

NATIONAL DEFENCE UNIVERSITY

**SELF-LEADERSHIP – CORE OF COMPETENCE AND KNOWLEDGE
MANAGEMENT**

General Staff Officer Course Thesis

Captain
Mika Penttinen

General Staff Officer Course 58
Army

July 2017

NATIONAL DEFENCE UNIVERSITY

Course General Staff Officer Course 58	Service Army
Author Captain Mika Penttinen	
Thesis Title SELF-LEADERSHIP – CORE OF COMPETENCE AND KNOWLEDGE MANAGEMENT	
Discipline Leadership and Management	Storage Location National Defence University's Library
Date July 2017	Text Pages 95 Appendix Pages 7
SUMMARY The objective of this research was to conceptualize self-leadership in the Finnish Defence Forces (FDF) as part of competence and knowledge management. Consequently, the purpose was also to increase knowledge about the fostering and importance of self-leadership as well as to facilitate improving leadership and management in the FDF. The thesis is a content analytic and interpretative concept analysis, which is non-empirical and qualitative. According to the determined research objectives, the concepts of competence and knowledge management as well as self-leadership in the FDF were analyzed and interpreted by means of the leadership and management fourfold. The research comprised phases, which overlapped to an extent. At first, the basis for the analysis of the phenomenon was created by documentation and viewing management paradigms from the leadership and management fourfold's perspective ranging from the early 20 th century to 21 st century. This was followed by analyzing and interpreting the concepts of competence and knowledge management as well as self-leadership in the FDF by means of the formed theoretical background. Before finalizing this research report, the results were summarized and conclusions made. On the basis of this study, the notion of self-leadership has been recognized in the FDF for a couple of decades, but it has not been conceptualized by relying on examining the documentations available until now. So far, self-leadership has been referred to by using varied concepts, such as deep leadership and pedagogical leadership as well as action competence, which all are directly connected with self-leadership in that these constructs contain elements of self-leadership. When examining an individual's competence and knowledge from the viewpoint of competence and knowledge management in the FDF, the definitions of individuals' competence and knowledge invariably contain dimensions of abilities and action, and thus are related to the concepts of action competence and deep leadership. It can be noted that in the FDF, managing or leading oneself has been viewed an inseparable part of leadership. The attributes of self-leadership include control, performance, aiming for fostering and enhancement, systemic, interdependent as well as physical, mental, social and ethical dimensions. Furthermore, the key close concepts include self-regulation, self-efficacy, self-control and managing oneself. In the FDF, self-leadership can be defined to represent a process through which an individual controls the holistic construction of physical, mental, social and ethical features by applying cognitive and behavioral strategies in order to influence his or her thoughts and actions, enhance his or her skills and abilities, and lead himself or herself in a context-oriented way aiming to meet both individual and organizational objectives concerning tasks and aims.	
KEY WORDS Competence, Knowledge, Leadership, Management, Competence and Knowledge Management, Self-leadership, Self-Management	

CONTENTS

1	PREFACE	1
1.1	Premises and Purpose of Research	1
1.2	Briefly About Leadership and Management Research	2
1.3	Structure of Research Report	3
2	IMPLEMENTATION OF RESEARCH	6
2.1	Research Task and Scope of Research	6
2.2	Research Paradigm and Theoretical Frame	8
2.3	Interpretative and Analytical Approach as a Means of Research	10
2.4	Methodology	11
2.4.1	Data Collection	11
2.4.2	Applied Content Analysis Model	13
2.4.3	Operating Mode of Concept Analysis	15
2.4.4	Interpretation	17
2.5	Review of the Sources Used and Previous Research	18
2.6	Research Validity and Reliability	23
3	EVOLUTION OF MANAGEMENT PARADIGMS	25
3.1	Scientific Management (Taylorism)	25
3.2	Human Relations	27
3.3	Organizational Structure Analysis	29
3.4	Theories of Organizational Culture	30
3.5	Paradigm of Innovation	32
3.6	Summary and Conclusions	33
3.6.1	Arc of History of Management Paradigms – Duel of Transactional and Transformational Dimensions	33
3.6.2	Categorizing of Management Paradigms	35
4	COMPETENCE AND KNOWLEDGE MANAGEMENT IN GENERAL AND IN FINNISH MILITARY CONTEXT IN PARTICULAR	39
4.1	Well-Known, But Weakly Recognized – Concepts of Competence and Knowledge	40
4.1.1	Competence and Knowledge Recognized as Features	41
4.1.2	Competence and Knowledge Viewed as Actions	42
4.2	Competence and Knowledge in Finnish Military Context	43
4.2.1	Competence and Knowledge while on Duty	43
4.2.2	Competence and Knowledge in the Context of Finnish Military Sciences	45
4.3	Complicated Concept of Competence and Knowledge Management	48
4.3.1	Evolution of Competence and Knowledge Management from the Perspective of Different Generations	49
4.3.2	Construction of Competence and Knowledge Management in the Finnish Defence Forces.....	52
4.4	Summary and Conclusions	59
5	SELF-LEADERSHIP IN GENERAL AND IN FINNISH MILITARY CONTEXT IN PARTICULAR	62
5.1	From Self-Management to Self-Leadership	63
5.2	Self-Leadership in the Finnish Defence Forces	72
5.2.1	Deep Leadership	73
5.2.2	Action Competence	76

5.2.3	Self-leadership Is Based on the Integration of Deep Leadership and Action Competence	77
5.3	Summary and Conclusions	80
6	DISCUSSION	86
6.1	Conclusions	86
6.1.1	Competence and Knowledge Management	87
6.1.2	Self-Leadership	88
6.2	Evaluation of Research Validity and Reliability	90
6.3	Need for Further Study	92
6.4	To End Up With	95
	REFERENCES	96
	APPENDIXES	112

LIST OF FIGURES

Figure 1. Research Design and Phases Linked to Structure of Research Report	8
Figure 2. Framework of Research	9
Figure 3. Management Paradigms Viewed through the Leadership and Management Fourfold	38
Figure 4. Key Close Concepts of Competence and Knowledge Management from Individual´s and Self-Leadership´s Perspective in the FDF	60
Figure 5. Modelling of Self-Leadership in the FDF (adapted from Mäkinen 2009a, 101–102)	78
Figure 6. Positioning of Self-Leadership in Construct of Management by Means of the Leadership and Management Fourfold	84
Figure 7. Framework for Concept of Self-Leadership in the FDF	90

LIST OF TABLES

Table 1. Transformational and Transactional Dimensions of Leadership and Management in the Different Paradigms (adapted from Seeck 2008, 327, 332; cf. Bryman 1992, 1)	34
Table 2. Dimensions of Competence and Knowledge (adapted from Håland & Tjora 2006, 1009)	41
Table 3. Integrated Concept of Competence and Knowledge in Finnish Military Context	48
Table 4. Evolution of Competence and Knowledge Management in the FDF	58
Table 5. Primary Tendencies in the Field of Self-Leadership in mid-2010s	67
Table 6. Core Features of Self-Leadership	70
Table 7. Primary Aspects of Further Inquiries Based on Results and Conclusions of This Research	94

SELF-LEADERSHIP – CORE OF COMPETENCE AND KNOWLEDGE MANAGEMENT

1 PREFACE

An environment comprising variable, interdependent and complicated elements sets completely new requirements for the organizations of the 21st century (e.g. Ghosh 2015, 1126–1227; Hänninen 2011, 2–3; Konradt 2014; 289–291; Tirkkonen, 2014, 74–75). Therefore competence and knowledge as well as leadership and management are acknowledged as crucial enablers of success both today and especially tomorrow (e.g. Moghaddam, Akhavan & Mehralian 2015, 233–234, 244–246; Pääesikunta 2015b, 5; 2016b, Appendix 1: 1–2; Uden, Wang, Rodríguez, Yang & Ting 2014, v). In other words, the future competitiveness and capability of the every organization, including the Finnish Defence Forces´ (FDF) will increasingly be relied on the appropriate human competence and knowledge available.

1.1 Premises and Purpose of Research

This research draws from the notion that the current society is post-modern, which causes novel challenges and sets requirements as well as opens possibilities as regards leadership and management. The motivation for this thesis is associated with one of the major themes of *The Finnish Defence Forces´ Research Agenda 2015*. This is, “The Person as Part of Systems and Units” involves a multidisciplinary approach in which the core characteristics of a professional include, among other things, a person´s action competence as an entity as well as a learning process. (Puolustusvoimat 2015, 6–7.) Although this research utilizes the point of view of an individual, it does not mean that the individual is seen as a separate actor. Rather, the individual is understood as an integral part of his or her environment.

This thesis concentrates on a particular sub-discipline of leadership, namely, self-leadership. It is a complicated phenomenon with various, context-dependent definitions and interpretations depending on the given framework applicable. Self-leadership can be

approached either from an individual's or organization's point of view, but the creating a synthesis of these separated dimensions invariably becomes challenging. (e.g. Neck & Houghton 2006, 274–286; Stewart, Courtright & Manz 2011, 211–213; cf. Manz 2015, 136–137.) Inspired by that complicacy, the present study intends to examine and define the concept of self-leadership in the Finnish military context. Overall, the thesis also attempts to increase knowledge about the fostering and importance of self-leadership from competence and knowledge management's point of view. Moreover, improved understanding of the concept of self-leadership targets facilitation of developing leadership and management in the FDF.

1.2 Briefly About Leadership and Management Research

There are some essential issues that concern leadership and management research from the perspective of this content analytic and interpretative conceptual research at hand, which were worth taking into account. The identification of those core elements made it possible both to build up and to follow a line of thought for the purposes of the present research.

All in all, the awareness of the past developments of leadership and management helps both to understand the present and also to forecast the future (Seeck 2008, 17). On the other hand, the theories and models of leadership and management are a very heterogeneous entity. Research related to leadership and management abounds in several contexts. (Juuti 2001, 7; Åhman 2003, 12.) The research perspective adopted has varied from efficiency and performance to humanity (Huhtinen 2002b, 44; Rantapelkonen & Koistinen 2016, 42). The notion of management has been seen as execution and performance, whereas leadership has been understood as human interaction and influencing (Juuti 2001, 281). However, there is neither consensus about the optimal balance between transactional and transformational features of leadership (Bass 1999, 21; Bass, Avolio, Jung & Berson 2003, 216; Seeck 2008, 331; cf. Alvesson & Jonsson, 2016, 13), nor is there an exhaustive description of leadership if only the transactional and transformational dimensions are accounted for (Anderson & Sun 2017, 91; Antonakis & House 2014, 764, 766; cf. Alvesson & Jonsson 2016, 15–16). The multi-dimensionality and diversity of the concepts of leadership and management also become evident, for example, in the definitions featured in British and American dictionaries (see Appendix 1). However, attempts to bring the all differing views closer together are probably impossible and even unnecessary in light of the scale of the matter.

For the purposes of this study, the concept of leadership and management can be viewed by utilizing the notion of *paradigm*, as introduced by Kuhn. In his work *The Structure of Scientific Revolutions* Kuhn (1970¹, 10–11, 23, 77) pointed out that paradigms are the basic assumptions of the science or discipline, which will not normally be questioned. The paradigm is a joint commitment among a certain discipline community and directs researching as well as the formulation of theory. However, even the firmest theories and models never dominate forever. In due course of time, a type of phenomenon surfaces, which the prevailing paradigm is not able to explain, and thus the paradigm becomes replaced by a new one.

Furthermore, the notion of *theory* can be viewed as “a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena” (Kerlinger 1986², 9). This in turn means that a theory tends to aim to being consistent as well as conceptualizing the examined phenomenon and its interrelations (Kerlinger 1986, 9). In practice, the applications of theories are always based on ontological and epistemological premises dependent on the given paradigm (cf. Huhtinen 2002b, 16–17). In this present research, the author has adopted a subjective approach complemented by a social construction of reality.

Although, in an academic context, a model can also be used as an example to imitate or to present a simplified description, the notion of a model is a less absolute construction than a theory. Thereby a model can comprise fundamental and idealistic features, which delineate notions about the desirable condition. (Rantapelkonen & Koistinen 2016, 68–69.) Consequently, the concepts of paradigm, theory and model all represent essential tools for a researcher and assistance for a reader, as they enable mutual interaction between the writer, reader and the text.

1.3 Structure of Research Report

The structure of the research report is divided into preface and four independent, yet mutually supportive parts as well as a discussion to close with. As is the case in every discipline, the basis of the leadership and management research rests on philosophy of science. That is why

¹ Originally *The Structure of Scientific Revolutions* was published in 1962.

² Originally *Foundations of Behavioral Research* was published in 1964.

the natural continuation following this preface comprises the definition of an exact research task together with introducing the theoretical premises of the research in Chapter 2. Further in that chapter a literature review is presented, the purpose of which is to describe a themes relevant for this topic in the sources of the present research. This is followed by a brief review about credibility of sources as well as the key principles of validity and reliability in this study.

In the Chapter 3 the evolution of management paradigms is outlined. After the chronological review, the main conclusions are summarized by means of a leadership and management fourfold (see Section 3.6). As a result, this develops the necessary pre-understanding concerning the subject. The aim is to formulate a tool for analysis and interpretation, which is a prerequisite for proceeding to the next phase of the research process. That, furthermore, defines the scope of the present study.

Based on the findings and conclusions from the previous chapter, the concept of competence and knowledge management are reviewed in Chapter 4. The goal is to view individual, communal and organizational aspects of the competence and knowledge management. The depth of reviewing will be based on a parallel utilization of relevant civilian and military disciplines as well as the official documents (e.g. norms, regulations and reports). Ultimately, after the holistic reviewing, a theoretical construction of competence and knowledge management from an individual's and self-leadership's point of view in the FDF will be formulated on the basis of competence and knowledge management's close concepts. Consequently, the aim is to answer the first sub-question (see Section 2.1). Furthermore, the conclusions of this chapter will help to determine the core elements of self-leadership and enable continuing to the next phase of the research process.

In Chapter 5 the concept of self-leadership is reviewed in general and in the FDF's context. The conclusions from Chapters 3 and 4 are guided the concept analysis, which is based on a parallel utilization of civilian and military disciplines as well as the official documents (e.g. norms and manuals) of the FDF. According to the main research task, the aim is, first of all, to generate a theoretical concept of the self-leadership in the FDF. It is carried out by answering the remaining sub-questions (see Section 2.1). In practice, the exploration in the hermeneutic loops stops and the findings and results of that excursion are acquired and presented but not summed up yet.

