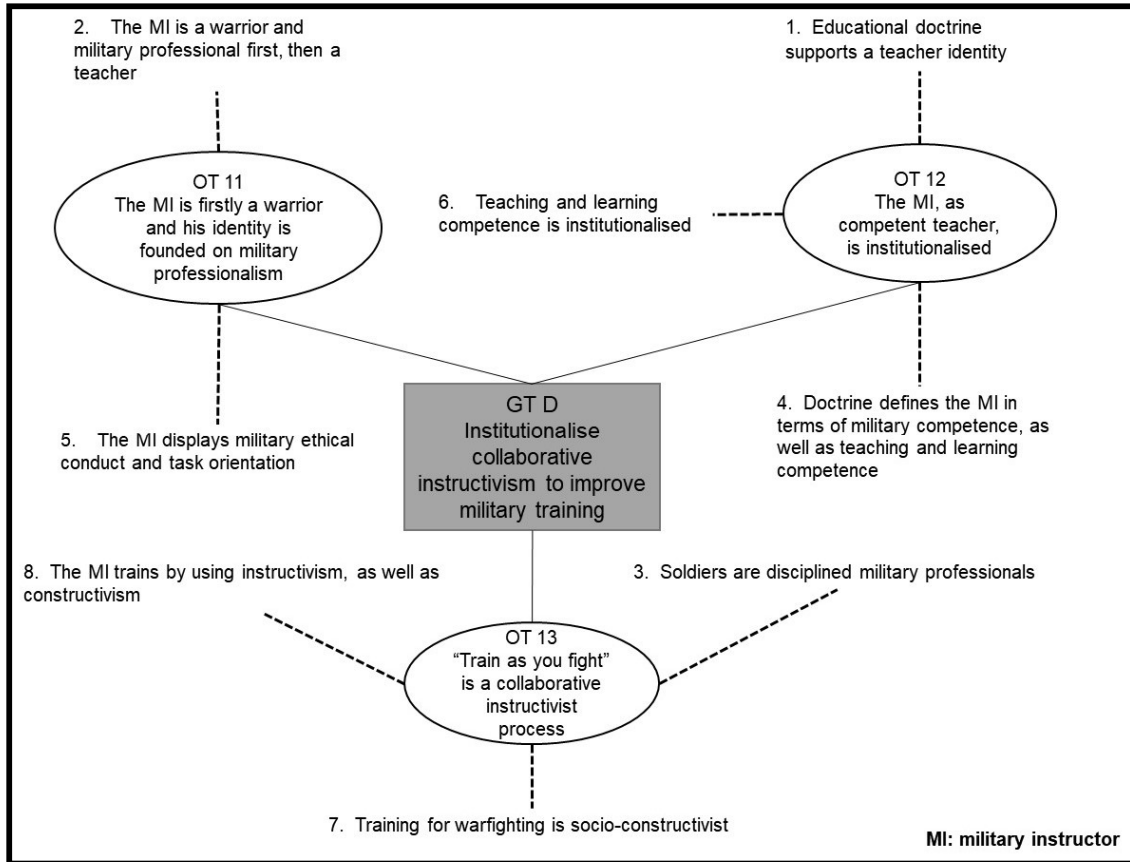
Figure 4.5: Global theme D: institutionalise collaborative instructivism to improve military training

4.4.4.1 Organising theme 11: the military instructor is firstly a warrior and his identity is founded on military professionalism

Interviewee 3 held the same view as Interviewee 2, namely, that the military instructor is firstly a warrior and his identity is founded on military professionalism.

> …the military instructor is always firstly defined in terms of his...own... mustering or the corps that he belongs to... so he will always first see him as either a infanteer or a pilot before he see himself as an instructor... and there is not a specific corps just for the instructor in the SANDF... and that... influence how they see themselves as instructors... they are very clear that they are an instructor and they are very proud of being an instructor and they see themselves as an instructor in the infantry but not necessarily as a professional instructor...uhm... in a broader and a...uhm... defined sense... so I think they… the construct do exist in the defence force but in, as I said first, they will see themselves in their own mustering or corps... or their own profession

before they will see themself as an instructor, that's just the other way around...uhm... that's the way they see themselves (INT3, p.1: 8).

In spite of the high regard that Interviewee 3 held for PMII, she, as did Interviewee 2, was of the opinion that the professional military identity is dominant. In terms of PMII, one can conclude that the warrior and military professional guides the military instructor.

> It will be extremely important... because how the soldier developed and how he is being developed completely depends on how the instructor convey the message how the instructor is basically conducting the… the training to be done...and therefore his the identity that is formed from a civilian into a soldier is fundamentally the work of an instructor to do so yes it will be extremely important as we move forward to… to build a disciplined force which is the primary focus of the Chief SANDF is to have his disciplined soldiers to go back to the statement in the constitution of that it is a disciplined force looking after the, the safety and security of the country (INT3, p.3: 61).

4.4.4.2 Organising theme 12: the military instructor, as competent teacher, is institutionalised

Interviewee 3, as a policy manager, endorsed the military instructor as a competent teacher in the Instruction 04/2018 (South African Department of Defence, 2018a). Collaborative instructivism is not mentioned in the instruction but will, according to Interviewee 3, be regularised in the ensuing doctrine. The process of institutionalisation is therefore ongoing.

> …the document is numbered 04 of 2018 to that effect... to put this system in place that the focus of the instructor is not on generic facilitation but on military instructional skills and then when you look at how military instructor skills the theory behind which it will be developed, it will be in terms of...uhm... working in a way that are that are as you defined it being collaborative instructivism (INT3, p.2: 35).

> …so I see that there a collaborative instructivism, the way that I understand it, will come to the full already in practice but now it will be more formalised and as we have just set on the path of having this basically defined and basically put into instruction which is taken up in policy, which will be taken into the doctrine that will be the basis from which all the military instructors will be trained that the effect will only be seen in years to come and if I say years to come, I mean in the next...uh...short to medium term will you actually see the effect of that (INT3, p.3, 50).

4.4.4.3 Organising theme 13: "Train as you fight" is a collaborative instructivist process

Interviewee 2 had already indicated that military activities and training emulate the collaborative instructivist approach. Interviewee 3 verifies this statement as follows:

> INTERVIEWER: … what is your personal…as an educator what is your personal opinion regarding the influence of collaborative instructivism or the technique, the process of collaborative instructivism on the professional military identity...uh...professional military instructor identity of an instructor in the South African National Defence Force.

> INTERVIEWEE 3: the whole concept of collaborate instructivism as the foundation for the theory in which you will…will approach your, your training practice makes a lot of sense and I think it defines it, which wasn't done before in that particular way that is ...uh...I can't even say halfway or anywhere in between behaviourism and constructivism but that is a construct in its own describing how we work so... for the cliché of we train like we fight will basically come into play here... and not to fight the way that we train (INT 3, p.4, 69).

4.4.4.4 Summary of the findings of the network of Global Theme D: institutionalise collaborative instructivism to improve military training

The network developed around Global Theme D: institutionalise collaborative instructivism to improve military training represents the results of the interview with Interviewee 3. The Interviewee validated previous statements made during the focus group discussion and by the other interviewees. These were that <u>PMII is constructed around a nucleus of sub-identities, of which the warrior and military professional are most important</u>. After verifying that <u>the military instructor, as a competent teacher of soldiers, is now institutionalised</u> by means of an instruction and forthcoming doctrine. The interviewee motivated this decision by connecting collaborative instructivism to the well-known and universally used adage <u>'we train as we fight'</u>. This maxim is used by numerous armed forces to indicate a commitment to realistic training, in other words, to train soldiers in near-reality environments, conditions and scenarios. The US Army states that the reason for this approach is that their "historical experiences show the direct correlation between realistic training and success on the battlefield" (Department of the Army, 2002, p. 1).

4.5 Conclusion

Having decided on interviewing and conversing as methods of data collection, a focus group discussion and three interviews provided data, which was analysed using thematic networks analysis. Four thematic networks, which were constructed around four global themes and 13 organising themes, were analysed and integrated with the results of the literature study. Having completed analysing stage B, steps 4 and 5, it is concluded that, although PMII is an unknown construct in the SANDF, sub-identities are known and discussed. Opinions are, however, divided as to whether the individualised Self, the warrior or the military professional is the primary identity in a modern armed force. Three influencing factors, namely, individualism, professionalism and warriorism are also well-known. It was further observed that the SANDF is following the trend of other modern armed forces, namely, displaying growing individualism, unfortunately to the detriment of professionalism and warriorism. Not knowing about PMII, the participants had disparate views of the influencing factors thereof. Finally, despite the similarity between collaborative instructivism and the military approach to training and warfare, it is evident that the suggested changes to the current training processes will have to be institutionalised in order for these to be implemented. In the last chapter, the analysis stage C, step 6, which involves the final integration of deductions and the formulation of main conclusions, will be done and more detailed recommendations will be given with regard to policy advice.

CHAPTER 5 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this study was to explore the perceptions of a sample of military instructors and military educational managers with the intention of describing the currently undefined PMII in the SANDF. The purpose was further to investigate how a construct, collaborative instructivism, may shape this PMII. The rationale for this study was to contribute to the body of knowledge on military education and training, which could enhance the effectiveness of the training of and by military instructors.

Professional identity in a military context is a concept that is unfamiliar to the SANDF. However, as Johansen (2013) postulates, a professional identity has a predictive influence on military performance. Therefore, this research was undertaken to formalise a Professional Military Instructor Identity (PMII), which could contribute to the improvement of military instructor quality. The possibility of an educational construct, known as collaborative instructivism, shaping the PMII also came to the fore. Subsequently, the research question for this study was formulated as follows:

> *How do military instructors in the SANDF COLET perceive the relationship between collaborative instructivism and the professional instructor identity?*

The primary research question is underpinned by the following secondary research questions:

1. *How can collaborative instructivism be described in a military context?*

2. *How can PMII be described?*

3. *What are the perceived factors that influence PMII?*

4. *In a military context, what are the identifying indicators for the appropriate support of PMII?*

This chapter sums up the research, guided by the research problem and questions, and proposes recommendations based on the abovementioned results.