In Chapter 6 the findings and conclusions from the whole research are summarized to form an integrated entity. The purpose of epilog is to assess the content of the results, which were generated by the main research question and the following sub-questions. At the same time the validity and reliability of the research are accounted for. The aim is to explicate how the set research objectives were reached and, on the other hand, outline the identified needs for further research.

To complement the structure and layout of the report, the figures and tables are used to highlight particular parts in the theory-based text. In addition, the footnotes provide a supplementary information source and translations for readerships. This helps to ensure the readability of the thesis.

2 IMPLEMENTATION OF RESEARCH

This chapter introduces the theoretical premises of this research as well as defines the exact research task and describes the applied methodology. Moreover, a connection between data collection, and data analysis as well as interpretation and conclusions is outlined by explicitly describing the methods employed during the research process. Furthermore the topic-based themes in the sources used and source critique are discussed also. This means a brief previewing prior research in order to describe the categorizing and assessing of the sources utilized in this research including the assessment of their credibility in this context. This is followed by a brief review about the core aspects of validity and reliability in this study. Overall, the aim is to offer the reader the means to understand and evaluate the conducted research.

2.1 Research Task and Scope of Research

The tasks of this research are both to examine and define the position and concept of self-leadership in the FDF 's competence and knowledge management. The aim is to define relations and interfaces with deep leadership and action competence as well as competence and knowledge management in the context of the FDF. This present research narrowed down its scope on the area of self-leadership as a part of competence and knowledge management interpreted by the leadership and management fourfold.

The thesis is a content analytic and interpretative concept analysis, which is by default value non-empirical and qualitative. The triangulation of the content analysis and concept analysis was based on both the tasks and aims of the research. The applied triangulation was indispensable to enable treating holistic concepts and contents. A systematic documentation was conducted by means of applying hermeneutic approaches for understanding and interpreting the phenomenon (cf. e.g. McAuley 2004, 195; Takala & Lämsä 2001, 373–385). Thereby, selected material was viewed in light of a theory-guided content analysis. The theoretical background for the analysis and interpretation was based on reviewing the evolution of management paradigms. Because the hermeneutic process rarely progresses in a systematic step by step way unlike a positivist research philosophy linked to quantitative research (e.g. Saunders, Lewis & Thornhill 2012, 134–135; Takala & Lämsä 2001, 379–380), it was absolutely necessary to make exclusions to control the multi-threaded process (see

Section 2.4) (cf. Huhtinen 2002b, 17; Palonen 1988, 139–140; Saunders et al. 2012, 556–557, 562; Takala & Lämsä 2001, 386–388).

The conceptualization of the phenomenon and the formulating of the research problems are an integral part of the qualitative research process, which may be extended to cover the study completely (cf. Palonen 1988, 138–141; Saunders et al. 2012, 562; Takala & Lämsä 2001, 387–388). It should be stated that any absolute hypothesis setting without in-depth familiarization with the multitude of nuances and conflicting data could be shackled to a narrow approach of the topic (cf. Hirsjärvi, Remes & Sajavaara 2005, 14–15, 116–117; Palonen 1988, 139–141; Saunders et al. 2012, 546–548; Takala & Lämsä 2001, 380–381). Thus, the pre-understanding will be transformed – narrowed down as the process progresses in a hermeneutic circle (e.g. Huhtinen 2002b, 36–37; Koskiahio 1990, 44; McAuley 2004, 195; Takala & Lämsä 2001, 379–380). During the process, each theoretical viewing produced to researcher an improved understanding of the said object compared to the preceding one.

By examining different contexts an in-depth review gradually emerged and generated into a more comprehensive understanding of the phenomenon, which finally enabled outlining and employing the criteria for an appropriate question setting (cf. Palonen 1988, 139–141; Takala & Lämsä 2001, 379–380). Thus, by means of interpretation, which covered the whole research process, it was possible to formulate an understanding about the level of standard for setting relevant research questions. Based on the thus defined objectives of research, the research process reached the point of defining the main research question, which was further divided into specific sub-questions.

The main research question is:

- **What is the concept of self-leadership in the FDF?**

This main question is further broken down into specific sub-questions as follows:

- How is competence and knowledge management constructed in light of close concepts from the perspective of an individual and self-leadership in the FDF?
- What are the attributes of self-leadership?
- How is self-leadership defined in the FDF's context?
- What are the relations and interfaces of self-leadership in the leadership and management fourfold?

Despite of the nonlinear progressing of the research process, it is possible to visualize this process by modelling the research set-up connected to the structure of the research report, as presented in Figure 1. However, it is worth pointing out that although the individual phases are listed in a chronological order in, many of these phases overlap and are carried out parallel to each other.

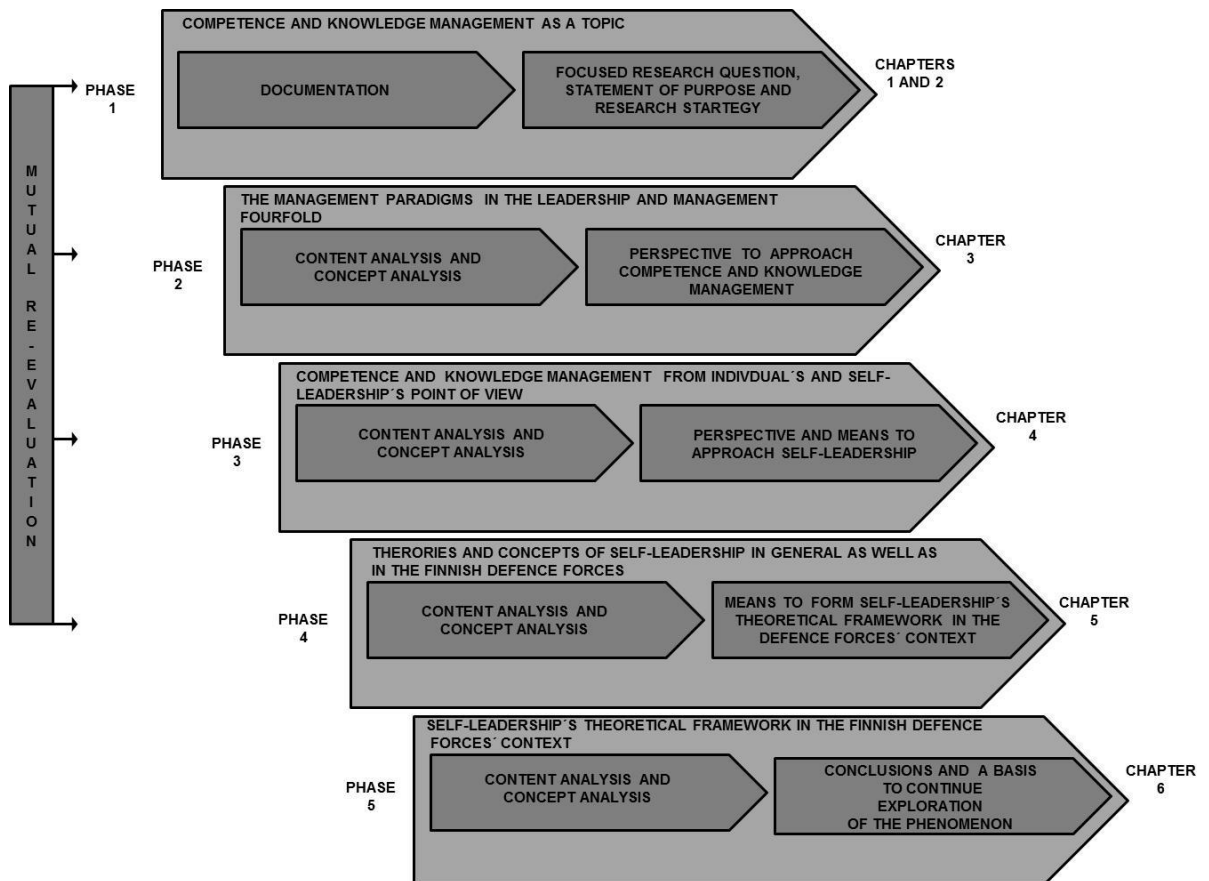


Figure 1. Research Design and Phases Linked to Structure of Research Report.

2.2 Research Paradigm and Theoretical Frame

The ontology of the interpretative research philosophy emphasizes the importance of subjectivity as well as that of social, linguistic and symbolical action (Saunders et al. 2012, 132, 137, 546). According to Berger and Luckman (1991³, 43–48), through interaction people construct and organize their reality time and again. It is in general assumed that social reality is not given but rather people will create and complete this reality by means of

³ Originally *The Social Construction of Reality. A Treatise in the Sociology of Knowledge* was published in 1966.

interaction and activities. Consequently meanings are dependent on human cognition – individuals’ interpretation of the occurrences that take place. In other words, an individual is not a mere product of social constructions. (Berger & Luckman 1991, 33–61.) Berger and Luckman (1991, 78) have emphasized that the relationship between the individual and society is understood as dialectic: the individual is both a constructor of social reality and a product of that reality.

The manifold nature of leadership and management encourages exploitation of qualitative methods. That is why it is necessary to challenge the traditional and positivist research philosophy during the interpretative-theoretical research process. The conceptualization of complex relations between competence, knowledge, leadership and management are not possible to carry out appropriately by utilizing quantitative measurements. Instead, the hermeneutic paradigm looks beyond trying to establish cause-effect relations and thus primarily aims to understand and interpret issues. An essential feature of hermeneutic orientation is the acceptance and acknowledgement of the researcher’s personal experience and knowledge influences. (cf. Huhtinen 2002b, 36–37; McAuley 2004, 192–196; Palonen 1988, 139–140). The framework of this research is presented in Figure 2.

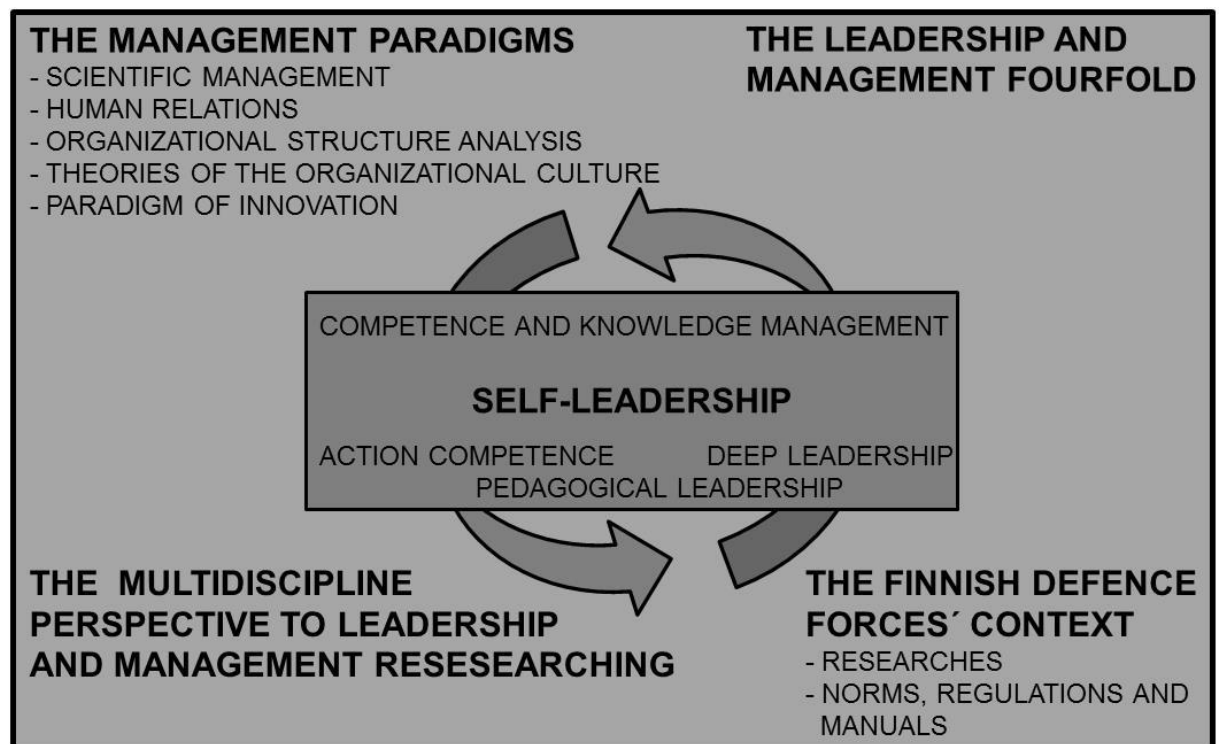


Figure 2. Framework of Research.

2.3 Interpretative and Analytical Approach as a Means of Research

An interpretative mindset, which differs from the most traditional, positivist methodological guidelines, is to understand science as interpretation (e.g. Palonen 1988, 13; Takala & Lämsä 2001, 371–374). This viewpoint rejects the type of epistemological conception whereby issues “are known” or “unknown”. An interpretational approach instead aspires to replace one kind of understanding by narrative (Palonen, 1988, 14–15). However, the interpretations are always contextual, limited and one-sided views concerning a phenomenon (Palonen 1988, 15; Takala & Lämsä 2001, 386–387). Consequently, according to Palonen (1988, 15), each of those interpretations can also be disputed and objections as well as alternatives can be presented.

Palonen (1988, 15) points out that only one interpretation cannot offer comprehensive narrative about the given phenomenon. At all times, the interpretation is related to other interpretations and preconceptions without any predetermined order of precedence or scale. Although the interpretation modifies preconceptions, this does not result in relativism with all interpretations being equal (Palonen, 1988, 15). Adopting this kind of approach requires some philosophic commitment. Most importantly, this involves abandoning essentialism or philosophical realism, which state that the reality exists independently of observers, issues are real and always feature particular characteristics. Rather it can be determined that philosophic agnosticism suffices. Thereby a stand will not be taken on how issues really are but they are analyzed, and furthermore, different concepts or interpretations about the issues are proposed. (Palonen 1988, 16; Takala & Lämsä 2001, 386–388.) Surely, the chosen epistemological point of view can be criticized for its lack of developing measurable definitions for validity and reliability. But the interpretations are not made by intuition only. The interpretative research process contains certain critical selection situations and operations. (Palonen 1988, 16–17.) However, according to Ehnrooth (1990, 37–39), a transparent justification and demonstration of the different procedures can be seen to pose a significant challenge concerning interpretative research.