5.2 SUMMARY OF THE CHAPTERS

The research started with <u>Chapter 1</u>, which contains the introduction and a comprehensive background. This showed the importance of training and trainers, called military instructors, in all armed forces over centuries of armed conflict. The rationale for conducting this study is explained and the research questions provided. A brief description of the inductive/qualitative research approach, the focus group and interview methods of data collection, as well as the thematic analysis method were also offered. Ethical considerations, a definition of frequently used terms, and a layout of the study concluded Chapter 1.

<u>Chapter 2</u> comprised the literature review leading to two conceptual frameworks, viz. that of PMII and of collaborative instructivism. It investigated, from first principles, the construct of identity, professional identity, professional military identity, and lastly, PMII. The three elements of PMII, namely, the sub-identities, influencing factors, and identifying indicators were fully investigated. This was done starting with the sub-identities, that is the Self, the military professional, the teacher, the leader and the warrior (see Section 2.6.3.1.). Next, the influencing factors, i.e. that which influences the development of the identity, (idealism, individualism, professionalism and warriorism) (see Section 2.6.3.2) were explored. This was followed by the identifying indicators, which are military-technical and general military competence, military ethical conduct, leadership and character and teaching and learning competence.

An extensive study of learning and several learning theories, such as behaviourism, cognitivism and constructivism, were then looked at in Chapter 2, followed by Sweller's HCA and CLT (Sweller, 1994). A discussion regarding objectivism/instructivism versus constructivism as a learning theory led to Cronjé's Two-Dimensional Model (Cronjé, 2005). Being able to utilise both theories simultaneously facilitated the construction of collaborative instructivism (see Section 2.8.4). This is defined as an educational approach where learning is facilitated by giving learners comprehensive information and guidance through instruction. This is done so that they can effectively and efficiently construct their own mental representations utilising collaborative methods and supportive devices.

Chapter 3 describes the research methodology employed in this study. Using Figure 5.1 (See Figure 3.6, as described in Section 3.1), the research methodology was initiated by the decision to follow an interpretivist/constructivist paradigm.
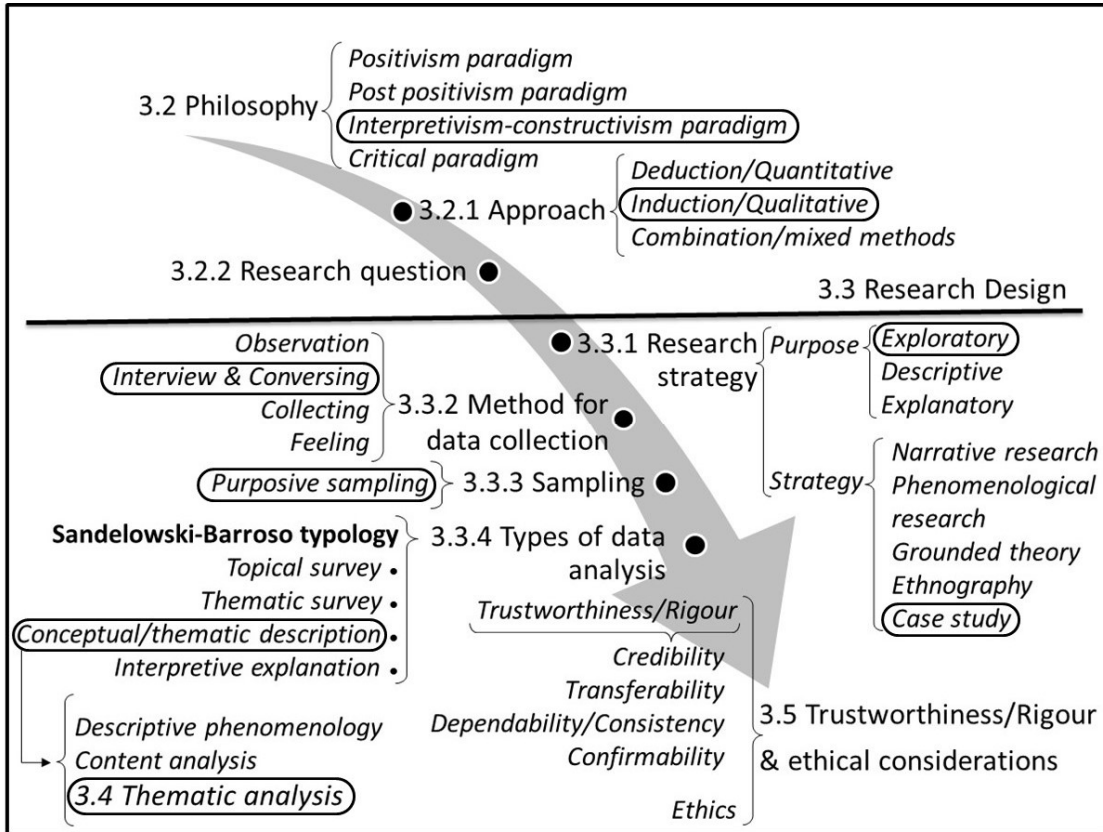
Figure 5.1: Research methodology

The paradigm led to the inductive/qualitative approach and the research questions listed in Section 5.1. The research design provides the practical elements for the execution of the research (Lewis & McNaughton Nicholls, 2014), being the research strategy, methods for data collection, and types of data analysis. The research design provides a broad plan for answering the research questions (Saunders, Lewis & Thornhill, 2009). Using a case study as an exploratory strategy, as well as conversing and interviewing as the method for data collection, a semi-structured qualitative focus group discussion and semi-structured qualitative expert interviews were decided on. Based on the Sandelowski and Barroso typology (2003), pronouncements by Braun and Clark (2006, p. 77), as well as Attride-Stirling's method (2001), a thematic analysis was chosen as the data analysis type. The chapter is concluded with an explanation of trustworthiness/rigour and ethical considerations.

The results of the research, executed by means of a focus group discussion and three expert interviews, were provided in Chapter 4. A discussion of the data collection methods provided insight into the purposive sampling method used, the composition of the focus group and the motivation for the three experts used. The thematic networks analysis technique, as proposed by Attride-Stirling (2001), was then used for the coding of the data. This method was chosen due to its logical sequence and structure (see Figure 5.2 and Figure 3.5, as described in Section 3.4.1)). In order to augment the coding process, an *a priori* codebook was compiled using the two conceptual frameworks (see Figure 5.3 and Figure 3.4, as described in Section 3.4). Coding was done by means of ATLAS.ti, followed by the manual development of basic themes, organising themes and global themes, resulting in four networks (see Figure 4.2, Figure 4.3, Figure 4.4 and Figure 4.5). The conclusions of the analysis of the data that were accumulated during the research phase concludes Chapter 4.

Chapter 5 contains the summary and main conclusions of the research and provides recommendations based on these conclusions. The summary is done per chapter, followed by a discussion and the main conclusions of the research. A discussion on the recommendations for policy and practice and further study are followed by the limitations of the study and final thoughts.