This research applies an interpretative concept analysis approach, which is complemented by analytic content analysis. The applied research approach is based on the ideology of social constructionism. That is why the concepts are seen as dynamic and ambiguous. According to Takala and Lämsä (2001, 384), the process of constructing and processing concepts presupposes people’s interaction and activities. This kind of instability is not expected to

result in inaccuracy of interpretation, but rather offer possibilities to generate varying interpretations instead. On the other hand, according to the adopted theory of science, the conceptualization represents an endless process. (cf. Takala & Lämsä 2001, 387–388.) Inevitably, the foundation for and quality of interpretations of this research are dependent on the exploration taking place as part of the hermeneutic circle of interpretation.

2.4 Methodology

According to Saunders et al. (2012, 556), there is not a single standardized approach to analyzing qualitative data. As in a number of other studies (e.g. Costas & Kärreman 2016; Hartikainen 2015; Nuopponen 2010; Tsai 2016), this research has also formulated and applied a specific analytical procedure for the purposes of analyzing qualitative data. Specifically the triangulation of content analysis and concept analysis was designed in order to reach the set aims of the research in accordance with the outlined theoretical frame and approach as discussed in this section.

2.4.1 Data Collection

Avoiding too wide data collecting could be said to be one of the most fundamental principles of qualitative research (cf. Hirsjärvi et al. 2005, 170–171; Saunders et al. 2012, 546, 562). Overly extensive source material is difficult to control and therefore the interpretations and the conclusions are easily impressionistic based on unattached samplings (cf. Ehnrooth 1990, 39; Saunders et al. 2012, 546–548). On the other hand, in the case of content and concept analytical research in data collection, data analysis as well as the generating and verification of propositions are an interrelated and interactive set of processes. The analysis takes place both during the phase of data collecting and after it. It is this analysis that zooms and sharpens the collection of data. (cf. Saunders et al. 2012, 562.) The key point here is relative flexibility, which is characteristic of qualitative analysis.

From the point of view of traditional source criticism, primary sources should be utilized as much as possible. However, this is not necessarily so simple. It can be claimed that all the data are contaminated in some sense (cf. Feyerabend 1993, 51). Consequently, the primary or secondary source always conveys partial or skewed notions. As Palonen (1988, 132) has pointed out, data should be viewed in relation to the context and research task. The formulation of the research task restricts the collection of data, but then again, the data as well

as researcher's competence at hand guide the formulation of the research task. The data and the formulation of the research task are thus contemplated together, which is necessary in a multi-layered process. (Palonen 1988, 130–135.) However, the main prerequisite for retaining validity is that the core of the collected data is of a high standard when assessed by means of traditional source criticism.

The initial source survey of this research can be said to originate from the early 2010s. Familiarization with the subject has been acquired during the recent years, by reviewing of the quality of the National Defence University's student selection processes conducted as part of competence and knowledge management in the FDF (e.g. Penttinen 2014). Thus, the data collection of the present study was conducted on the basis of this pre-understanding. The systematic searching for data has been made by Taisto-, JSTOR- and Scopus-databases as well as interlibrary services of the National Defence University's library. Besides, the electronic databases on the FDF's internal-portal have been utilized. The main concepts and terms, which were scanned from different databases included competence, knowledge, competence and knowledge management, self-leadership, self-management, action competence as well as pedagogical leadership.

Accordingly, the sampling of data was continued until saturation can be stated to have become reached when the sources ceased to reveal new viewpoints that were relevant in terms of understanding (cf. Hirsjärvi et al. 2005, 171). The chosen set of data comprises sources from the early 20th century to the year of 2017. According to Saunders et al. (2012, 82–83), literature sources are divided into three categories: primary, secondary and tertiary. However, this thesis has also viewed the date of publishing to be a very relevant matter during the data collection. Consequently the type of information available in the sources has been categorized as settled-, current- as well as anticipatory-data. In practice, the first category refers to what can be described as classics concerning the topic. The second category comprises mainly theses and other research publications, official documents well as peer-reviewed articles. The third category contains the latest up-dated FDF documents and recently published articles, which outline not only current but also emerging tendencies.

There were two reasons for carrying out the expansive longitudinal sampling. Firstly, this allowed for developing a genuine understanding about the background of the reviewed phenomenon and thereby offered data collecting quality assurance. Secondly, when applying this type of approach to conducting scientific research, the notions of reliability and validity

need to be accounted for and thus both sustaining scientific credibility and examining discipline significant sources were seminal during the data collection.

The content-matter-based themes of the sources and principles of source criticism are discussed in Section 2.5.

2.4.2 Applied Content Analysis Model

As a data analysis method, content analysis is a basic method, which is applicable broadly in different qualitative research approaches (Tuomi & Sarajärvi 2013, 91; see also Saunders et al. 2012, 557). Overall, according to Tuomi and Sarajärvi (2013, 103–104, 107–108), the aim of content analysis is to generate a compact and general description about the given phenomenon. The simplification should be done without losing any of the information included in the set of data. In other words, the objective is to generate a succinct, plain and coherent definition on the basis of fragmented material.

This research applied an approach to content analysis that based on Tuomi's and Sarajärvi's (2013, 95–100, 108–113, 117–118) formulations on data-driven but theory-guided content analysis, complemented by Saunders' et al. (2012, 556–566), Nadin's and Cassell's (2004), Takala's and Lämsä's (2001) as well as Palonen's (1988) views about analysis and interpretation. As Tuomi and Sarajärvi (2013, 91) have pointed out, content analysis is not only a single method but it can also be seen as a wider theoretical construct and connected with other analysis methods. In consequence, for the purposes of this study, a theoretical framework of the concept analysis (see Section 2.4.3) was constructed by means of content analysis.

The process of content analysis was carried out in an abductive way, which meant implementing the theory-guided type of process. To be able to rely on an existing theoretical basis of concepts, management paradigms were utilized in steering and guiding the analysis. According to Tuomi and Sarajärvi (2013, 117), the theory-guided analysis is complemented by an existing theory-based narrative. Accordingly, analysis was aimed to which enables discovering new mindsets about self-leadership as a part competence and knowledge management in the FDF.

The content analysis (Saunders et al. 2012, 564–566; Tuomi & Sarajärvi 2013, 108–113, 117–118) contained three main phases in the present research. Those were:

1. a data reduction
2. a grouping
3. an abstraction.

The aim of data reduction was to condense the data contents by summarizing, simplifying and prioritizing the data collected (Saunders et al. 2012, 564). The reduction was guided by the findings examined in Chapter 3. Consequently, certain keywords were selected from the data concerning competence and knowledge management as well as self-leadership and this was done by means of applying the leadership and management fourfold. The keywords were: transactional, transformational, management, leadership, individual and organization. By condensing and transforming the data made it possible to create a valid point of view, which was a prerequisite for grouping these items in the next phase.

During the phase of grouping, hierarchical categorizing was made by means of the selected keywords (cf. Nadin & Cassell 2004, 272–274). The higher-order codes were transactional and transformational, and the lower-order codes at level two were management and leadership, whereas at level three the codes were individual and organization. This categorizing prioritized further reading and guided abstraction.

It can be said that this categorizing offered binoculars, the lenses of which have their own perspective: transactional and transformational. The resolution of different lenses can be equated with the hierarchy. At level three, the review angle was at its most detailed and narrow, whereas at level two, the scene was slightly wider, and both the transactional and transformational vistas were at their widest and roughest at level one.

The created levels of abstraction connected the content and concept analyzes together. The method of triangulation was needed because this combined analysis was carried out during the data collection as well as afterwards (cf. Saunders et al. 2012, 562; Tuomi & Sarajärvi 2013, 108). The abstraction was implemented as part of the concept analysis. Therefore the data grouping, which included organizing and assembling the reduced data into tabular matrices, was applied also during the content analysis, adapting Saunders' et al. (2012, 564-566) as well as Tuomi's and Sarajärvi's (2013, 110–113, 117–118) formulations. The purpose was to recognize relationships between the different views of leadership and management,

competence and knowledge management as well as self-leadership both in general and in the context of the FDF. Moreover, the aim was to draw and verify conclusions about the given concepts.

2.4.3 Operating Mode of Concept Analysis

According to Puusa (2008, 36), as a research method, concept analysis can be said to represent a non-empirical approach. By applying concept analysis it is possible to increase understanding as well as explain abstract concepts and also formulate operational definitions and clarify features of the examined concepts (Puusa 2008, 41). On the other hand, according to Niiniluoto (2002, 155), definitions play a crucial role in scientific concept formation. Thus the notion of definition can be described as the linguistic depiction of a particular concept. Definitions can further be divided into *stipulative* and *descriptive* categories. The stipulative definitions are used to formulate a new linguistic or symbolic meaning. Similarly, an outdated or vague term can be replaced by a stipulative definition. Instead, the established meanings of existing terms are described by means of the descriptive definitions. (Niiniluoto 2002, 156, 158–161.) Furthermore, according to Takala and Lämsä (2001, 387), all concepts and their definitions are contextual, varied as well as culturally constructed.

In practice, it can be stated that concept analysis is both a way and means for defining the concept at hand transparently and briefly. All in all, the general aim of the concept analysis is, according to Puusa (2008, 36), to define the reviewed concept by attempting to comprehend the meanings of the concepts as well as clarifying the relations between the concept and its possible related concepts.

This research implemented the method of concept analysis by applying principles of hermeneutic research (e.g. McAuley 2004; Puusa 2008; Takala & Lämsä 2001). Thus the type of concept analysis utilized in this study is based on an application of what was originally Wilson's (1963) model, which Puusa (2008) has later modified. However, the version used here has also been complemented by Nuopponen's (2010) formulations about a systematic concept analysis. Besides, Nadin's and Cassell's (2004), Palonen's (1988) as well as Takala's and Lämsä's (2001) views about analysis and interpretation were taken into account while carrying out the analysis.

The eight partially parallel phases (Puusa 2008, 41) of the concept analysis were:

1. The analysis began by choosing to focus on the concept of self-leadership. During the documentation the evolution of the concept was detected to be closely related to competence and knowledge management.
2. The aim of the analysis was to clarify and define an otherwise varied or imprecise use of the concept in the FDF's context. Besides, the purpose was to increase understanding about the competence and knowledge management from the point of view of self-leadership, which will supply development of the discipline. (cf. Nuopponen 2010, 248; see also Puusa 2008, 39). By means of interpretative and analytical approach, the existing definitions were questioned, which enabled examining the core contents concerning the concept.
3. The applications of the concept of self-leadership are dealt with in Chapter 5, whereas the subject is discussed in connection with competence and knowledge management in Chapter 4. The identifying of the uses of the concept was made by examining the use contexts both in scientific sources and the official FDF documents. However, when identifying the uses of the concept, the analysis was not limited to the term self-leadership only (cf. Nuopponen 2010, 249). The data collection process is described in Section 2.4.1.
4. The definition of attributes of the concept of self-leadership is presented in Chapter 5. The process is based on conclusions drawn on the basis of Chapters 3 and 4.
5. The theoretical concept of self-leadership in the FDF context was generated by means of focusing on the critical characteristics of the concept, which were recognized in the previous phase. The process is described in Chapter 5.
6. The viewing of relevant close concepts, which in this setting include borderline, related and referring cases, aimed to aid the defining the concept of self-leadership. The close concepts are presented in Chapters 4 and 5. The analysis process progressed in hermeneutic way, meaning that the viewing of the concept and that of the close concepts overlapped and were conducted as parallel processes.
7. The competence and knowledge as well as managing them from an individual's point of view is recognized a prerequisite of the concept of self-leadership but the organizational

perspective should also be accounted for to some extent. Those two dimensions are both viewed in Chapters 4 and 5.

8. The concepts of self-leadership as well as competence and knowledge management can be viewed from several perspectives categorized according to their individual and communal features as well as their transformational and transactional dimensions. This complexity is reviewed in Chapters 3, 4 and 5.

The concepts of competence and knowledge, action competence and deep leadership, including individual dimensions of pedagogical leadership have not been defined as self-leadership, although these concepts have been used to denote self-leadership in certain contexts. This has been taken into account during the documentation process while implementing the analysis process outlined above.

Consequently, the analysis acquired interpretative features (cf. Takala & Lämsä 2001, 383–385), but also enabled acknowledging the multidiscipline characteristics of military pedagogy, leadership and management together with other disciplines (cf. Nuopponen 2010, 252–254). Because the eight phases' process did not proceed chronologically, the consecutive, parallel, interlaced, and optional phases of analysis were separated. The findings and results of these separate phases were abstracted in the form of tables and figures featured in Chapters 4 and 5 (cf. McAuley 2004). The controlling of the multifaceted and hermeneutic process was regulated by applying Nuopponen's (2010) views on a systematic approach to concept analysis.

2.4.4 Interpretation

Interpreting the contents of a text may take two basic forms, one that emphasizes a literal interpretation and the other that interprets the contents by concentrating contextual factors. Simplified, in this dualism, the question is, whether the lettering would be taken literally or in a relation to its context. (Palonen 1988, 61.) However, these two should not be seen as mutually exclusive processes but rather complementing each other. The process of interpretation will thus become two-fold, both explicit and implicit, allowing proceeding from plaintext to context and vice versa. (Palonen 1988, 61–62.) According to Takala and Lämsä (2001, 387), the contextual horizon of a text must be determined during the interpretation. For the purposes of this research, the text-immanent interpretation was emphasized. Thus, the

interpretation concentrated on the manifested level of data by taking into account of the utilization context and origin context of the texts.