ANALYSIS STAGE A: Reduction or breakdown of text	ANALYSIS STAGE B: Exploration of text	ANALYSIS STAGE C: Integration of Exploration
Step 1. Code material Step 2. Identify themes Step 3. Construct thematic networks	Step 4. Describe and Explore Thematic Networks Step 5. Summarize Thematic Networks	• Step 6. Interpret Patterns
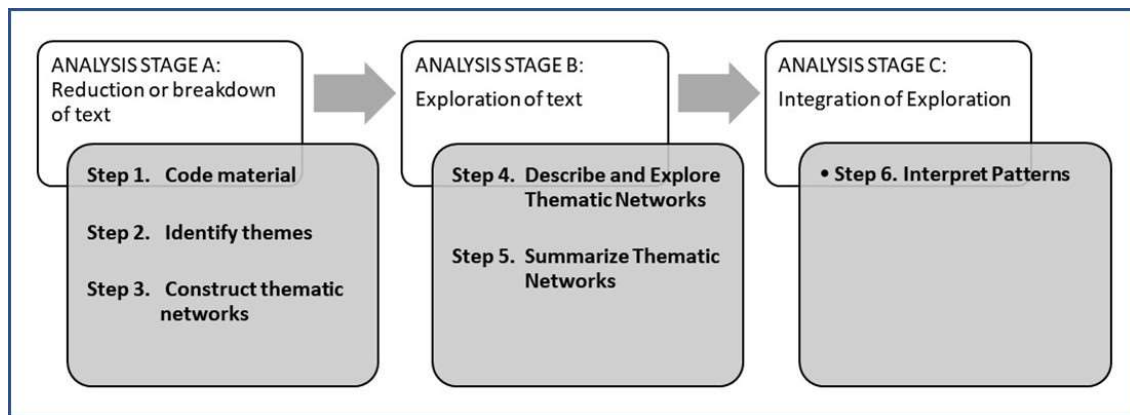
Figure 5.2: Thematic network analysis process (Attride-Stirling, 2001, p. 391)
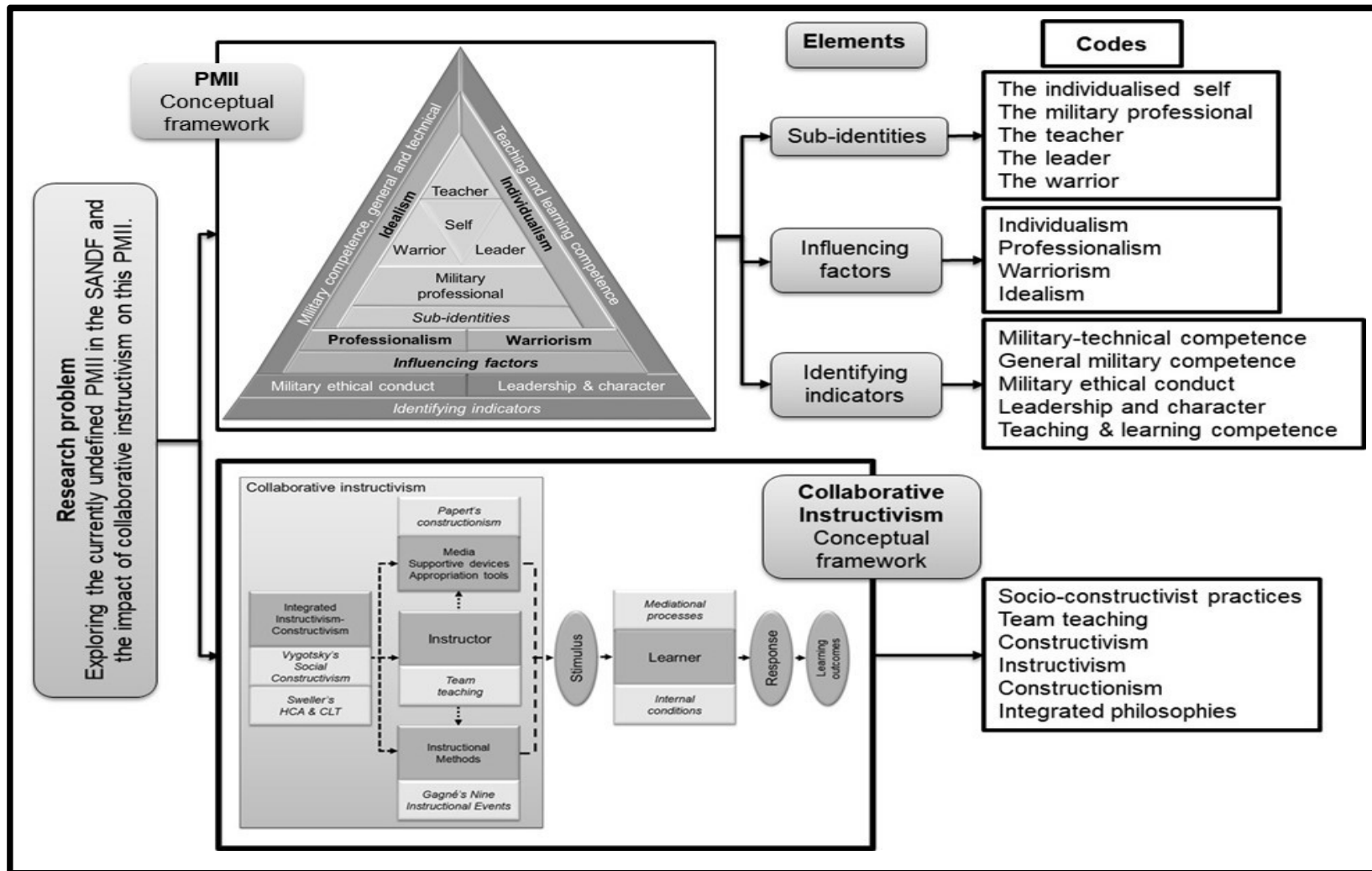
Figure 5.3: Theory-driven development of the codebook

5.3 Self-reflection

According to Boud, Keogh and Walker (1994, bl. 18) reflection is "a form of response of the learner to experience" (See Section 2.8.2). For the researcher, self-reflection is his response to the experience of research, as well as the environment in which the research took place. My environment was the SANDF and SANDF COLET in particular. I was not only the general officer commanding of SANDF COLET, also called the "Commandant", but in addition, the developer of a new educational construct, namely collaborative instructivism, which was perceived to lead to an enhanced PMII and improved training for and by military instructors of the SANDF.

As Commandant, I soon became aware of the lack of identity of the military instructors. The effect of politics, favouritism when it came to promotions (Esterhuyse, 2013), lack of discipline, the training provided by civilian institutions and lastly, the use of an acronym, "ETDP" to describe a military instructor, led to a lack of military ethos, as well as a breakdown of the unique ethic and competencies of the military instructor. This was my perception as a soldier of 42 years experience in both the SADF and SANDF. I soon realised that the current situation was not conducive to efficient training and that I had to make the Chief of Human Resources aware of the situation. The circumstances also inspired me to start with my own research on ways to improve the current situation, which brought me to the subject of the PMII and collaborative instructivism.

During my research into PMII, I confirmed previous experience as a conflict simulation facilitator that, due to the threat-independent strategy of the SANDF and the resultant goals and tasks (South African Department of Defence, 2015a), the mission and training regime of the SANDF did not change (see Section 1.2.1) since 1997, which, according to Matthews (2008), Piddock (2009), as well as Johnson, Moroney, Cliff, Markel, Smallman and Spirtas (2009) is a sound strategy. Soldiers still receive conventional warfare training and then, depending on the task that they are about to perform, receive additional so-called mission-readiness training. I also concluded that the three elements of PMII, namely the sub-elements, influencing factors and the identifying indicators do not change because of no change in mission or training. As the influencing factors, namely warriorism, professionalism, idealism and

individualism, are influenced by missions, tasks or training, the factors influence the sub-identities and the identifying indicators, but do not change it. For example, when the focus of an armed force shifts from conventional warfare to peace-keeping operations, the warrior sub-identity will not change to a policeman or peace-keeper, but will only become less prominent. Poor training will not remove technical and general military competences, but it will become a poor or less prominent indicator. I came to the profound realisation that without a pronounced PMII, military instructors might not understand the effect of poor or inadequate training on themselves and their training ability.

The current institutionalist/occupationalist drift (Moskos, 1981), also alluded to by Heineken (2014) and the interviewees, as well as the lack of reference to warriorism during the focus group discussion, confirmed my personal observation of the increase in the prominence of individualism, apparently at the expense of warriorism and professionalism. Several researchers, such as Johansen (2013); Johansen, Laberg and Martinussen (2014) and Faris (1995) have empirically shown that individualism is detrimental to combat effectiveness. This is in line with my observation, as well as the perceptions of the participants of the focus group discussion and interviews, namely that the competencies and unique ethic of the military instructor should be enhanced, in order to strengthen the warrior, teacher and leader sub-identities.

According to the previous Defense Review (South African Department of Defence, 1998), training of military instructors had to become outcomes-based and credit-bearing. It also implied a change from an instructivist to a constructivist educational credo. However, it was soon clear that we did not practice what we preached. During the focus group discussion and the retraining sessions that I presented, the participants indicated that they were unfamiliar with 'constructivism' as a learning theory (see Section 2.8.2.3) but that the characteristics thereof appealed to them. Unfortunately, the training provided to and by them was still instructivist in nature. Although the instructors were content with the instructional techniques they applied, this anomaly created confusion and convinced me that a new educational credo had to be found, which would be scientifically sound and would be effective in enhancing the PMII. 'Train as you fight', the well-known maxim in many armed forces, voiced by Interviewee 2 and Interviewee 3, as well as the social nature of warfare, inspired and

confirmed one of the principal approaches for the development of a new proposed educational credo, namely social constructivism. Studying social constructivism, I read and applied the theories of Piaget, Dewey and Vygotsky, which supported collaborative learning and the development of collaborative instructivism. I was however, disappointed to hear during the interviews that, in spite of the focus group participants voicing a constructivist inclination, the current application of instructivism and the 'train as you fight' aphorism, the resistance to change in the training environment of the SANDF is holding back the implementation of the new educational credo.

Lastly, I have not applied an interpretivist-constructivist paradigm and a qualitative approach in research before. Initially I found the case study strategy and collecting data by means of conversing and interviewing difficult in terms of sampling and the extraction of sufficient reliable data. However, applying thematic networks analysis (Attride-Stirling, 2001), I was convinced that the design led to trustworthy data. I could confirm this by considering the four standards of trustworthiness/rigour, namely credibility, transferability, dependability/consistency, and confirmability (Shenton, 2004; Merriam, 2009). My last concern was the sampling process. According to Gläser and Strauss (2006) the researcher would not know from the onset how many groups or interviews he would require. Theoretical saturation, being the point where no additional data are found, will determine the eventual sample size. Again, applying the thematic networks analysis process, the richness of the data and the fact that the saturation point was found within the interviews with the three interviewees, alleviated my concerns.

In conclusion, my self-reflection led to a re-evaluation of the research and its findings. I realised that the current unsatisfactory situation with regard to the quality of training to and by military Instructors in the SANDF could be alleviated by the consideration of a PMII and by implementing a new educational credo. Initial concerns with regard to the research process were removed by utilising thematic networks analysis and by reaching theoretical saturation with the available participants. The following main conclusions will indicate that congruence between the research, literature and my observations do exist.

5.4 MAIN CONCLUSIONS BASED ON THE INTEGRATION AND INTERPRETATION OF THE RESULTS

This is the final step in the thematic networks analysis process, analysing stage C, step 6 (see Section 3.4, and Figure 5.2), providing the main conclusions of the research. The procedure followed in this process was to combine conclusions from the summary of network findings from the respective global themes, as well as the organising themes from all of the global themes (see Section 4.4) and then to rearrange it in a structural framework according to their relevance to the secondary research questions (see Figure 5.4). The complementary nature of the two data-sets namely that of the focus group discussion and of the interviews, is clearly visible in the structural framework based on the secondary research questions. Deductions from the network summaries are subsequently combined, interpreted and integrated with the related theory and conclusions are made in reply to the research questions.

5.4.1 Secondary research question: How can PMII be described?

The construct, PMII, is defined as follows (see Figure 5.5 and Figure 2.4, as descibed in Section 2.6.3):

> A construction of the past, present and future perceptions of oneself as a warrior, a leader and a teacher. This is based on military ethical conduct, general and technical military competence, as well as leadership, character and affiliation with a cohort of military professionals.

PMII is not known in the SANDF, however, sub-identities that describe PMII are known, although these is not formally discussed or taught. These sub-identities are – confirming the literature study in Section 2.6.3.1 – the Self, the warrior, the leader, the teacher and the military professional. As there is no formal doctrine in this regard to guide thought and study, two contrasting views on the matter exist, namely, the occupationist (Johansen, 2013) and the conservative-professional views.

Organising and Global Themes

- General and technical military competence, teaching and learning competence, leadership and character, and military ethical conduct realise the PMII (FGD, OT 3).

Research problem
Exploring the currently undefined PMII in the SANDF and the impact of collaborative instructivism on this PMII.

Organising and Global Themes

- PMII is unknown in the SANDF (GT A).
- Elements of the PMII are known and occasionally thought about (GT A).
- The MI regards his sub-identities as the individualised self, teacher and leader (FGD, OT1).
- PMII is not inculcated in the development of the military instructor (GT B).
- The MI is primarily a military professional and a warrior (INT2, OT9).
- PMII is constructed around a nucleus of sub-identities, of which the warrior and military professional is most important (GT D).
- The MI, as a competent teacher of soldiers, are now institutionalised (GT D).
- The MI is firstly a warrior and his identity is founded on military professionalism (INT3, OT 11).
- The MI, as competent teacher, is institutionalised (INT3, OT12).

Primary research question
How do military instructors in the SANDF COLET perceive the relationship between collaborative instructivism and the professional instructor identity?

Organising and Global Themes

- Collaborative instructivism, which could contribute to the enhancement of the PMII, is wasting away (GT B).
- Collaborative instructivism enhances the PMII (INT1, OT7).
- Due to the inability to change current to new practices, the implementation of collaborative instructivism is not taking place (GT C).
- Limited deployment as MI undermines the teacher sub-identity of the warrior (INT2, OT8).
- Collaborative instructivism underpins the uniqueness of military training (INT2, OT9).
- Resistance to change prevents the implementation of collaborative instructivism (INT2, OT10).
- "Train as you fight" is a collaborative instructivist process (INT3, OT13).

Secondary research questions

How may PMII be described?

What are the factors that influence the PMII?

In military context, what are the identifying indicators for appropriate support of the PMII?

How may collaborative instructivism be described in military context?

Organising and Global Themes

- Modern individualism is undermining professionalism and warriorism (FGD).
- PMII is created and influenced by idealism, individualism and professionalism (FGD, OT2).
- There exist socio-political and competency tensions in the PMII (FGD, OT4).
- Modern individualism is undermining professionalism and warriorism and by implication, undermining the PMII (GT B).
- Individualism informs a dormant, sub-optimal PMII (INT1, OT5).
- The PMII is not actively enhanced (INT1, OT6).
- the limited deployment time as military instructor affects the PMII (INT2).
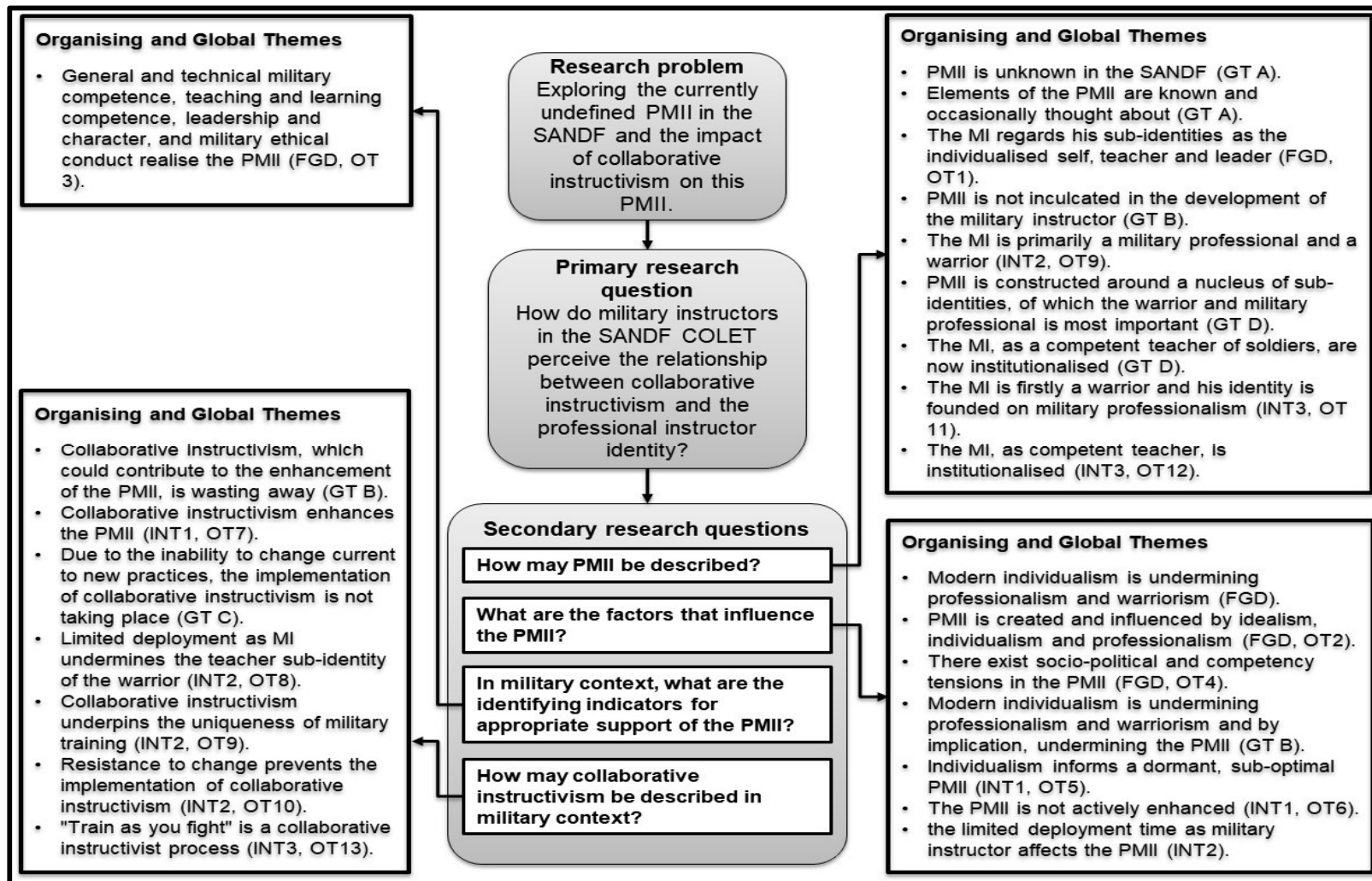
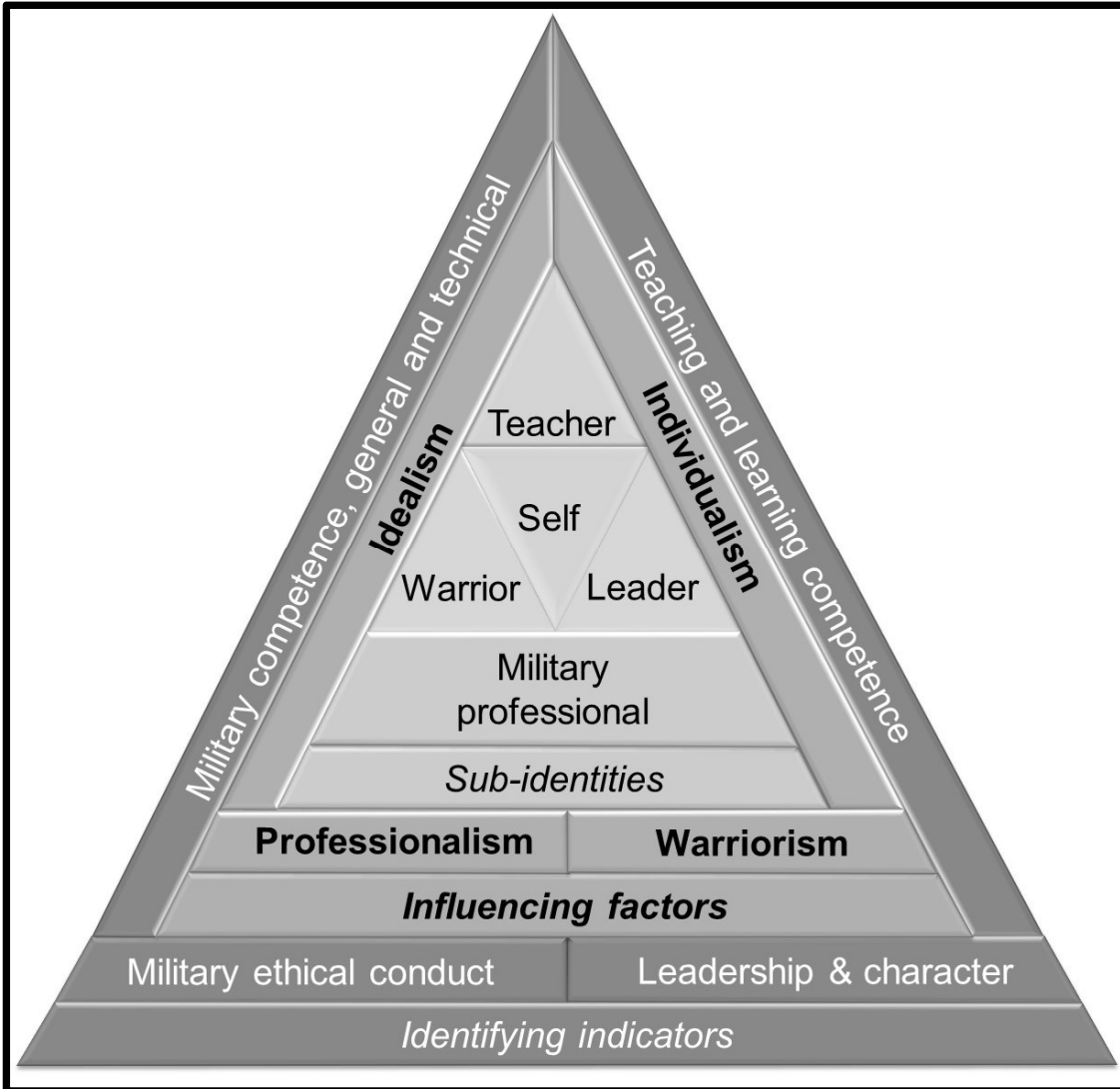Figure 5.4: The structural framework for the final main conclusions