The purpose of the analysis was to identify essential and partly renewed standpoints in the set of data which were necessary to form constructions at the phase of inference. The experience and knowledge of researcher represented guided inference that distorted the data somewhat, but also focused the reasoning thus making it necessary to reflect how the essence of the examined concept can be distilled from the set of data during the construction of inference. All the information available in the source material was neither taken as the only truth nor the notions expressed in the source material separated totally from their contexts. (cf. Palonen 1988, 137–138.) In accordance with Palonen's (1988, 49–53) views, the interpretation method applied here was based on a combination of a three-dimensional evaluation. The arguments expressed in a text are assessed by:

1. looking for and identifying instances of equivalent propositions
2. looking for and identifying instances of objections
3. comparing different sources with each other.

Every proposition was examined with equal attention, objectively and impartially. The conclusions were drawn in relation to the research task and the theoretical premises of the study. Further, as Huhtinen (2002b, 17) has pointed out, scientific research should follow some logic and be repeatable meaning that research follows a line of argumentation and is understandable, accountable, and available. Therefore, in order for this study to be evaluable and repeatable, the data were categorized (see Section 2.4.2). This made it possible to determine the elements of analysis in as detailed a manner as possible. At the same time, the processes of interpretation were divided into sub-processes, which also facilitated the structuring of the conclusions drawn.

2.5 Review of the Sources Used and Previous Research

The sources used for this study can be divided into three main thematic categories on the basis of their contents. However, it should be emphasized that the completed classification concerning the second and the third entity contains material, the significance of which is not limited to merely one nominated category. Nevertheless, the classification has been carried out to enable discerning and separating the key pieces of data based on the main subject

matter of each source. As part of data collection, the type of information featured in the source material has been further categorized as settled-, current- as well as anticipatory-data.

The first main category of the data comprises material, which has been used to form theoretical framework of this research. In addition, the category can partly be divided into two individual sub-categories that are connected to each other. The type of literature, which has guided the application of research strategy and the methodology of the adopted research philosophy, forms the first source sub-category of theoretical framework. The second sub-category of the theoretical framework data instead concerns leadership and management by formulating a background understanding for the analysis of contents and concepts and the interpretation of phenomena.

This present research resorted to social constructivism, which has been viewed based on Berger's and Luckman's (1991) thoughts. When applying a hermeneutic understanding to reality, the interpretive process and the role of intuition (McAuley 2004, 192), are seminal in this interpreting in that reality is seen in a conditional or proportional way. The data analyzing and interpretation were conducted by means of two separate but complementary methods: content analysis and concept analysis. The content analysis was based on the application of among others Saunders' et al. (2012), Palonen's (1988) as well as Takala's and Lämsä's (2001) views concerning analysis and interpretation, whereas Puusa's (2008) and Nuopponen's (2010) formulations guided the concept analysis techniques. In practice, the triangulation of these methods was carried out by applying among others McAuley's (2004) notions of hermeneutic research. To put it briefly, the above mentioned authors together with a few others offered methodological guidelines for carrying out this research, as discussed in Section 2.4.

The pre-understanding for a theory-guided analysis processes and interpretations was generated by reviewing the management paradigms ranging from the early 20th century to 21st century. The evolution of the management paradigms was viewed in accordance with the outlines presented by Seeck (2008) and complemented among others by Guillén's (1994), Virtaharju's (2016) as well as Nissinen's (2001) researches together with the chosen scholars' articles. Those studies and academic articles made it possible to describe Scientific Management, Human Relations, Organizational Structure Analysis, Theories of the Organizational Culture and Paradigm of Innovation from an appropriate perspective related to the premises and purpose of this research. Finally, the synthesis of the evolution of the

management paradigms was made by applying the leadership and management fourfold, which has been presented in the FDF's manuals and some military academic publications such as Huhtinen's (2006b) article. The leadership and management fourfold has been applied over a decade, and it can be seen as an applicable means to analyze phenomenon of leadership and management diversely.

Publications on competence and knowledge management form the second main category of source material comprising scientific publications ranging from articles to dissertations as well as the official documents (e.g. norms, regulations and reports). This material views the notions of competence and knowledge management either from an individual, communal or organizational perspective, but also allows for examining the distribution to transformational and transactional dimensions.

Because of the relative novelty of the concept of competence and knowledge management in research, the most essential academic data are drawn from publications produced over the past fifteen years, such as the articles by Hong and Ståhle (2005), by Håland and Tjora (2006), by Oikarinen and Pihkala (2010), by Snowden (2002), by Tuomi (2002) as well as by Tsai (2016), and the dissertation by Hyrkäs (2009). The views about transformation of competence and knowledge or managing them were utilized in some form in the said sources.

On the other hand, for instance Peltoniemi's (2007) dissertation and Salonen's (2002) General Staff Officer Course thesis offer a scientific overview about competence and knowledge management from the FDF's perspective. They have viewed the competence and knowledge management from the organizational point of view. However, the FDF's norms and military academic writings, for instance, by Hänninen (2011) and by Nissinen (2007) have often taken account for an individual level also. All in all, the chosen theses and academic articles as well as the official documents both broadened the perspective about competence and knowledge management and also focused the conceptualization by contextualizing the topic.

The third main category of the used source material focuses on self-leadership. Due to the transformational aspect and the chosen FDF's context, the most important data of this study were based on the recent academic articles and theses together with the chosen FDF's manuals and military scientific studies resulting in versatile perspectives. However, behavioral and cognitive dimensions of self-leadership can be pointed out to having been a significant uniting factor in the said source material.

The articles by Neck and Houghton (2006), by Stewart et al. (2011) as well as by Manz (2015) gave an overview about the evolution of self-leadership, which refined during the conceptualizing carried out by consulting other international journals. In addition the complementary views and initial contextualization as regards the Finnish settings were accessed by examining national dissertations by Åhman (2003), by Sydänmaanlakka (2003), and by Mielonen (2011). Overall, the complexity of self-leadership, especially during the past decade, was emphasized in these sources.

Regarding the concept of self-leadership especially in the FDF, Nissinen's (2001) dissertation about deep leadership and Toiskallio's (2009b) article on philosophical approach to action competence offered guidelines for focusing the study. However, the military scientific point of view was also widened by reviewing primarily the manuals on military leadership from the 1990s to mid-2010s. In the Finnish military context the concepts of deep leadership, pedagogical leadership and action competence were stressed both by academic publications and the FDF's official documents. Each of these three constructs can be said to contain elements of self-leadership. In practice, an integral connection between leadership and pedagogy in the Finnish military sciences determined the disciplinary basis for conceptualizing self-leadership in the FDF.

From the perspective of source criticism views the above described source material categories contain three types of references which are:

1. scientific studies and articles
2. non-peer-reviewed publications and internet
3. official documents (e.g. norms, regulations, reports and manuals).

According to Metsämuuronen (2006, 34), a licentiate thesis or dissertations represent reliable sources of scientific research. Furthermore, scientific, peer-reviewed articles serve as source material because of their credibility (Metsämuuronen 2006, 33; Saunders et al. 2012, 84, 86). Therefore this research relied on notably licentiate thesis and doctoral dissertations as well as journals rated by the Finnish Publication Forum. However, not all utilized articles were peer-reviewed and, criticism is required concerning both their credibility and purpose (cf. et al. 2012, 84–86). In practice, this research used different non-scientific articles for two purposes. Firstly, the selected articles have offered suitable views about the chosen methodology. Instead of being viewed as a repository of truth, those texts have provided useful examples of methodology appliances in an interdisciplinary approach. Secondly, non-peer-reviewed

articles about leadership and management have clarified the essence of the debate about the given theme and stereotyped the most topical issues in the field of leadership and management. Some of those articles had been produced for commercial purposes and this was taken into account while making analyzes and interpretations.

On the other hand, it is noteworthy to bring up that literature references also contain publications produced as part of official duties carried out by academics which have been used to verify the propositions featured in the FDF's norms, manuals and other official documents. Besides, defining the concepts has been supported by the help of electronic dictionaries (Cambridge University Press 2016; Merriam-Webster Incorporated 2016; Oxford University Press 2016) on the internet available online and ensuring the accuracy of information has been sustained by adopting a comparative approach instead of discarding these materials available.

The norms and manuals have, above all, been used to exemplify what has been instructed regarding competence and knowledge, competence and knowledge management as well as leadership and management in the FDF. This has been done to clarify how the issue and concepts at hand have been considered and applied over time. Because the context is the FDF overall, the selected norms and manuals have mostly been published by the Defence Command⁴.

It is easy to criticize the use of norms and other official documents as source material, because they are not peer-evaluated scientific studies. However, the FDF's norms and manuals are usually based on statements or research of experts as well as commonly approved theories. Furthermore, during the writing process of norms and manuals, authorities are asked to assess the content. (cf. Hyytiäinen 2015, 89; see also e.g. Nordberg 2004; Puolustusvoimien tutkimuslaitos 2016, Appendix 5: 1–4.) According to Hyytiäinen (2015, 89), the manuals have also been piloted before they have been taken into use. It can be claimed that the manuals are based on both experiences from the past and critique of practical demands (cf. Hyytiäinen 2015, 89; see also e.g. Nordberg 2004; Puolustusvoimien tutkimuslaitos 2016, Appendix 5: 1–4; Pääesikunta 2014a, 4–6). Hyytiäinen (2015, 89) has concluded that in the manuals the empirical and theoretic forms of knowledge are invariably integrated and thus stood a test of feasibility.

⁴ The FDF's norm should be draw by the principle of administrative cross-cutting. Therefore, if the norm of higher government level is comprehensive enough, there is not needed a norm of lower government level about the same issue. (Pääesikunta 2014a, 6.)

The norms and manuals can be used as primary data in certain conditions in the field of military scientific research (cf. Huttunen 2010, 42–43; Pääesikunta 2014a, 5–6). Usually no authors are identified in the norms and manuals but the usefulness of the official documents depends on the point of view and setting of the given research task (cf. Huttunen 2010, 42; Hyttiäinen 2015, 89–90; Mäkinen 2009a, 85; Pääesikunta 2014a, 5–6). It can be stated that the norms and manuals can be viewed as the primary data, when they exemplify contextually relevant valid strategies and doctrines (cf. Huttunen 2010, 42).

2.6 Research Validity and Reliability

This hermeneutic study applies content analysis as well as interpretative concept analysis abductively and triangulation makes the assessment of research validity and reliability critical. Whereas traditional concepts of validity are based on objective supposition about the existence of a substantial reality, qualitative studies mainly rely on the possibility of there being several realities or different interpretations. Therefore, the purpose of research is to generate a certain interpretation or point of view about a phenomenon. Further, according to Tuomi and Sarajärvi (2013, 134), no consensus exists concerning the evaluation criteria of qualitative research. Thus this research attempted to apply both traditional validation criteria and some qualitative ones.

The conventional validity tests concern construct validity, internal validity, external validity and reliability (Saunders et al. 2012, 192–194; cf. Andrade 2009, 47). This research implemented these conventional validation criteria as follows:

- construct validity by applying correct operational methods and measures for the concepts being reviewed
- internal validity by identifying relationships between concepts in the FDF's context
- external validity by using both the FDF's internal sources and general scientific material about the subject
- reliability by describing transparently the different operations of the research to ensure repeatability.

On the other hand, because of the chosen approach, the following aspects of validity in qualitative research have been emphasized:

Firstly, the relevance of research has been taken into account by pointing out the importance of the topic and the contribution of the conclusions to current understanding (cf. Tuomi & Sarajärvi 2013, 164).

Secondly, based on Palonen's (1988, 15–16) views, the adopted interpretational approach aspires to view understanding without absolute measurement. Thus absolute gauges are absent and that is why the notion of communicative plausibility has been emphasized during the validity assessment. Therefore the objectivity of the researcher can also be brought out. During the analyzing and interpretation processes the researcher always interprets data by utilizing categorization that is suitable with the question setting (cf. Palonen 1988, 130–133). This biased interpretation of source materials needed to be taken into account while carrying out the research process. All in all, interpretative and analytical approaches to evaluation should not only be concentrated on technical validity because primary verification is impossible (cf. Tuomi & Sarajärvi 2013, 136–139). Rather, what matters is that the interpretation is accepted in the scientific community.

Validity and reliability will be discussed in detail in Chapter 6.

3 EVOLUTION OF MANAGEMENT PARADIGMS

Management paradigms are fundamental and long-lasting thinking frameworks rather than fads or fashions that defined and realized methods of leadership and management as well as organizations in general (Barley & Kunda 1992, 363–365; Guillén 1994, 7–8; Seeck 2008, 25–27, 31–32; cf. Abrahamson 1991, 588–589, 606–609). This chapter views the evolution of management and leadership over time from at the beginning of the 20th century to 21st century by means of five significant paradigms (e.g. Seeck 2008, 34–35) as follows:

- Scientific Management (Taylorism)
- Human Relations
- Organizational Structure Analysis
- Theories of the Organizational Culture
- Paradigm of Innovation.

The first four listed represent the major management paradigms in the developed countries during the 20th century (Barley & Kunda 1992, 364; Seeck 2008, 33–39). The Paradigm of Innovation in turn represents one the most potential candidates to become the next dominant management paradigm (cf. e.g. Fichman 2004, 314–321, 348–349; Ghosh 2015, 1126–1127; Juuti & Luoma 2013, 47; Seeck 2008, 243; Seeck & Laakso 2010, 60; Tsai 2016, 1403).

In the following the evolution of management paradigms are reviewed and the main conclusions are summarized by means of the leadership and management fourfold. The purpose is to formulate theoretical background for the analysis and interpretation of self-leadership as a part of competence and knowledge management.

3.1 Scientific Management (Taylorism)

At the turn of the 20th century, in order to maximize industrial output, the basic principles of Scientific Management were introduced by Taylor to try to cut down underachievement, production losses, disorder, lack of control and arbitrary or inactive management (Barley & Kunda 1992, 369–371; Seeck 2008, 51–53). Barley and Kunda (1992, 370–371) have emphasized that the rational and scientific approach to industrial output was the core of Scientific Management. The problems of industrial production were viewed completely from a technical and mechanistic point of view.

According to Seeck (2008, 53–54), the key methods in improving labor production and economic efficiency included simplification, processing and mechanizing working, separating managerial workers and laborers as well as centralizing command and control. The aim was the identification of labor. Therefore every single employee was assessed in relation to a defined optimal model as part of a system of performance bonus. Team-work and co-operation were forbidden and everyone had to commit to the objectives and interests of the scientific management of the organization. (Seeck 2008, 53–54, 95; Taylor 2004⁵, 19–21; see also Barley & Kunda 1992, 371.) Seeck (2008, 94–95) has pointed out that communication between managers and employees was controlled and information was based on official interaction only with no space to creativity and transformational features in organizations.