Figure 5.5: PMII conceptual framework

The occupationist view also known as the postmodernist-individualist view (Johansen, 2013) is held by younger generation soldiers who have joined the SANDF in the peace-keeping era in "pursuit of the self and the legitimation of individualistic values and self-reliance" (Ben-Dor, Pedahzur, Canetti-Nisim, Zaidise, & Perliger, 2008, p. 568) and who regard being a soldier as just another job. The sub-identity set of the occupationist only vaguely describes the military professional, which includes the warrior. The conservative-professional military instructor sees himself as a warrior and professional who is temporarily instructing fellow soldiers. The Self is held in check, because it is important to serve the collective (Ben-Dor, Pedahzur, Canetti-Nisim,

Zaidise, & Perliger, 2008). Based on the literature study, there is a third, balanced view where all sub-identities form a balanced identity (see Figure 5.6).
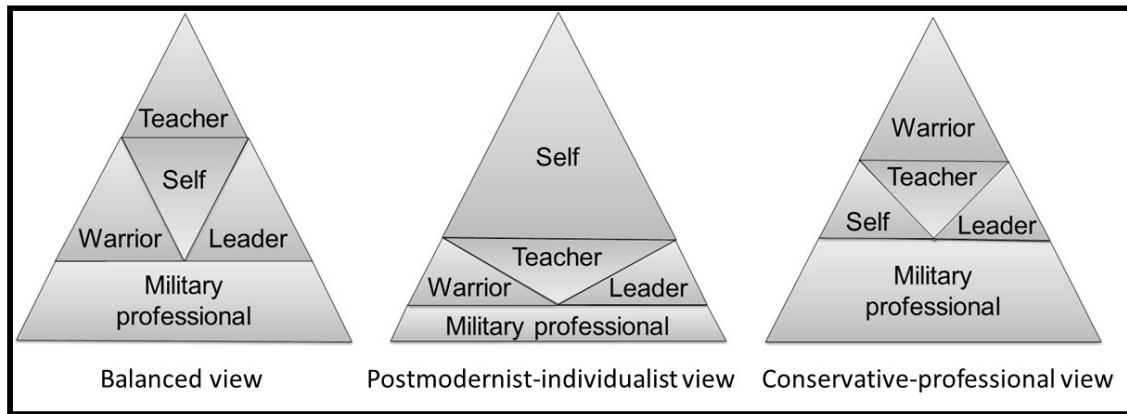

Figure 5.6: Three views of PMII sub-identities

The difference in size of the different shapes represents the relative importance of the sub-identity in relation to the others. For example, in the balanced view, all sub-identities are approximately equal, with the military professional somewhat more important. The Self in the occupationist view overshadows the rest. It is obvious that the differences in the views with regard to the sub-identities are directly opposing and a potential cause of internal conflict, for example, during operations where sacrificial decisions need to be made and the third task, that is to die, has to be executed (see Section 2.5). It also indicates that the indivildualist/occupationist shift (see Section 2.5.5) and a change in mission or task (mission-shift) (see Section 2.5.5) only influence the relative importance of the sub-identity in relation to the others and not the array of sub-identities.

In conclusion, with regard to the description of PMII, the research has, based on the informal existence of sub-identities, influencing factors and identifying indicators, as voiced during the focus group discussion and the interviews, confirmed the definition and conceptual framework of PMII as a true reflection of a dormant PMII in the SANDF. Furthermore, given generational differences, the views with regard to the importance of sub-identities, such as the individualised Self versus the warrior and military professional, has a detrimental effect on the performance of the organisation and need to be addressed.

5.4.2 Secondary research question: What are the perceived factors that influence PMII?

The influencing factors, according to Van Putten (2011), are the factors that influence the formation of a professional identity such as PMII. The influencing factors resulting from the research are idealism, individualism, professionalism and warriorism, which confirm the influencing factors found in the literature review (Johansen, 2013) (see Section 2.6.3.2). Some agreement was found amongst all participants regarding the existence of three influencing factors, namely, individualism, idealism and professionalism. Warriorism was conspicuously absent during the focus group discussion but was especially prominent during the interviews. What did differ amongst the participants, though, is the difference in the prioritisation of the various factors. Professionalism versus individualism is still a generational issue. Moskos (1981) mentioned the same phenomenon as he proposed his institutional/occupational model (I/O Model). He proposed that individualists/occupationalists identify with others doing the same work, whereas members of an institution are the professionalists, sharing a sense of responsibility for the performance of the organisation. Additional issues affecting the influencing factors include the abundance of socio-political rhetoric, which has found its way into the soldier's way of thinking (Esterhuyse, 2006).

On the one hand, individualism, influencing the sub-identities, has a negative effect on combat effectiveness and is a "'threat' to the quality of service" (Johansen, 2013, p. 23). On the other hand, professionalism increases organisational commitment, which enhances individual performance (Griffith, 2009; O'Shea, Goodwin, Driskell, Salas & Ardison, 2009). However, too much emphasis on professionalism, such as over-stressing skills and performance, without heeding morale and well-being, can be detrimental to overall performance. Researchers, for example, Battistelli (1997), also indicate that individualism and postmodernism are not all damaging to the military, but this view requires more research. Nonetheless, in view of the current modern, institutional (Moskos, 1981) SANDF, actions should be taken to counter the growing individualism and to remove political influence, albeit rhetoric and theatrics. This should be done using incentives and military activities, such as values, ceremonies, creeds and other symbols to establish trust, commitment and the will to serve (Bondy, 2004).

5.4.3 Secondary research question: In a military context, what are the identifying indicators for the appropriate support of PMII?

Identifying indicators are the behavioural traits displayed in the instructor's practice, or, that which is characteristic of a professional military instructor (see Section 2.6.3.3). The identifying indicators, namely, military-technical competence, general military competence, military ethical conduct, leadership and character, and finally, teaching and learning competence are all real and tangible elements. These were therefore frequently discussed in the focus group discussion. Given that there was broad consensus with regard to the indicators, it can be concluded that the indicators are true reflections of a professional military instructor in the SANDF and confirm the last element of the PMII conceptual framework. Considering that this is the only element where consensus exists, it should be used to foster greater understanding of PMII.

5.4.4 Secondary research question: how can collaborative instructivism be described in a military context?

The result of this research supports the dual objectivist and socio-constructivist nature of collaborative instructivism. The underlying philosophies of collaborative instructivism are regarded as similar to that of military training and operations, as well as to the universally used 'train as you fight' principle. Collaborative instructivism can therefore be described by means of the definition provided in Section 2.8.6 (see Figure 5.7 and Figure 2.13, as described in Section 2.8.6), namely:

> Collaborative instructivism is an educational approach where learning is facilitated by giving learners comprehensive information and guidance through instruction. This is done in order for them to effectively and efficiently construct their own mental representations utilising collaborative methods and supportive devices.

Collaborative instructivism is able to enhance PMII and, as a result, to augment the quality of military instructor training (see Section 2.8.7). However, there is inherent resistance to change in any educational fraternity (Koksal, 2013), and the limited time that officers and NCOs are deployed as military instructors must be considered. Thus, in spite of efforts in 2016 to instil collaborative instructivism in the training curriculum of military instructors, it was not applied and is wasting away. Therefore, to execute the instruction by Chief Human Resources (South African Department of Defence,

2015b), to improve the quality of military instructors, <u>the inculcation of PMII and collaborative instructivism should be institutionalised</u>.

Finally, having responded to the secondary research questions, the primary research question needs to be answered. Responding to the primary question entails the interpretation and integration of all the results of the research and the response can be construed as the <u>main conclusion(s)</u> of the research.
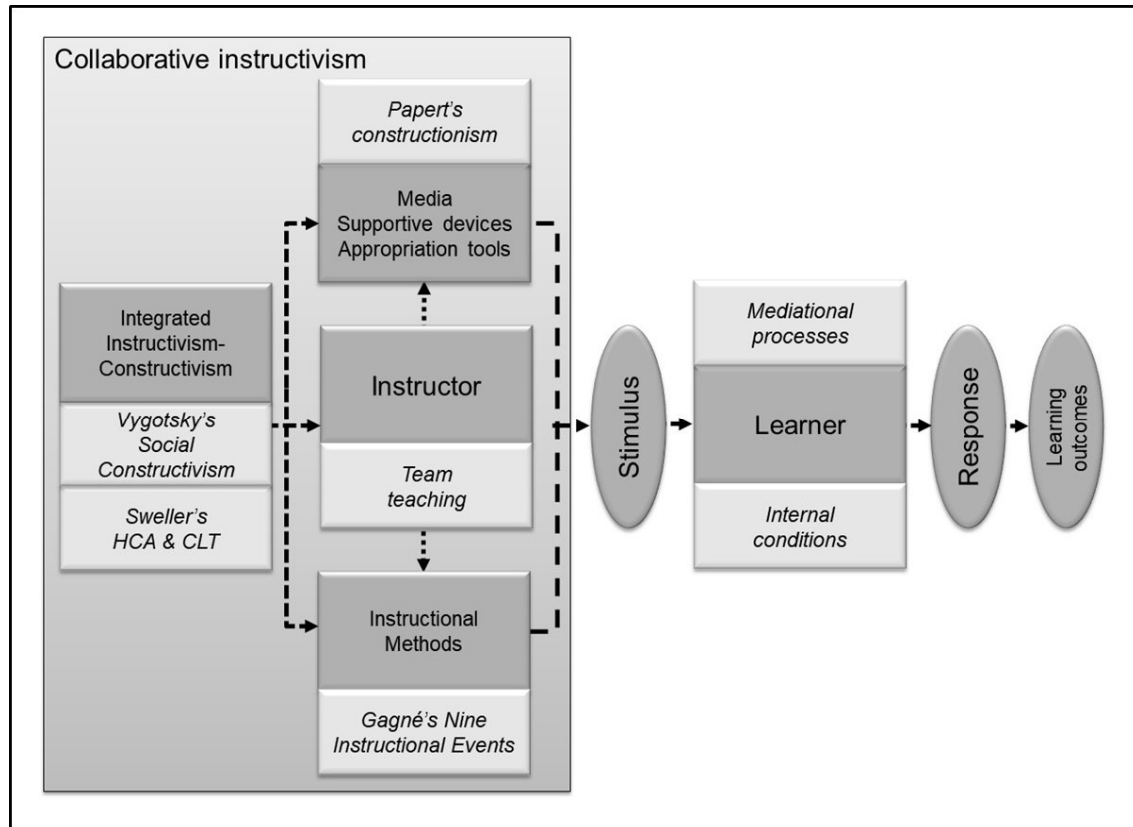

Figure 5.7: Conceptual framework of collaborative instructivism

5.4.5 Primary research question: how do military instructors in the SANDF COLET perceive the relationship between collaborative instructivism and the professional instructor identity?

The research indicates that PMII does not exist in the SANDF, but that elements thereof do exist in the minds of military instructors. Based on Johansen's view that PMI has a predictive influence on the performance of soldiers (2013), it is suggested that the same theory holds true for PMII. For example, the more pronounced the PMII, the better the performance of military instructors. The Chief Human Resources of the

SANDF has indicated that the current quality of instruction for and by military instructors is not up to the required standard (see Section 2.6.2). This lack of performance undermines at least two of the characteristics of a profession, namely, the theoretical and practical body of knowledge, i.e. professional competence, and the unique ethic (see Section 2.4) (McKinlay, 1970; Nuciari, 1994). The PMII elements supporting these characteristics are similarly negatively impacted (see the elements marked with an "X" in Table 5.1). This leads to the <u>first main conclusion</u>, as synthesised from the conclusions from the research. In other words, given the lack of PMII and the detrimental effect of the current unsatisfactory performance of military instructors, this position can be reversed by institutionalising and formally teaching the concept of PMII. A stronger PMII will negate the effect of poor performance and even lead to improved execution.

Table 5.1: Affected elements of PMII

ELEMENTS OF PMII		AFFECTED ELEMENTS OF PMII RESULTING FROM THE CURRENT SITUATION	
		Breakdown of the military instructor's competencies.	Breakdown of the unique ethic of the military instructor.
SUB-IDENTITIES	Self		
	Teacher	X	
	Warrior	X	
	Leader	X	X
	Military professional		X
INFLUENCING FACTORS	Individualism		
	Professionalism		X
	Warriorism	X	X
	Idealism		
IDENTIFYING INDICATORS	Military technical competence	X	
	General military competence	X	
	Military ethical conduct		X
	Leadership and character	X	X
	Teaching and learning competencies	X	

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Collaborative instructivism, described in the literature study as a combination of instructivist and socio-constructivist practices, is also described as the epitome of military training and operations (see Section 4.4.4.3). The influence of collaborative instructivism on the elements of PMII is illustrated in Table 5.2 (See also Table 2.8). By applying collaborative instructivism, a new, improved educational construct, as well as improved quality of instruction is provided. The educational construct implies improved training, leading to professional pride, professionalism and ethical conduct, while the improved quality of instruction provides more expertise to the military instructor. Applying collaborative instructivism therefore has a positive effect on the elements of PMII. This in turn leads to a more prominent PMII, which is predictive of better military instructor performance. Unfortunately, it is not currently applied and resistance to change in this regard has been observed. The pronounced effect of collaborative instructivism on PMII resulted in the second main conclusion. This conclusion was that in order to encourage the development of PMII, collaborative instructivism should also be institutionalised and implemented in training doctrine and competency-based curricula.

5.5 RECOMMENDATIONS FOR POLICY AND PRACTICE

The first main conclusion indicates the need for an institutionalised PMII in the SANDF and similar methods to promote professionalism and warriorism to the extent required. The institutionalisation of PMII should be through official doctrine, openly supported by the Chief of the SANDF and other senior generals. In addition, the explanation and popularisation of PMII should be done by means of a document similar to the US Army's 'The Profession of Arms' (Department of the Army, 2010) in terms of motivational ceremonies, and so forth. This conclusion also indicates the need for visual recognition through competency badges and monitory recognition by means of an instructor allowance. Both methods for recognition are already mentioned in a Chief Human Resources instruction (South African Department of Defence, 2018a).

The second main conclusion points to the detail required to guarantee the implementation of collaborative instructivism. Firstly, collaborative instructivism needs to be described in doctrine and the implementation ordered per instruction. The operationalisation of collaborative instructivism should be by means of a competency-based curriculum that uses identifying indicators as competencies. Figure 5.8 shows

a five-stage curriculum development model of a competency-based programme, developed from first principles. The subjects taught could include collaborative instructivism, learning theories, Gagné's nine events of instruction, team teaching and methods of instruction and assessment.

Table 5.2: The possible effect of applying collaborative instructivism on PMII elements

ELEMENTS OF PMII		AFFECTED ELEMENTS OF PMII AS A RESULT OF THE CURRENT SITUATION		EFFECT OF COLLABORATIVE INSTRUCTIVISM ON ELEMENTS OF PMII	
		Breakdown of the military instructor's competencies.	Breakdown of the unique ethic of the military instructor.	Improved educational construct	Improved quality of instruction
SUB-IDENTITIES	Self				
	Teacher	X		X	X
	Warrior	X			X
	Leader	X	X		X
	Military professional		X	X	
INFLUENCING FACTORS	Individualism				
	Professionalism		X	X	
	Warriorism		X		X
	Idealism				
IDENTIFYING INDICATORS	Military technical competence	X	X		X
	General military competence	X	X		X
	Military ethical conduct		X	X	
	Leadership and character		X	X	X
	Teaching and learning competencies	X			X

During the first stage of the model, a needs analysis is done. By analysing inputs, such as the mission statement for the programme, the roles that the student will fulfil and the profile of the student, the main competencies, for example, management competencies, leadership competencies, and technical competencies are determined.

Stage two divides the main competencies into sub-competencies and, in matrix format, maps the sub-competencies in terms of knowledge, skills and attributes with the roles.
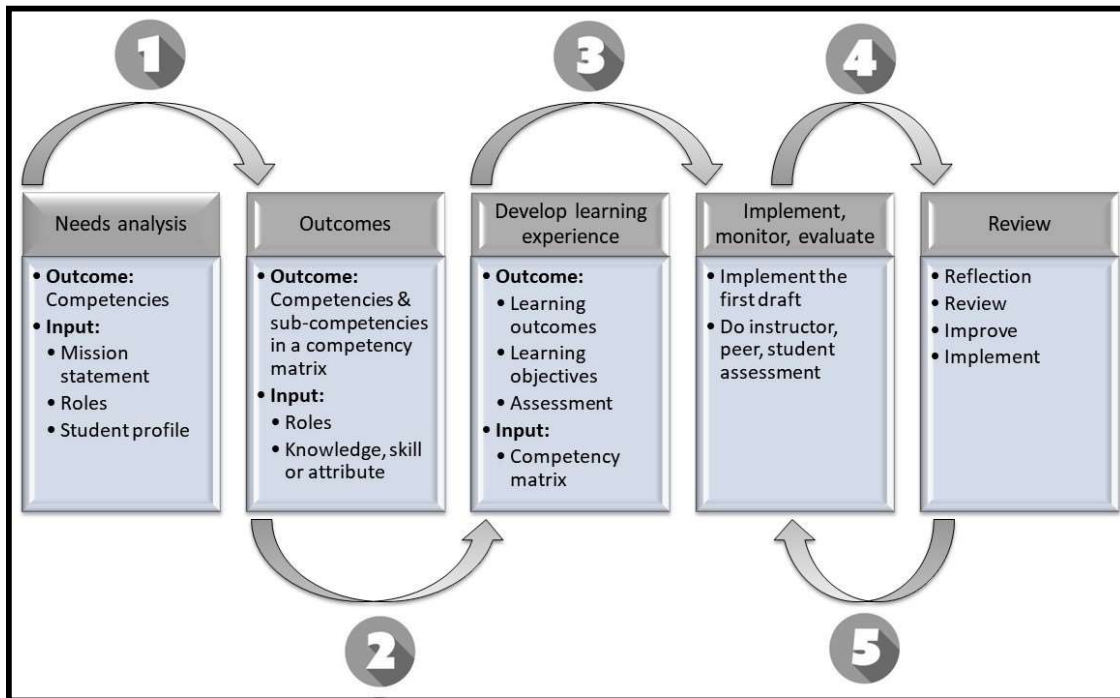

Figure 5.8: A 5-stage competency-based curriculum development model

The third stage's activities entail the description of sub-competencies in terms of learning outcomes and the learning outcomes in terms of learning objectives. The learning objectives contain, amongst others, the method of assessment. The first draft of the curriculum is then implemented, assessed, reviewed and re-implemented.