Because of strict discipline and some inhuman features as well as competence and knowledge disparaging attributes, Scientific Management has also been criticized (Seeck 2008, 98; see also Barley & Kunda 1992, 372). However, despite the criticism, many principles of Scientific Management have lasted over the decades in several management and leadership doctrines and paradigms. Therefore, related to the FDF's competence and knowledge management as well as self-leadership, it is worth to bring up the following. According to legal-rationality authority based bureaucracy, it has been believed for decades in many organizations that there is just one right way to do things and it can be defined. Furthermore, the hierarchy and separate roles of personnel are also identifiable features of Human Relations, which can be seen as a backlash of Scientific Management. (Seeck 2008, 98.) Seeck (2008, 98) notes that the separation of managerial workers and laborers on the basis of the expertise required as well as the division into managerial and mechanical tasks is recognizable widely even today.

In fact, it has even been pointed out that the philosophy and principles of Scientific Management are present not only in certain employments but also in society overall (Morgan 1997, 25–26; Seeck 2008, 99). According to Morgan (1997, 25–26), people have begun programming their leisure time and specialize in their privacy. We are developing our mental and physical skills as well as shape our bodies aiming to become paragons of excellence. To put it briefly, we have become partial machines and begun to treat ourselves as robots.

⁵ Originally *The Principles of Scientific Management* was published in 1911.

3.2 Human Relations

The paradigm of Scientific Management was replaced by Human Relations in the mid-20th century with the focus on increasing efficiency, cost-effectiveness, and co-operation, as well as justifying the manager's status and authority (Guillén 1994, 58–59; Miles, Snow, Meyer & Coleman 1978, 558–559; Seeck 2008, 103–104). As a paradigm, Human Relations has represented quite a heterogeneous group of researches and theoreticians, who all have still been interested in management from the point of view of social psychology (Seeck 2008, 104, 112; see also Barley & Kunda, 1992, 372–376). According to Virtaharju (2016, 11), the first researchers of leadership focused on the traits of leaders from the 1930s to 1950s aiming to determine the individual characteristics that would generally differentiate leaders from followers. However, the universal features of effective and excellent leadership could not be nominated.

Human Relations attempted to tackle the tediously unvarying tendencies of work, instances of low work ethic and absences as well as weak stability of personnel and do so by emphasizing interaction and co-operation (Guillén 1994, 12–13; Seeck 2008, 104; cf. Miles et al. 1978, 559–560). According to this paradigm, the relations of community and employees at the working places had to be balanced (Guillén 1994, 12–13; Seeck: 2008, 104–105). In other words, as Seeck (2008, 145) has noted, the unwanted side effects of work were analyzed.

Human Relations also relied on objective science to increase the efficiency of output. However, experts of efficiency and researchers of organizations and processes were replaced by psychologists (Seeck 2008, 145; cf. Barley & Kunda 1992, 372–373). As a result, the social unrest caused by Scientific Management settled down and employees began to appreciate their work and identify with products of their organizations. Consequently, the notions of team spirit and loyalty can be defined as the merits brought about by Human Relations. (Seeck 2008, 145; cf. Barley & Kunda 1992, 375–376.) According to Seeck and Kuokkanen (2007, 120), the paradigm highlighted atmosphere and social construction surveys by means of interviews, inquiries, group discussions, and mentoring.

Yet, Human Relations was incapable of considering contextual factors of an organization enough (Seeck 2008, 201; cf. Miles et al. 1978, 559–561). Furthermore, Seeck (2008, 149) has pointed out that the paradigm was generally criticized for its objectification, which was

caused by, among other things, the overemphasis of performance assessment from a scientific point of view.

From the perspective of competence and knowledge management as well as self-leadership, the following particular dimensions of Human Relations related theories are reasonable to discuss. The influence of these theories can be identified in Finnish military leadership and management at several levels and in varying environments.

Firstly, Human Relations viewed organizations as co-operation systems of social activity (Guillén 1994, 12; Seeck 2008, 105). Thus, the interaction between the leader and the followers should be as direct as possible without any distractions to avoid misunderstandings (Barnard 1968⁶, 175–181; Seeck 2008, 119). Among others Barnard (1968, 165–166) pointed out that the formal superior's authority was not enough alone. Therefore a good leader's most important features are the ability to clarify organizational objectives, communicate fluently, co-operate and motivate others to co-operate. It can be noted that the principles of shared vision, interaction as well as co-operation are still prominently present in the FDF (cf. Maanpuolustuskorkeakoulu 2016, 3–4; Nissinen 2001, 212–218).

Secondly, Human Relations brought about the meaning of personal motivation (Seeck 2008, 105). For example, according to Argyris (1957, 175–208), employees' possibilities to cultivate themselves were viewed as an important enabler. Thus giving too minor tasks was viewed to prevent individual's holistic cultivation, and sustaining multi-stage command chains as well as tight control were seen to decrease spontaneity and increase inactivity. On the other hand, the decentralization of decision making increases employees' participation in the planning processes. Argyris' ideas can be viewed to be linked to features of inspirational motivation, intellectual stimulation and individualized consideration (cf. Bass et al. 2003, 208; Nissinen 2001, 222–223), which are essential dimensions of transformational leadership.

Thirdly, Human Relations has significantly affected, for example, the doctrines of Human Resource Management and Human Resources (HR) in general (Seeck 2008, 153; cf. Miles et al. 1978, 559–560). The paradigm can be seen to have initiated the focusing on employees' possibilities in self-realization and self-direction (Argyris 1957, 175–208; Miles et al. 1978, 559–560; see also Seeck 2008, 146–149). In the FDF Human Resource Management has begun to receive increasing attention since the mid-1990s (Berqvist 1994, 114–120).

⁶ Originally *The Functions of the Executive* was published in 1938.

According to Defence Command (Pääesikunta 2015b, 5, 10, 16–17), the focus has been directed to well-being and quality of working life as well as coping at work nowadays.

3.3 Organizational Structure Analysis

It was the need to tackle the problems arising from the incompatibility of organizational structure, technology and business environment that induced the Organizational Structure Analysis to study organizations from a structural and functional viewpoint (Guillén 1994, 10–11; Miles et al. 1978, 558–561; Seeck 2008, 155). According to Seeck (2008, 155), especially bureaucratic, international and sizeable organizations met challenges unexplainable by Scientific Management and Human Relations. As a result, the Organizational Structure Analysis focused on the organizational system as a whole accounting for both the unit and division formation as well as command, control and communication (Guillén 1994, 14–15; Seeck 2008, 155).

The basis for the Organizational Structure Analysis paradigm was created during the 1950s and 1960s (Huhtala & Laakso 2006, 6, 10–11; Seeck 2008, 155–159). According to Seeck (2008, 179), the paradigm includes varying emphases on decision-making, contingency approach, ancestor of organizational thinking, innovation theoreticians, engineers of strategic management, bureaucrats, and other structures. In order to solve the organizational challenges, the focus was shifted to examine extensive corporate operations and their planning, the task allocation at the division and unit group levels, communication as well as the formation of hierarchy and control (Guillén 1994, 10–11, 80–81, 83; Seeck 2008, 155). According to Barley and Kunda (1992, 377–378), as regards management, the organization was believed to become more effective by manipulating its structures and decision-making processes.

On the other hand, in the mid-20th century, leadership researchers concentrated on observing the leader's behavior in laboratory settings or interviewing people at workplaces about the behavior of individuals in positions of authority (Virtaharju 2016, 11; see also Bryman 1992, 4–5; House & Aditya, 1997, 419–420). According to Virtaharju (2016, 11–12), task-oriented and person-oriented behaviors were the two main empirical contributions identified by leadership researchers. However, evidence of leader's behavior that had universal impact was still not found as the specific role demands of leaders, the context or differences in the dispositions of leaders and subordinates were not sufficiently accounted for.

With the 1970s and contingency theories or the situational view on leadership, the focus included viewing how situational variables interacted with leader personality and behavior. Contingency theories defined several situational variables, but only a few moderators. (Virtaharju 2016, 12; see also Bryman 1992, 11–20; Yukl 2009, 237–239.) Virtaharju (2016, 12) has concluded that contingency related research often suffered from lack of accurate measures.

All in all overemphasis on the decision-making process and structural elements have been viewed as the demerits of the Organizational Structure Analysis approach (Seeck 2008, 191–192). Despite the notion of limited rationality in decision-making (e.g. Simon 1982⁷), the Organizational Structure Analysis together with the contingency approach still remain topical (Huhtala & Laakso 2006, 16; Seeck 2008, 189; see also Huhtinen 2006b, 60–61). The heritage of the Organizational Structure Analysis represents an aspiration to solve problems by means of structural modification. According to Seeck (2008, 156, 201), compared to Scientific Management and Human Relations, the strength of structural approach was in its ability to produce alternative answers instead of settling for just one solution. Besides, the Organizational Structure Analysis accounted for the environment. The two previous paradigms mainly concentrated on the internal issues of organizations. Therefore decision-making theories as well as the discipline of strategic management expressly represent well-known and widely recognized tendencies in the paradigm of Organizational Structure Analysis and are also still in applied in the FDF at every level and in all environments (cf. Maanpuolustuskorkeakoulu 2016, 14–15, 19–22; Pääesikunta 2015c, 4–9).

3.4 Theories of Organizational Culture

In an attempt to address issues involving too low an industrial output, weak stability of personnel and difficulties concerning leading expertise, Theories of Organizational Culture came about and emphasized committing personnel to aims, creating joint norms, vision and strategy as well as harmonizing rules of working practices (Barley & Kunda 1992, 380–384; Seeck 2008, 34–35). As a result, according to Seeck (2008, 205–206), at the turn of the 1980s researchers began to pay more attention in the deep structures of the organization instead of outward effects and reflections.

⁷ Originally *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization* was published in 1947.

All the organizations have their specific culture, which defines appropriate behavior in various situations and environments (Alvesson 2002, 1–3; Dauber, Fink & Yolles 2012, 1–2). The culture of an organization is structured by means of values, symbols, language, assumptions, beliefs and habits. (Dauber et al. 2012, 2–6; see also Alvesson 2002, 3). Morgan (1997, 138) notes that culture is a way to form and reform the social reality of an organization. The notion of an organization's culture can be taken as a variable or a metaphor and, according to Alvesson (2002, 24–29), the variable refers to how the possibility to change and develop, the ability to re-evaluate an organization's culture aids in maximizing the efficiency of the organization. When culture is viewed as a metaphor, an organization is created by its processes of symbols, communication, myths, narratives, and rituals.

Parallel to the paradigm of the Theories of Organizational Culture, transformational and charismatic leadership dimensions can be said to have become dominant in the late 20th century (Virtaharju 2016, 12; see also Nissinen 2001, 75–83). According to Virtaharju (2016, 12), leadership was seen to consist of the management of meaning and organizational transformation rose to focus. However, some researchers argued that charismatic and transformational theories concentrated too restrictedly on dyadic processes. The organization culture and followers as an enabler of leadership were seen to have become ignored to some extent. (e.g. Alvesson 2002, 114–117; Virtaharju 2016, 13.) Therefore, ontological, epistemological and methodological reflection has also been advocated. In other words, it has been seen necessary to view leadership through different, complementary ways to adopting contextual and cultural factors also. (Alvesson 2002, 2–3; cf. Alvesson & Kärreman 2016, 149–150; Costas & Kärreman 2016, 78–79.)

Over the last past three decades, the paradigm of Theories of Organizational Culture has retained its complex nature (Seeck 2008, 241). Seeck (2008, 241–242) has summarized that culture has been viewed as a tool to improve efficiency and cost-effectiveness, but the industrial output has not been the only perspective of the researches conducted. Consequently, it has also been pointed out that culture cannot be adapted deliberately. For example, viewing culture as a metaphor excludes easily a real connection to practice from the perspective of leadership and management. However, despite some criticism, team-work and the ability to adapt to in a changing environment still remain in the focus of various organizations, including the FDF (Pääesikunta 2015b, 14–17).

3.5 Paradigm of Innovation

Competitiveness continues to be vital in all organizations and therefore the Paradigm of Innovation emphasizes the re-evaluation of ways, means and production in the name of quality and efficiency (Seeck 2008, 243; cf. Seeck & Laakso 2010, 60). Since the 1990s the Paradigm of Innovation can be said to be at least very prominent, if not the dominant one among leadership and management doctrines (Fichman 2004, 314–321, 348–349; Ghosh 2015, 1126–1127; Juuti & Luoma 2013, 47; Seeck 2008, 243; Seeck & Laakso 2010, 60; Tsai 2016, 1403).

This paradigm views individuals willing to develop themselves all the time. On the other hand, creativity, co-operation and reliance are also characteristic of theories of innovation. (Seeck 2008, 243–244; cf. Ghosh 2015, 1128–1133.) According to Thrift (2005, 141), fostering the spirit of innovation and creativity includes brainstorming, role-playing, purposeful shifts in metaphors, and shock experiences as well as visits to new environments. Tsai (2016, 1403) has pointed out that allocating resources to research and development is an integral part of organizational innovation actions.

This paradigm comprises features of Scientific Management, Human Relations, Organizational Structure Analysis and Theories of Organizational Culture. The structure of an organization and the modification of processes are viewed as means for enabling creativity and innovation (Seeck 2008, 245). On the other hand, time management by leadership and efficient processes presuppose knowledge about the culture of an organization and competence (Tsai 2016, 1403–1405). As regards leadership, the post-heroic leadership perspective has increasingly been paid attention for by scholars during the last few years, so far the transformational paradigm has been remained strong in the field of leadership. (Virtaharju 2016, 13). That is why, the concepts of vision and mission are often seen as core means of leaders who empower, inspire and motivate the subordinates. (Virtaharju 2016, 13; see also Nissinen 2001, 221–224). However, according to Virtaharju (2016, 13), it can also be pointed out that transformational theories are leader-centered, which emphasizes the unidirectional influence of the leader on the followers.