5.6 RECOMMENDATIONS FOR FURTHER STUDY

According to Johansen (2013), identity can be used to predict certain elements of performance. Further research into the predictive potential of the PMI and the PMII could therefore be of value to the SANDF. Given the growing individualism in the SANDF and the views of Moskos (1981), Griffith (2009), O'Shae et al. (2009), Johansen (2013), and others, research with regard to the effect of individualism would also provide valuable input in the attempt to improve training.

This study has indicated that collaborative instructivism is likely to improve the quality of the military instructor and his instruction. Further research is, however, required to confirm this hypothesis. The SANDF is, meanwhile, promoting the use of blended

learning (South African Department of Defence, 2015a), and research into the application of collaborative instructivism in blended learning would also support improved training in the SANDF.

5.7 LIMITATIONS OF THE STUDY

Based on the instruction by Chief Human Resources to improve the quality of military instructors and their ability to instruct, a retraining programme was started barely six months before my statutory retirement. The time available restricted the research strategy, as well as the methods of data collection. Eventually, however, the methods used provided sufficient data to complete the research and this study effectively. The number of military instructors being retrained was also quite small, allowing for only one focus group discussion before I left the SANDF. Unfortunately, no further retraining took place and the original number also dwindled due to the transfer of members.

The second limitation was the availability of suitable participants and interviewees. With regard to the participants, it was required to conduct the focus group discussion with members already exposed to collaborative instructivism, which were the small number participating in the retraining programme. The interviewees had to be senior officers in educational management positions with previous experience as military instructors. As there are few educational management positions in the SANDF, the choosing of interviewees was rather difficult.

The last limitation was my personal position as the general officer commanding the SANDF COLET. As the commander of the participants, I had to ensure absolute anonymity and voluntary participation. This necessitated the use of a suitable research assistant, who had a military background, as well as focus group facilitation skills. The assistant was found and he did sterling work with the single focus group discussion. As the researcher, I was unfortunately not able to provide input with regard to the questions asked or duration of the discussions and had to analyse the data that I received. As an ardent post-positivist, it was difficult to adapt to an environment consisting of highly subjective human perspectives, views and interpretations, where objective outcomes are impossible (Mack, 2010; Guba & Lincoln, 1994). Qualitative analysis was therefore a difficult process, specifically in terms of maintaining

objectivity. Fortunately, the thematic networks analysis method (Attride-Stirling, 2001) was extraordinarily helpful in this regard and I believe that I came to all conclusions in an objective, logical manner.

5.8 CONCLUSION

A soldier has four tasks, namely, to kill, to train to kill, to die, and to prepare to die. (Toner, 1995). By preparing our military instructors to be the best that they can be, we train our soldiers optimally in the tasks of killing, preparing to kill, and preparing to die, but we prevent them from dying.

Behind every good soldier there is an even better instructor.

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THE CODEBOOK

LIST OF TABLES

Table A1: The codebook

CODE	DESCRIPTION
THE INDIVIDUALISED SELF	The individualised self is also known as the personal identity. It is the core identity and is unique to the individual, while not influenced by the community. This is the place where the value-system resides and is the only identity which distinguishes the individual from all other individuals (Hitlin, 2003).
THE MILITARY PROFESSIONAL	The military professional executes the orders of the government and sees himself as a servant of the nation. Organisational values reside in the military professional, who also ensures ethical conduct, competence and teamwork (Snider, 2003). The military professional display communication skills, expert educational techniques and character (Schatz, et al., 2012).
THE TEACHER	The teacher identity distinguishes the military instructor from other soldiers. He needs to have specific educational expertise, operates within a unique environment (2000) and is able to operate effectively and efficiently in the various roles of the military instructor, befitting his rank.
THE LEADER	Officers and non-commissioned officers are trained military leaders who must display enhanced cognitive readiness in order to adapt and manage the ever-changing educational environment (Schatz, et al., 2012).

CODE	DESCRIPTION
THE WARRIOR	The warrior, or war fighter, is skilled in combat and is ready to partake in battle. This sub-identity is not applicable to all military instructors. Nurses and military social workers are regarded as non-warriors. Warriors often, however, have a problem with the credibility of non-warriors as their instructors (Johansen, Laberg, & Martinussen, 2013).
INDIVIDUALISM	Individualism focusses on the individual and is characterised by, amongst others, self-righteousness, opposition to authority and a breakdown in values. The military instructor brought up in this era is influenced by these qualities and acts accordingly. The effect of this influence on the PMII should therefore be minimised through thorough training and education (Johansen, Laberg, & Martinussen, 2013), or managed through individualist motivation (Ben-Dor, Pedahzur, Canetti-Nisim, Zaidise, & Perliger, 2008).
PROFESSIONALISM	Professionalism is the influence on the military instructor which motivates him to participate in operations as ordered, to develop his military technical competencies and educational technology skills and to co-operate effectively within his team. Although professionalism leads to military effectiveness (Faris, 1995); (Griffith, 2009), it should not be over-emphasised as it might detract from the other influencing factors, that are equally and sometimes more important (Johansen, Laberg, & Martinussen, 2014).
WARRIORISM	Warriorism influences the credibility of military instructors as a warrior, a leader and a teacher of combat and military technical skills. Warriorism should be applied in the realm of all types of operations, not only warfighting and should not be over-emphasised (Johansen, Laberg, & Martinussen, 2013).

CODE	DESCRIPTION
IDEALISM	Idealism provides the affective influence through altruism, patriotism, *esprit d'corps* and a military value system to all the sub-identities of the total identity, leading to more effective military instructors and soldiers (Griffith, 2009).
MILITARY-TECHNICAL COMPETENCE	The military instructor displays above-average competence pertaining to his training as a soldier, these skills would not only include the skills of his mustering, for example a tank crew commander, aircraft mechanic or an operational medical orderly ("ops medic"), but also tactical or operational skills becoming his rank. He is able to transfer this knowledge and skills by effective facilitation of the learning of his students (Snider, 2003).
GENERAL MILITARY COMPETENCE	The military instructor displays above-average competence relating to his general training as a soldier. These skills include general soldiering knowledge, skills, values and behaviour such as administration, writing skills and discipline. He is able to transfer this knowledge and skills by effective facilitation of the learning of his students (Johansen, 2013).
MILITARY ETHICAL CONDUCT	A soldier, i.e. military instructor, without ethical knowledge and behaviour is not properly trained. The military instructor must demonstrate his commitment to ethical conduct at all times and teach it formally and informally to his students (Snider, 2003).
LEADERSHIP AND CHARACTER	In the SANDF military instructors are leaders, being an officer or non-commissioned officer. As a leader, the military instructor must possess leadership qualities and character, which manifest itself in personal bearing, discipline, dedication and morale (Johansen, 2013).

CODE	DESCRIPTION
TEACHING & LEARNING COMPETENCE	The military instructor shows the ability to plan, organise, present and assess the correct teaching and learning for the subject effectively. He is also able to operate effectively and efficiently in the various roles of the military instructor, suiting his rank.
SOCIO-CONSTRUCTIVIST PRACTICES	Socio-constructivist practices, blended with instructivist practices, provide an effective solution for effective and efficient learning, also with modern technology and media (Dalbani, 2014; Moallem, 2001).
TEAM-TEACHING	Team teaching, also known as collaborative teaching, provides the opportunity for improved collaborative learning and other instructional practices.
CONSTRUCTIVISM	Constructivism, as a learning theory, proposes that knowledge is a construct of and by the learner, based on his own experiences. Knowledge is therefore constructed and not absorbed (Slabbert, De Kock, & Hattingh, 2009; Johnson, n.d.; Ertmer & Newby, 1993; Schunk, 1989) According to the constructivist learning theory, there is no stimulus – response action, only construction through reflection and abstraction (Ertmer & Newby, 1993).

CODE	DESCRIPTION
INSTRUCTIVISM	Johnson (n.d.) refers to the educational application of the objectivist learning theories, that is behaviourism and cognitivism, as instructivism. Behaviourism entails a stimulus, a response and the relationship between the two, stating that learning takes place when a specific, correct response is exhibited, based on a specific stimulus. Cognitivism differs from behaviourism in the sense that it concerns the communication of information by a knowledgeable person and emphasises on mental processes, which lead to a response. It regards the learner as an active member of the learning process, involved with knowledge acquisition, formatting, understanding, storage and retrieval
CONSTRUCTIONISM	In view of the monitory and temporal advantages of educational devices, the application of collaborative learning through Papert's constructionism contributes even further to the effectiveness of instruction and learning. (Papert, 1990; Ackermann, 2001).
INTEGRATED PHILOSOPHIES	Not only can objectivist and constructivist practices be combined and integrated, but the integration thereof leads to more effective and efficient learning (Cronjé & Burger, 2006; Johnson, n.d.)

APPENDIX B

THEMATIC NETWORKS ANALYSIS TABLES

LIST OF TABLES

Table B1: Focus group discussion: code-to-theme process

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
SUB-IDENTITIES	Individualised self Military professional Teacher Leader Warrior	• Instructor's Self • Individual differences • Discipline • Pressure • Humane conduct • Passionate • Planner • Instructor roles • Assertiveness • Perseverance • Democratic conduct • Change management • Judging • Selection • Competence • Humble • Flexible • Respect • Qualifications • Mentorship • Communication • Instructor's Creed • Military experience • Fraternisation • Constructivism • Creative • Team-teaching • Counselling	1. Professional identity is based on the individual self. 2. The MI regards himself as a passionate, competent constructivist teacher. 3. The MI regards himself as a persistent, humble, disciplined, communicative and caring leader. 4. The MI is a selected, competent military professional. 5. The MI, as warrior and leader, is adversely influenced by socio-political effects.
INFLUENCING FACTORS	Idealism Individualism Professionalism Warriorism	• Selection • Focus • Reward • Democracy • Own way • Discipline • Pressure • Perseverance • Loyalty	6. The MI displays idealism 7. The MI displays individualism. 8. The MI displays professionalism

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
IDENTIFYING INDICATORS	General military competence Leadership and character Military ethical conduct Military technical competence Teaching and learning competence	• Experience • Competence • Subject matter expert • Leadership functions • Coaching • Discipline • First impressions • Student participation • Instructor roles • Assertive • Motivation • Collaborativism • Approachable • Reinforcement • Humane • Integrity • Following orders • Fraternisation • Persuasive • Qualification • Planner • Preparedness • Flexible • Communication • Not forceful	9. An MI displays general and technical military competence 10. An MI displays teaching and learning competence 11. An MI displays leadership and character. 12. An MI displays military ethical conduct
COLLABORATIVE INSTRUCTIVISM	Constructivism Instructivism Constructionism Integrated philosophies Socio-constructivist practices Team-teaching	• Experiential learning • Collaborative learning • Team-teaching • Uncertainty	13. MIs regard socio-constructivist practices as useful instructional methods. 14. MIs are not familiar with socio-constructivist practices and integrated philosophies

Table B2: Interviewee 1: code-to-theme process

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
SUB-IDENTITIES	Individualised self · Military professional · Teacher · Leader · Warrior	• Better teacher • No enforcement • Warrior identity required	1. A more prominent warrior sub-identity would benefit the PMII. 2. Applying collaborative instructivism can enhance the MI's teacher sub-identity. 3. The use of Collaborative instructivism to enhance the MI's teacher sub-identity is not enforced in the SANDF
INFLUENCING FACTORS	Idealism · Individualism · Professionalism · Warriorism	• Primarily individualism • Identity disregarded • Warriorism lacking Warriorism /professionalism needed	4. A PMII is currently disregarded. 5. MIs lack professionalism and warriorism. 6. The PMII is influenced primarily by individualism
IDENTIFYING INDICATORS	General military competence · Leadership and character · Military ethical conduct · Military technical competence · Teaching and learning competence	• Well-trained • Effective teaching competence • Competence disregarded	7. Collaborative instructivism, which improves the teaching and learning competence of the MI, is not currently endorsed by the SANDF.

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
COLLABORATIVE INSTRUCTIVISM	Constructivism Instructivism Constructionism Integrated philosophies Socio-constructivist practices Team-teaching	• Effective method • Not enforced	8. Collaborative instructivism is an effective learning theory, utilising constructivism and instructivism.

Table B3: Interviewee 2: code-to-theme process

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
SUB-IDENTITIES	Individualised self Military professional Teacher Leader Warrior	• Leadership • Military professional first • Temporary Teacher • Warrior before teacher • Non-professional conduct • Intervention	1. The MI is a leader 2. The MI is a military professional and warrior first, then a teacher 3. The MI is a teacher for a restricted time only. 4. The individualised self suppresses the military professional
INFLUENCING FACTORS	Idealism Individualism Professionalism Warriorism	• Specialist training • Uniqueness of military training • Train the trainer • Specialist military instructor	5. Lack of professionalism required intervention to implement collaborative instructivism
IDENTIFYING INDICATORS	General military competence Leadership and character Military ethical conduct Military technical competence Teaching and learning competence	• Intervention required	6. The MI has specialist military technical competence 7. Collaborative instructivism supports military technical competence 8. A trainer of trainers has teaching and learning competence, as well as military technical competence

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CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
COLLABORATIVE INSTRUCTIVISM	Constructivism Instructivism Constructionism Integrated philosophies Socio-constructivist practices Team-teaching	• Uniqueness of military training • Prevailing theories • Reluctance to implement • Non-military theory • No implementation • Collaborative/ Social element	9. The integrated philosophies of collaborative instructivism supports the uniqueness of military training 10. Prevailing non-military theories create reluctance to implement collaborative instructivism 11. Collaborative instructivism is not effectively implemented 12. Military training has an inherent socio-constructivist component

Table B4: Interviewee 3: code-to-theme process

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
SUB-IDENTITIES	Individualised self Military professional Teacher Leader Warrior	• Warrior first • Instructor roles • Disciplined soldiers • Educational doctrine • Instructivism	1. Educational doctrine supports a teacher identity 2. The MI is a warrior and military professional first, then a teacher 3. Soldiers are disciplined military professionals
INFLUENCING FACTORS	Idealism Individualism Professionalism Warriorism		
IDENTIFYING INDICATORS	General military competence Leadership and character Military ethical conduct Military technical competence Teaching and learning competence	• Warrior before teacher • Military professional conduct • Institutionalisation • Task orientation Instructor focus	4. Doctrine defines the MI in terms of military competence, as well as teaching and learning competence. 5. The MI displays military ethical conduct and task orientation

CLUSTER	CODES	TEXT SEGMENTS FROM ASSOCIATED QUOTATIONS	(BASIC) THEMES IDENTIFIED
COLLABORATIVE INSTRUCTIVISM	Constructivism Instructivism Constructionism Integrated philosophies Socio-constructivist practices Team-teaching	• Constructivism practices • Instructivism practices • Learning theory • Institutionalisation • Appropriate training • Socio-constructivism • Uniqueness • Warfighting	6. Teaching and learning competence is institutionalised 7. Training for warfighting is socio-constructivist 8. The MI trains by using instructivism, as well as constructivism

Table B5: Focus group discussion: organising themes and global theme

(BASIC)THEMES IDENTIFIED	ORGANISING THEME	GLOBAL THEME
1. Professional identity is based on the individual self 2. The MI regards himself as a passionate, competent constructivist teacher 3. The MI regards himself as a persistent, humble, disciplined, communicative and caring leader 4. The MI is a selected, competent military professional	1. The MI regards his sub-identities as the individualized self, teacher, leader and military professional	PMII elements exist in the SANDF
6. The MI displays idealism 7. The MI displays individualism 8. The MI displays professionalism	2. PMII is created and influenced by idealism, individualism and professionalism	
9. An MI displays general and technical military competence 10. An MI displays teaching and learning competence 11. An MI displays leadership and character 12. An MI displays military ethical conduct	3. General and technical military competence, teaching and learning competence, leadership and character., as well as military ethical conduct, realise the PMII	
5. The MI, as warrior and leader, is adversely influenced by socio-political effects 13. MIs regard socio-constructivist practices as useful instructional methods 14. MIs are not familiar with socio-constructivist practices and integrated philosophies	4. There exist socio-political and competency tensions in the PMII	

Table B6: Interviewee 1: organising themes and global theme

(BASIC)THEMES IDENTIFIED	ORGANISING THEME	GLOBAL THEME
1. A more prominent warrior sub-identity would benefit the PMII 4. A PMII is currently disregarded 5. MIs lack professionalism and warriorism 6. The PMII is influenced primarily by individualism	5. Individualism informs a dormant PMII	PMII is in dire straits
4. The use of collaborative instructivism to enhance the MI's teacher sub-identity is not enforced in the sandf 7. Collaborative instructivism, which improves the teaching and learning competence of the MI, is not currently endorsed by the sandf	6. The PMII is not actively enhanced	
2. Applying collaborative instructivism can enhance the MI's teacher sub-identity 8. Collaborative instructivism is an effective learning theory, utilising constructivism and instructivism	7. Collaborative instructivism enhances the PMII	

Table B7: Interviewee 2: organising themes and global theme

(BASIC)THEMES IDENTIFIED	ORGANISING THEME	GLOBAL THEME
1. The MI is a leader 2. The MI is a military professional and warrior first, then a teacher 3. The MI is a teacher for a restricted time only 6. The MI has specialist military technical competence	8. Limited deployment as MI undermines the teacher sub-identity of the warrior.	Resistance to apply collaborative instructivism prevents improvement to the PMII and military training
8. A trainer of trainers has teaching and learning competence, as well as military technical competence 9. The integrated philosophies of collaborative instructivism supports the uniqueness of military training 7. collaborative instructivism supports military technical competence 12. Military training has an inherent socio-constructivist component	9. Collaborative instructivism underpins the uniqueness of Military training	
10. Prevailing non-military theories create reluctance to implement collaborative instructivism 11. Collaborative instructivism is not effectively implemented 5. Lack of professionalism required intervention to implement collaborative instructivism 4. The individualised self suppresses the military professional	10. Resistance to change prevents the implementation of collaborative instructivism	

Table B8: Interviewee 3: organising themes and global theme

(BASIC)THEMES IDENTIFIED	ORGANISING THEME	GLOBAL THEME
2. The MI is a warrior and military professional first, then a teacher 5. The MI displays military ethical conduct and task orientation	11. The MI is firstly a warrior and his identity is founded on military professionalism	Institutionalise collaborative instructivism to improve military training
1. Educational doctrine supports a teacher identity 6. Teaching and learning competence is institutionalised 4. Doctrine defines the MI in terms of military competence, as well as teaching and learning competence	12. The MI, as competent teacher, is institutionalised	
3. Soldiers are disciplined military professionals 7. Training for warfighting is socio-constructivist 3. The MI trains by using instructivism, as well as constructivism	13. "Train as you fight" is a collaborative instructivist process	