Naturally, there are also many unsolved challenges related to the Paradigm of Innovation. The fact is that time is often a very limited resource nowadays, the lack of which can prevent an individual's creativity and development of new ideas. Seeck (2008, 272) has stated that rush

and the inability to control fragmented assignments can be seen as factors that are both tackled and pose problems in the Paradigm of Innovations. Those challenges were also recognized in the FDF (Päeesikunta 2015b, 16–17).

3.6 Summary and Conclusions

The evolution of management paradigms has been discussed above by being selective and simplifying. Management paradigms and theories are always products of their own time and prevalent social environment. Seeck (2008, 288) has noted that each of the paradigms has received inspiration from challenges encountered in society and tried to respond to those difficulties.

3.6.1 Arc of History of Management Paradigms – Duel of Transactional and Transformational Dimensions

Changes in society and organizations bring long the need to question the prevalent mindsets, processes or systems. The pressure of success in organizations has called for renewal and introduced, to list the mainstream paradigms in their order of occurrence, Scientific Management, Human Relations, Organizational Structure Analysis, Theories of Organizational Culture, and Paradigm of Innovation, respectively. However, it is worth noting that despite the described precise grouping of paradigms, these paradigms still overlap each other.

The legacies of all these paradigms are still present in society. Actually, a very complicated and intensive environment could be easier to handle by applying the old paradigms with certain limitations. This is because of their linear doctrines. According to Peters and Waterman (1983, 108), the old management theories are interesting because of their simplicity with no excess in paradox and ambivalence. On the other hand, since the world is neither now nor in the future that simple, renewed mindsets, processes and methods become important enablers of success. Thus applying a well-balanced mixture of elements from old and new theories could be better than opting for applying only one particular theory alone.

Management paradigms can be said to have progressed from emphasizing the execution of a task to underlining the notions of relevancy, responsibility and learning (cf. Seeck 2008, 332). Both transformational and transactional dimensions still exist but their ways as well as means

have changed during the recent decades, as indicated in Table 1. The evolution of leadership and management has been affected by not only environmental and societal changes (e.g. Seeck 2008, 17) but those involving a renewed concept of a human being. Nowadays, an individual is seen to be an active and self-imposed actor rather than a passive subordinate (e.g. Bass 1999, 12–13; Nissinen 2001, 294–295) thereby making leadership and management increasingly shared and communal.

Table 1

Transformational and Transactional Dimensions of Leadership and Management in the Different Paradigms

Dominant Paradigm	Reign and Dimension	Concept of Leader/Manager
Scientific Management (Taylorism)	Approximately 1900–1920, Transactional management	Manager is an authority, who controls and coordinates. Leadership is a congenital feature.
Human Relations	Approximately 1920–1950, Transformational leadership	Leader motivates their subordinates and improves communal atmosphere. Efficiency of leadership is based on different modes.
Organizational Structure Analysis	Approximately 1950–1980, Transactional management	Manager makes the decisions, clarifies the aims and gives feedback. He or she also controls the fulfillment of the aims. Circumstances affect the efficiency of leadership.
Theories of the Organizational Culture	Approximately 1980–2000, Transformational leadership	Leader integrates subordinates in the organization and their tasks by a shared vision.
Paradigm of Innovation	Approximately 2000– Transactional management, Transformational leadership	Manager allocates human resources and structures an otherwise mixed environment. Leader guarantees the sustainment of an innovative environment by culture, atmosphere and social interaction. Vision plays a crucial role in leadership.

(adapted from Seeck 2008, 327, 332; cf. Bryman 1992, 1)

As a matter of fact, the temporal dimension in the evolution of management paradigms spreads over approximately a hundred years only. With the pace of changes increasing, interdisciplinary research will affect the number of different viewpoints that produce heterogeneous scientific knowledge on a given research issue. And, although this might not always mean the rise of a new dominant paradigm (cf. Virtaharju 2016, 15), the field of leadership and management will continue to become increasingly extensive.

3.6.2 Categorizing of Management Paradigms

Management paradigms can be categorized by utilizing the leadership and management fourfold. According to Rantapelkonen and Koistinen (2016, 42), in the context of Finnish military sciences, management is divided in four sections by means of the leadership and management fourfold so that leadership, management, organizational culture and organizational structure are both interdependent and permanent parts of management.

The dimensions of the fourfold can be defined in pairs. The difference between leadership and management is made by noting that individuals are led whereas things are managed (Huhtinen 2006b, 45) and this distinction is also evident in some British and Americans dictionaries (see Appendix 1). According to Huhtinen (2006b 45–46), the difference between the organizational structure and organizational culture can be defined by thinking that a structure is a way to conceptualize a model or a system of an organization, while the culture of an organization can be understood as the social net conceptualized, for example, by means of cohesion and workplace well-being.

The balance of those elements is prerequisite of successful leadership and management (Huhtinen 2006b, 45–49; Maanpuolustuskorkeakoulu 2016, 16; cf. Nissinen 2001, 212–225), which can also be recognized in the evolution of management paradigms. However, the center of gravity of a single dimension is related to a situation and an action or to an operational environment (Huhtinen 2006b, 45–49; Nissinen 2001, 212–213; cf. Fisher & Robbins 2015⁸). When comparing Scientific Management, Human Relations, Organizational Structure Analysis, Theories of Organizational Culture and Paradigm of Innovation with the sections of the leadership and management fourfold, a connection can clearly be found.

⁸ Fisher and Robbins (2015) have viewed military leadership by re-analyzing a competency framework previously identified in a larger case study of Australian military advisers during the Vietnam War.

Features of management are dominant among the theories and applications pertaining to Scientific Management. As discussed in Section 3.1, mechanic and materialistic means connected with process-oriented thinking have been seen as the key factors of the productivity and efficiency function. The main aim of transactional Scientific Management was just to enhance industrial output at the beginning of the 20th century. Undeniably, maximized rationalization was suitable for simple and specialized tasks in which spontaneity and the spirit of innovation did not play a crucial role. Employees have been educated to perform a defined and particular function, their performances are measured openly and they are controlled by managers. The human perspective remains almost non-existent.

Human Relations can be viewed as a leadership dimension on the leadership and management fourfold. As pointed out in Section 3.2, the main focus was removed from processes to the individual yet reliance on the flawlessness of scientific research was strong. The efficiency of processes was based on interaction and co-operation in accordance with the basic assumptions of Human Relations. The perspective in the theories and applications of Human Relations can be characterized as mental and human.

By means of the leadership and management fourfold, the paradigm of Organizational Structure Analysis can be seen to be a mechanic and materialistic doctrine just as Scientific Management. However, instead of emphasizing processes, the system becomes pronounced and command, control and communication are coordinated by certain organizational systems in different environments and conditions. (see Section 3.3.) The transactional features are essential to the applications of the paradigm of Organizational Structure Analysis (see Table 1). As noted in Section 3.3, despite the systematic emphasis on the rational considering as part of the decision-making process and its structural elements, the paradigm of Organizational Structure Analysis is a situational doctrine. Both Scientific Management and Human Relations offered only one kind of viewpoint to solve the problems of leadership and management and remained unable to take into account the variable environment of organization in contrast with the paradigm of the Organizational Structure Analysis.

As outlined in Section 3.4, every organization has its own kind of culture which guides all the functions of the given organization and Theories of Organizational Culture can be placed on the organizational culture dimension on the leadership and management fourfold. In accordance with the characteristics of transformational features, mental and human matters are pronounced among theories of organizational culture. The paradigm of Theories of

Organizational Culture views culture both as a solution and a tool in improving efficiency. Yet, the system-oriented belief in the ability to transform the culture of an organization is not trouble-free as irrational or abstract concepts can be difficult to apply in practice. However, the characteristics of the paradigm, such as the emphasis on team-working and the ability to adapt to changing environment are appreciated both among researchers and managers.

The fundamental assumption present in the leadership and management fourfold is the need for the balance of every element (Huhtinen 2006b, 45–49) and the Paradigm of Innovation can be seen as an enabler to an extent in responding to that requirement. As discussed in Section 3.5, transformational features are dominant in this paradigm, which contains dimensions of both Human Relations and Theories of the Organizational Culture. On the other hand, the ability to conform is claimed to be the main factor in organizational competitiveness, and creativity is in the core of the Paradigm of Innovation. In practice, according to mental and human oriented thinking, individuals are supposed to be willing to develop themselves independently. Competence and knowledge will come into existence by means of co-operation and trust.

Because rush and the inability to control fragmented assignments have been proved problematic among the theories of the Paradigm of Innovations, transactional elements are still needed in a complex and evolving environment (see Section 3.5). According to Seeck (2008, 267–273), in fragile situations considerate implementation of command and control enable creating feelings of assurance as well as decrease time pressure. Accordingly, sustaining an appropriate level of management fosters supporting creativity.

The following Figure 3 charts the outline of the management paradigms on the leadership and management fourfold. The transactional and transformational dimensions together with the scale of functions depicted as a process (individual) and system (organization) were also placed on the chart. In summary it can be said that excluding the Paradigm of Innovations, the management paradigms featured only cover one dimension of the leadership and management fourfold. On the other hand, the Paradigm of Innovations emphasizes transformational features. Successful leadership and management are supposed to cover transformational and transactional elements. The given situation and environment determine the proportion of the elements of leadership and management. Although leadership, management, organizational culture and organizational structure may function in isolation, only together they form a

genuine and integrated entity. (Huhtinen 2006b, 45–49; Maanpuolustuskorkeakoulu 2016, 16.)

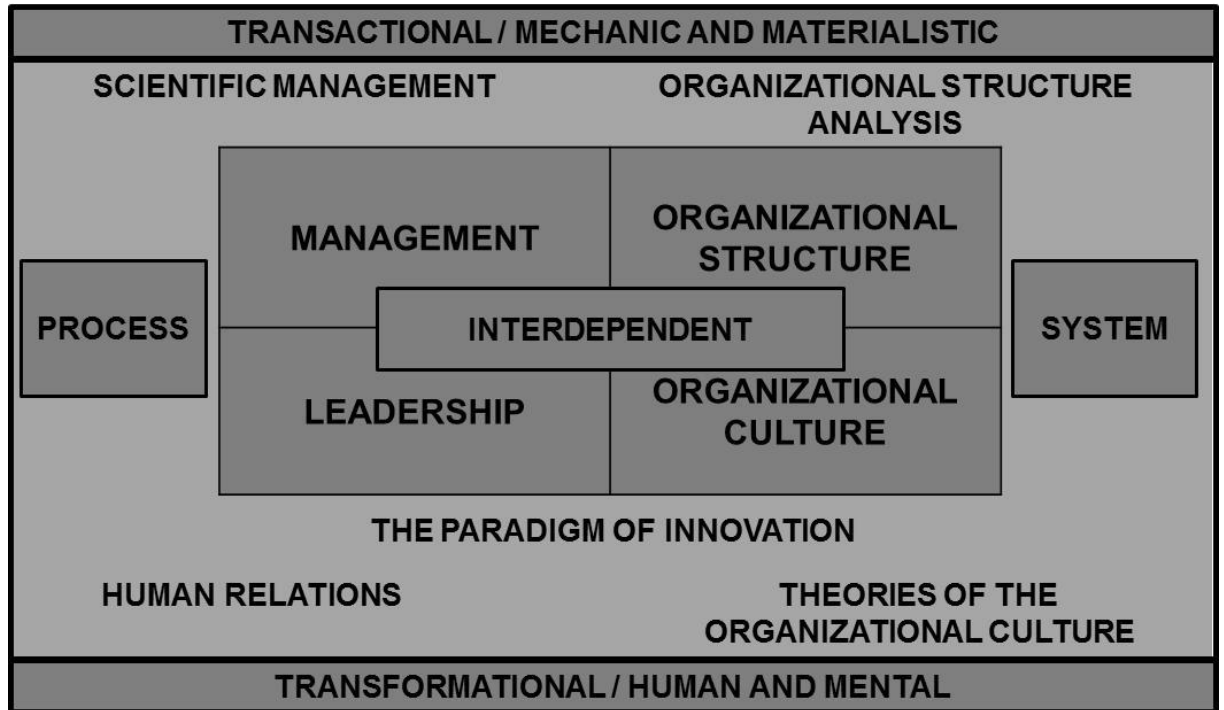


Figure 3. Management Paradigms Viewed through the Leadership and Management Fourfold.

4 COMPETENCE AND KNOWLEDGE MANAGEMENT IN GENERAL AND IN FINNISH MILITARY CONTEXT IN PARTICULAR

On the basis of the review about the evolution of management paradigms, it can be said that competence and knowledge management has been a permanent part of leadership and management. The phenomena, theories and paradigms of management since the early 20th century to 21st century, which were discussed in Chapter 3, provide a background, a pre-understanding about the issue.

In the chapter the pre-understanding focuses on screening competence and knowledge as well as managing them. Competence and knowledge are concepts whose interpretations vary extensively. Therefore, the means to implement and apply competence and knowledge management vary as well. (Hong & Ståhle 2005, 130; Hyrkäs 2009, 16.) According to Hong and Ståhle (2005, 130), lack of conceptual clarification dominates in this issue. Therefore, this research utilizes an integrated notion *competence and knowledge management* to denote the overlapping and heterogeneous concepts of competence management and knowledge management (e.g. Hong & Ståhle 2005; Hyrkäs 2009; Peltoniemi 2007; Salonen 2002; Tuomi 2002).

Competence and knowledge management is rooted in various disciplines and areas of practice with different focuses. It has been viewed, for instance, from philosophical, psychological, organizational and sociological, economic and business as well as technological perspectives, and usually either at the individual, communal or organizational level. (Hong & Ståhle 2005, 130–131, 140–141; Tuomi 2002, 1–9; Uotila, Viitala & Pihkala, 2010, 2.) However, according to Uotila et al. (2010, 2), the combination of different levels has been proven to be challenging invariably.

In the following, the aim is to address the problem of differentiation by progressing from examining the communal or organizational and individual competence and knowledge parallel to managing them since the 1990s by utilizing relevant civilian and military disciplines to arrive at a theoretical construction of the related concepts of competence and knowledge management from an individual's point of view in the FDF.

Consequently, the following sub-question will be answered:

- How is competence and knowledge management constructed in light of close concepts from the perspective of an individual and self-leadership in the FDF?

Furthermore, the conclusions of this chapter will enable determining the core elements of self-leadership.

4.1 Well-Known, But Weakly Recognized – Concepts of Competence and Knowledge

Although extensively studied, depending on the author, the meanings and concepts covered concerning the notions of competence and knowledge vary (e.g. Håland & Tjora 2006; Nonaka & Takeuchi 1995; Phillips & Lawrence 2012; Salonen 2002; Tsai 2016; Wisner, Sabol & Ellis 1999). As examples of this variation the terms competence, capability, knowledge, skill and ability are used when discussing this issue (cf. Davenport, De Long & Beers 1998; Egelid, Mattila, Mustonen, Salonen, Virolainen & Vähätiitto 2003, 36; Gold, Malhotra & Segars 2001; Heaslip 2014, 57–59; Håland & Tjora 2006; Lindberg & Rantatalo 2015; Salonen 2002, 19). The diversity of the concept can be recognized also in British and Americans dictionaries (see Appendix 1).

In order to clarify the fragmented and heterogeneous setting concerning the concepts of competence and knowledge, one may identify both the feature (asset) and action (process) related dimensions of competence and knowledge⁹ (Håland & Tjora 2006, 1008–1010; see also Oikarinen & Pihkala 2010, 48). As a feature, viewed from a rationalistic and positivistic perspective, competence and knowledge stand for the ownership of different sets of the theoretical or practical understanding of a subject and skills. In comparison, when examined from a phenomenological, humanistic and constructivist perspective, as a type of action, the notions of competence and knowledge refer to practices and task related performance. Those two dimensions can, furthermore, be seen from either an individual viewpoint or a collective perspective, as indicated in Table 2. (Håland & Tjora 2006, 998, 1008–1010; Sandberg 2000, 9–12.)

⁹ Håland and Tjora (2006, 1008) have used the terms of asset and process to denote the dimensions of competence.

Table 2
Dimensions of Competence and Knowledge

Perspective	Feature / Asset	Action / Process
Individual	Competence and knowledge are an individual's ownership.	Competence and knowledge represent personal task performance.
Organizational (Collective)	Competence and knowledge are an accumulation of individuals' features.	Competence and knowledge represent interdependent processes.

(adapted from Håland & Tjora 2006, 1009)

4.1.1 Competence and Knowledge Recognized as Features

Traditionally, an individual's competence and knowledge have been viewed as comprising feature-based substance in work contexts. Thus, competence and knowledge can be described by using nouns. Professional tasks require particular features and individuals demonstrate individual features. This has resulted in viewing that a person who demonstrates the best combination of features will perform his or her tasks more optimally than others (Håland & Tjora 2006, 1000–1004; Oikarinen & Pihkala, 2010, 48; Sandberg 2000, 10–11; cf. Toiskallio & Salonen 2004, 32–33). In the task-oriented approach, an individual's competence and knowledge can be determined on the basis of the individual possessing the particular set of knowledge, skills, abilities, motive, attitudes, personal traits, experience and contacts or expertise required by the given professional task. (Sandberg 2000, 10; see also Oikarinen & Pihkala 2010, 48; cf. Peltoniemi 2007, 73; Toiskallio & Salonen 2004, 32–33). In fact, as Oikarinen and Pihkala (2010, 48) have noted, this task-oriented defining of the requirements for competence and knowledge is clearly recognizable already in Scientific Management. In accordance with Taylorism, managers determined the constituents of good task performance and were responsible for guidance and control (see Section 3.1).

While examining competence and knowledge it is useful to take into account resource management based strategies (cf. Oikarinen & Pihkala 2010, 49). An organization's efficiency and competitiveness are dependent on its resources in a particular operating environment (cf. e.g. Hong & Ståhle 2005, 135–136; Prahalad & Hamel 1990, 89–90). Competence and knowledge both represent a resource and also a means to utilize other resources, such as financial resources, inventory, production capacity, or information

technology (Gold et al. 2001, 206–210; Medina & Medina 2015, 284–286; Prahalad & Hamel 1990, 81–82).

The core competencies of an organization enable optimizing the usefulness of other resources (Medina & Medina 2015, 285). Grant (2010, 134–135) outlines a six-stage hierarchy of capabilities, in other words, competence and knowledge that features on the top layer the organization's core competencies comprising the compatibility of several functions and actions, whereas the bottom layer is the individual's professional know-how. This viewpoint echoes particular theories among the paradigm of the Organizational Structure Analysis (see Section 3.3).

When determining necessary core competencies as part of the strategic planning process, it is necessary to be able to predict probable changes in the operational environment. Furthermore, the requirements concerning competencies are prioritized and deployed at the level of an individual's professional know-how and expertise. Competence and knowledge are thus viewed as features, which the individuals possess. (Oikarinen & Pihkala 2010, 49; see also Håland & Tjora 2006, 1001–1004; Peltoniemi 2007, 198, 202.) The competence and knowledge of an organization are accumulated by individuals' features (Grant 2010, 133).

4.1.2 Competence and Knowledge Viewed as Actions

Competence and knowledge can be viewed as actions and as organizational processes (see Table 2) and referred to by using verb forms. At the level of an individual, the relationship between a person and his or her (work-related) task is emphasized. Developing competence and knowledge requires practice and co-operation in particular. (Håland & Tjora 2006, 1004–1006; Toiskallio & Salonen 2004, 32–33.) In other words, competence and knowledge are based on learning by means of deliberate doing and reflecting (Halonen 2007, 133; Peltoniemi 2007, 96–97).

Competence and knowledge come about, are structured and stored by means of social interaction (Nonaka & Takeuchi 1995, 62–70; Nonaka & Toyama 2003, 4–6). The links between the tasks, situations, and contexts are essential elements in this dynamic perspective. Firstly, the nature of work is communal. (Håland & Tjora 2006, 1010–1011; Oikarinen & Pihkala 2010, 50.) Secondly, Oikarinen and Pihkala (2010, 50) emphasize that competence and knowledge regarding an individual's work is also an entity formed by the given

individual and the given task or process. Consequently, a person might come across as unprofessional and incompetent if the person's competence and knowledge are separated from the context of the task or process.

When viewed as a contextual phenomenon, competence and knowledge are determined by the community and process (Oikarinen & Pihkala 2010, 50), and organizational actions provide the means to recognize the necessary competence and knowledge as well as competent members of the organization (Håland & Tjora 2006, 1009). In other words, communal competence and knowledge surface through engaging in action as well as teamwork and thus the future becomes more essential than the current state of affairs from the perspective of competence and knowledge management (Oikarinen & Pihkala 2010, 50; cf. Bass 2000, 19–20). Therefore, competence and knowledge as well as progression are expected to intertwine in everyday actions and an improved level of competence and knowledge is achievable through the organizational processes (Håland & Tjora 2006, 1009–1010; Oikarinen & Pihkala 2010, 50). The concept of a learning organization (cf. e.g. Garvin 1993) is closely linked with this kind of orientation towards competence and knowledge (Håland & Tjora 2006, 997; Peltoniemi 2007, 95–99).

4.2 Competence and Knowledge in Finnish Military Context

In the context of the FDF, competence and knowledge are primarily defined by the set (military) operational requirements (Peltoniemi 2007, 161; Toiskallio & Salonen 2004, 35–36; cf. Pääesikunta 2013, Appendix 2: 1). However, the concepts of competence and knowledge carry different, context-dependent definitions. When referring to routines being carried out, competence and knowledge are usually defined by norms, whereas in the context of military sciences it is military pedagogy in particular that engage in constructing definitions for the concepts of competence and knowledge. In the following, competence and knowledge are in light of sources, which define these concepts from the FDF's point of view.

4.2.1 Competence and Knowledge while on Duty

The sustaining of norms governing the regulations concerning competence and knowledge is mainly the responsibility of the Training Division of Defence Command (Pääesikunta 2014c, 2, 43–45; 2015c, 5–6) in the FDF. In addition, the Personnel Division as well as Plans and

Policy Division of Defence Command play essential role with regard to competence and knowledge management. (Pääesikunta 2014c 2, 14–15, 33–34, 37–38; 2015b 10; 2015c, 5–6).

According to *Management of the Defence Forces' Sub-branch of Education and Training* (Trans. MP)¹⁰ competence and knowledge are expertise, other abilities, theoretical or practical understanding and skills as well as the ability to implement these to reach the set aims (Pääesikunta 2015d, 4). Furthermore, Training Division (Pääesikunta 2015d, 4–5) has defined that: “When an organization integrates as part of itself the given individuals’ know-how, organizational competence come into being cf. learning organization” (Trans. MP).

In fact already in 2004 the competence and knowledge were seen to entail the viewpoints of both an individual and that of an organization. Thus, competence and knowledge of a given individual stood for his or her abilities and implementation of expertise, understanding and skills to reach the set aims (Pääesikunta 2004, 9). “This know-how draws from analyzing information in light of his or her previous experiences, philosophy, and values” (Trans. MP), as Training Division (2004, 9) has stated. Competence and knowledge of a given organization were instead its abilities to integrate, utilize and foster individuals’ know-how and other resources available in order to reach the set aims, according to the norm *Cultivation of Competence and Knowledge of the Defence Forces' Personnel 2004–2017* (Trans. MP)¹¹ (Pääesikunta 2004, 9).

On the other hand, in *Defence Forces' Personnel Strategy* (Trans. MP)¹² it is stated that competence and knowledge “represent a whole, which contains an individual’s know-how, values and attitudes as well as the applying these in practice to reach the set aims” (Trans. MP) (Pääesikunta 2015b, 35). Further, in this context it can be pointed out that competence and knowledge are “abilities to implement, know-how and other abilities as well as the ability to apply these – – to reach the set aims of either an organization or those of an individual” (Trans. MP), according to Plans and Policy Division (Pääesikunta 2013, 10).

To sum up, it can be noted that the definitions by Training Division as well as the Plans and Policy Division have accounted for both the individual and communal aspects. In contrast, Personnel Division overlooks the organizational dimension of competence and knowledge.

¹⁰ *Puolustusvoimien koulutustoimialan johtaminen*

¹¹ *Puolustusvoimien palkatun henkilöstön osaamisen kehittäminen 2004–2017*

¹² *Puolustusvoimien henkilöstöstrategia*

However, the all definitions of individual's competence and knowledge contain dimensions of features and action, and thus related to the concepts of action competence and deep leadership (see Appendix 2). Furthermore, according to Training Division as well as Plans and Policy Division, an individual's competence and knowledge is a way and means to reach the set individual and organizational aims. Overall the above outlined conceptualizations emphasis context-oriented action and cumulative feature of competence and knowledge.

4.2.2 Competence and Knowledge in the Context of Finnish Military Sciences

Conceptualizing the notions of competence and knowledge requires accounting for epistemology. In the field of military pedagogy Toiskallio and Salonen (2004, 32) have applied, for example, Nonaka's and Takeuchi's (1995, 56–90) theoretical model of knowledge creation so that the concept of knowledge comprises explicit (clearly expressed or demonstrated) knowledge and implicit, tacit knowledge. In the field of military leadership and management Hänninen (2011, 38–40, 98–105) also took notice Nonaka's and Takeuchi's (1995, 56–90) model in his thesis, when he outlined competence and knowledge in the FDF in the 2020s.

Toiskallio and Salonen (2004, 32) conclude that theories of a learning organization, constructivist learning and competence and knowledge management draw from a common basis. Furthermore, deep leadership relies on the same assumptions (Nissinen 2001, 140), namely that an individual's actions are based on more than just impulses of the external environment. Every individual interprets the conditions and information in his or her personal way based on his or her previous experiences, philosophy, and personality (Salonen 2002, 21; Toiskallio & Salonen 2004, 32; see also Nissinen 2001, 34–41). So that an individual's value-based cognition is realized as action, which is controlled by a schema. Thus, the integration of cognition and values enables creation of knowledge (or wisdom). (Toiskallio & Salonen 2004, 32; see also Nissinen 2001, 34–41; Nonaka & Takeuchi 1995, 59–61.)

On the other hand, the term "competence" has its origins in the Latin *competentia* referring to the interdependence of a task and knowledge. The notion of competence refers to the necessary combination of knowledge, preparedness and abilities required in carrying out a particular task. (Toiskallio & Salonen 2004, 32–33.) According to Toiskallio and Salonen (2004, 33), competence is dynamic and its contents develop constantly. The quality and adequacy of competence and its components can be assessed through action as competence is in connection with the qualification of action or task (Toiskallio & Salonen 2004, 33; see also

Nissinen 2001, 160–162; Sandberg 2000, 10–11). Toiskallio and Salonen (2004, 33) argued that competence and qualification are related to each other but their conceptual contents differ from each other.

When defining the concept of competence, Toiskallio and Salonen (2004, 33) do so by shifting from the use of a noun to that of a verb with the Finnish *osata* (“to know; be able to”) which has originally indicated hitting a mark, knowing the route or knowing. In this regard, competence and knowledge can be defined to refer to problem solution (determining the solution) and taking action on the basis of this, or, figuratively, knowing the route or hitting the target in the context of action competence.

The use of verb forms when denoting competence orients the conceptualization of the concept to the notion of action. Toiskallio and Salonen (2004, 33) pointed out that competence and knowledge should be characterized in relation to the entity of action which targets achieving both individual and communal aims. Similarly, Hänninen (2011, 98) has emphasized the individual and organizational dimensions of competence and knowledge. From the perspective of human capital, Hänninen (2011, 98–105) has determined the following main requirements for competence and knowledge in the FDF in the 2020s:

- competence and knowledge should be versatile and multidisciplinary
- competence and knowledge should be generated by experimentation
- competence and knowledge should be resting on military scientific research.

In examining the concepts of competence and knowledge, Toiskallio and Salonen (2004, 34) have summarized that competence and knowledge represent the entity of know-how, supplemented by action competence and capability as well as required tools or instruments, which together constitute the ability and preparedness for taking action in order to cope with challenges when aiming to achieve the set aims. Furthermore Toiskallio and Salonen (2004, 33–34) have pointed out the complicated and context-dependent nature of competence and knowledge and attributes to the notion of action competence both an individual and organizational sense.¹³

On the other hand, Salonen (2002, 19–25) has also viewed individual and organizational competence and knowledge separately. The notion of organizational competence and

¹³ In the FDF action competence was understood in both an individual and organizational way in that action competence is an individual concept and capability an organizational concept (Halonen 2007, 38; Toiskallio 2009a, 42).

knowledge has been abstracted by means of multiplication, the factors of which are know-how, motivation, possibilities, and aims (Salonen 2002, 25). Instead, from an individual's perspective Salonen (2002, 22) states that competence and knowledge is a particular ability that allows receiving and structuring information and applying knowledge when taking action in order to achieve the set aims. The ability is inborn or brought about through learning and doing.

On the basis of the discussion above, it is reasonable to say that definitions formulated as part of research in military sciences serve as the basis for the terms in the FDF's norms¹⁴ which govern routines and actions (Pääesikunta 2015c, 6), and whose definitions should therefore be unambiguous. When examining the conceptualization of competence and knowledge in the normative FDF documentation, the terms used are more straightforward in their contents than those featured in the academic papers reviewed although they do carry key elements drawn from the academically specified concepts and do so consistently.

As demonstrated in Section 4.1, the concepts of competence and knowledge are denoted by nouns (feature) and verbs (action), an approach also applied in the structuring of competence and knowledge in the Finnish military context. As a result, the attributes of both competence and knowledge are conveyed by higher-order codes referring both to an individual and organizational aspect and listed from the viewpoints of feature and action. The following Table 3 describes the integrated type of conceptualizing of competence and knowledge in the Finnish military context based on military scientific definitions taking account of the FDF's norms by Defence Command also (see Section 4.2.1).

¹⁴Among others, Peltoniemi's (2004) as well as Toiskallio's and Salonen's (2004) articles have been part of the writing process of *Cultivation of Competence and Knowledge of the Defence Forces' Personnel 2004–2017* (Nordberg, 2004).

Table 3
Integrated Concept of Competence and Knowledge in Finnish Military Context

Concept	Individual	Individual	Organizational	Organizational
	Features (Nouns)	Actions (Verbs)	Features (Nouns)	Actions (Verbs)
Competence	a) Expertise	a) To act; carry	a) Co-operation	a) To learn
	b) Know-how	out	required know-how	b) To be communal
		b) To learn	and skills	c) To be co-operative
		c) To apply in aim-	b) Cumulative activity	d) To act and apply in
		oriented way in		practice in aim-
		practice		oriented way
				e) To integrate
Knowledge	a) Motivation	a) To process	a) Cohesion	a) To share
	b) Attitude	cognitively	b) Team-spirit	information
	c) Values	b) To understand	c) Communal	b) To be in interaction
	d) Experience	c) To innovate	motivation	based on cognition,
			d) Values	understanding and
		e) Multiplying activity	innovation	
			c) To integrate	

Competence and Knowledge

Competence and knowledge are individual expertise and know-how, motivation, attitudes and values, which involve aim-oriented understanding and action as well as co-operation. By means of integrating it becomes organizational, an entity with interrelated individual competencies and knowledges.

4.3 Complicated Concept of Competence and Knowledge Management

Although scholars (e.g. Hong & Ståhle 2005; Snowden 2002; Tuomi 2002; Virkkunen 2003; see also Hyrkäs 2009, 83–87) have frequently emphasized the evolution of competence and knowledge management by means of different generations, this approach can still be amplified. Therefore, this research examines competence and knowledge management from the perspective of the management paradigms by means of the leadership and management fourfold (see Section 3.6). Accordingly, an initial frame for a profound viewing of the evolution of competence and knowledge management in general and in the FDF is based on

the conceptualization of competence and knowledge, as discussed above, and structured through the leadership and management fourfold as follows:

When competence and knowledge are seen as a feature or an asset, the transactional elements of management and organization structure become emphasized. The individuals and their competence and knowledge represent the type of property, which should be evaluated, maintained or updated in the name of efficiency (Håland & Tjora 2006, 1001–1004, 1008–1009; Sandberg 2000, 10–11, 21–22). Concentrating on the increase of efficiency means coordinated, standardized and hierarchy-based interaction (Grant 2010, 183–185; Oikarinen & Pihkala, 2010, 52).

According to Håland and Tjora (2006, 1004–1009) as well as Toiskallio and Salonen (2004, 32–34), context, contingency and dynamism are emphasized, when competence and knowledge are understood as an action or a process. Therefore, the notions of process and community are the set requirements of competence and knowledge. The determination of the current situation is less relevant than focusing on the future from the perspective of management (Oikarinen & Pihkala 2010, 50; cf. Bass 2000, 19–20). The transformational attributes and organizational culture are the basis of continuous and communal cultivation (cf. Håland & Tjora 2006, 1004–1009; Toiskallio & Salonen 2004, 36).

4.3.1 Evolution of Competence and Knowledge Management from the Perspective of Different Generations

The evolution of competence and knowledge management is seen to have progressed via three generations (Hong & Ståhle 2005, 141; Hyrkäs 2009, 83–87; Snowden 2002, 100–101; Tuomi 2002, 1, 9–11). There is also a proposition on the existence a fourth era of competence and knowledge management (Koenig, 2005; see also Ferguson, Mchombu & Cummings 2008, 11–12), whose attributes (Ferguson et al. 2008, 12–13; Koenig, 2005, 91–92), can be identified on the basis of the definitions of the third generation (Hong & Ståhle 2005, 131–141; Snowden 2002, 101–102, 105–107; Tuomi 2002, 11–12). Therefore a three-tier division followed in the viewing. According to Hong and Ståhle (2005, 140), the development of competence and knowledge management has progressed through the process of shifting from an interest on documentation through synergy and integration to creating competence and knowledge. Hong and Ståhle have (2005, 140) summarized that during this modification the

trajectory of competence and knowledge management has been following the trail including changes as follows:

- from static to dynamic
- from present-concentrated to future-oriented
- from functional-concentrated to constructive-oriented
- from technology-concentrated to social-learning-oriented
- from single-based to multidisciplinary-oriented
- from separated-based to system-oriented
- from rationalistic-based to increasingly interpretative-oriented.

The early phases of the evolution were fast. The steps from the first generation via the second one to the third generation took place during approximately a decade. (Hong & Ståhle 2005, 131–133; Snowden 2003, 100–101; Tuomi 2002, 9–10.) In the mid-1990s a major objective of competence and knowledge management was to guarantee the submission of sufficient and correct information to the decision-makers (Snowden 2002, 100; see also Hong & Ståhle 2005, 132–133). According to Tuomi (2002, 10–12), although information technology is not the focus of the second and third generation of competence and knowledge management, it is still and probably will also continue to be an essential part of competence and knowledge management. A wide social network can be sustained, among other things, by means of applications of information technology.

The second generation of competence and knowledge management was brought about to question an approach that was too technology-oriented and viewed to prevented efficient utilization of human resources and result in ineffective functions (Hong & Ståhle 2005, 131–134; Tuomi, 2002, 10; see also Davenport et al. 1998, 52–54). That is why the emphasis on situation awareness and tacit knowledge, independent of conventional information technology applications, followed and, among other things, Nonaka's and Takeuchi's (1995, 56–90) views about what is known as the SECI-model of a learning organization emerged (Tuomi 2002, 7, 10).

However, according to Tuomi (2002, 10–11), the constructing of meaning requires the reflecting of subconscious matters, which can be supplied by information systems. Databases contain contextual information, which helps thinking and conceptualizing. The second generation of competence and knowledge management stresses cognition of information,

which is always a learning process also. On the other hand, learning is based on social interaction, which can be promoted by information technology applications.

The second generation of competence and knowledge management viewed knowledge primarily as social capital (Oikarinen & Pihkala 2010, 50). The focus of competence and knowledge management was on strategy-based organizational learning from sociological and organizational point of view (Hong & Ståhle 2005, 133–134, 139–141). According to Hong and Ståhle (2005, 132–134), the objective was to face the challenges successfully in the near future. Networks, communication and co-operation were emphasized instead of individual separate competencies. All in all, competence and knowledge management can be simplified to refer to information sharing and transmission instead of storage.

Hong and Ståhle (2005, 134) have noted that the transition to the third generation of competence and knowledge management has been viewed as a step towards an increasingly multidisciplinary approach. The development of organizational processes and innovations by creating new competence and knowledge is viewed to be critical nowadays. (Hong & Ståhle 2005, 133–134, 141; Tsai 2016, 1402–1404, 1413–1415). Snowden (2002, 101) has stated that instead of managing knowledge as a thing it is also managed as a flow. Therefore, the third-generation knowledge management concentrates on context rather than on content.

Medina and Medina (2015, 280) have noted that the processes of innovation, individuals interacting together for the purpose of organizational learning and development by utilizing internal- and external sources take place in an organization. Tuomi (2002, 11–12) points out that despite uncertain conditions in a given organizational setting, leadership and management should be efficient, which means, among other things, controlling of the social conflicts during the transformational processes. Consequently, organizational processes should continually undergo changes without losing cumulative competence, knowledge or social resources.

The three generations of knowledge management have been formed through periods of transition, which have involved shifting the focus from the description of competence and knowledge through organizational learning throughout individuals towards accounting for the ongoing changes that are the prerequisites for development and creativity (Hong & Ståhle, 2005, 139–140). However, it also can be said that the lessons learned and principles inherited from the earlier generations have been utilized during the evolution and differences are

evident in the changes concerning viewpoints and emphases (Hong & Ståhle 2005, 140; Snowden 2002, 111). Accordingly, the emergence of the generations of competence and knowledge management tends to demonstrate overlapping in organizational contexts (Oikarinen & Pihkala 2010, 51).

4.3.2 Construction of Competence and Knowledge Management in the Finnish Defence Forces

In the FDF, the general principles of leadership and management as well as execution guidance were determined by Plans and Policy Division in *Defence Forces' Management and Guidance*¹⁵ (Trans. MP), which sets the framework also as regards competence and knowledge management in the FDF (Pääesikunta, 2015c, 2–4, 10). According to the norm (Pääesikunta 2015c, 4), leadership and management are seen as “acts involving the use of jurisdiction and guidance affecting personnel, troops and capabilities in order to fulfil tasks and achieve the set objectives” (Trans. MP). As part of guidance, execution guidance is being implemented by giving basics, guidelines and regulations (Pääesikunta 2015c, 4–6).

It was also stated in the same norm (Pääesikunta 2015c, 10) that the FDF's management is supplemented by several models, which are not defined in the norm. These models include, among other things, competence and knowledge management, deep leadership, and pedagogical leadership. Yet, the application of these models is recommended to be context-dependent means of management and guidance.

On the other hand, *Defence Force's Personnel Strategy* (Pääesikunta 2015b, 10) includes principles of the human resource management, development personnel competence and knowledge, action competence as well as the FDF's education and training actions. Furthermore, in the norm *Cultivation of Competence and Knowledge of the Defence Forces' Personnel 2004–2017* by Training Division (Pääesikunta 2004, 9), the concept of competence and knowledge management has been defined as follows:

[It] is an action, which controls the Defence Forces' cultivation and utilization of the type of competence [and knowledge] necessary in a wartime and peacetime organization – individuals' mindsets, attitudes and actions are influenced by management so that they will cultivate these abilities both professionally and as

¹⁵ *Puolustusvoimien johtaminen ja ohjaus*

regards reaching the aims set by the organization when engaged in action and implementing know-how. (Trans. MP)

That definition is largely based on Peltoniemi's (2004) article, in which he examined competence and knowledge management in the FDF.

Since the mid-1990s, the FDF has utilized the principles of management by results and quality management supported with the modernized information and management systems (Berqvist, 1994, 114–115, 123–127; see also Hartikainen, 2015, 48). Overall utilization of the applications of strategic management was taken into use officially at the end of 20th century (Ylimartimo, 2010, 1; see also 2011, 20–21). Nevertheless, a new reform was needed already at the turn of the century. The FDF's project of competence and knowledge development had been launched based on the FDF's strategic planning and the personnel strategy. The aim of the project was to develop competence and knowledge management to become more systematic, flexible and effective. Competence and knowledge management needed to be an inseparable part of the FDF's everyday action. (Peltoniemi 2004, 44–47; Salonen 2002, iii.)

The purpose was to develop the methods of thinking and operating of the FDF to be aligned with those in a learning organization resulting in emphasizing learning as well as cultivation and developing of competence and knowledge at all the levels of the organization. The objective was to be able to share new and advanced information and knowledge to all the members of the organization. The most essential concepts related to competence and knowledge were competence and knowledge management, knowledge development and coordination of competence and knowledge. (Peltoniemi 2004, 45.) Related to the procedures for coordination of competence and knowledge management, the planning project of guidance implementation system was initiated in 2004 (Pääesikunta 2014b, 2).

Peltoniemi (2007) continued researching competence and knowledge management in his dissertation *The Core Competencies of Finland's Defence System in Light of Requirements and Challenges Posed by a Pending NATO Membership* (Trans. MP)¹⁶. In line with previous research (e.g. Hong & Ståhle 2005; Snowden 2002; Tuomi 2002), Peltoniemi (2007, 88) states that the framework and concepts of competence and knowledge management differ depending on both the given theoretical perspective and practical management conditions forming an interdisciplinary entity. Yet, although competence and knowledge management

¹⁶ *Suomen puolustusjärjestelmän ydinosaamisalueet ja niiden muutoshasteet mahdollisessa Nato-jäsenyydessä*

has been one of the main topics of management research, the lack of practical applications is obvious.

According to Peltoniemi (2007, 89), competence and knowledge management equals the execution of an organization's strategy, in which the vision and strategy are transferred into practical actions by the cultivation and developing of competencies and knowledge. Thereby competence and knowledge management in the FDF must involve:

- defining the defence system's core competence activities
- systematically developing the determined core competencies
- managing competence data.

Furthermore, Peltoniemi (2007, 89) concludes that overall competence and knowledge management is a practical way of thinking and operating implemented in order to aim at an ideal state of the learning organization and achieve this by determining, developing and managing the core competencies and activities of the organization and further individual competencies. In 2005, according to Peltoniemi (2007, 157–158), the FDF's competence and knowledge management is an entity that comprises strategic-, operative-, human resource management- as well as management by results- systems.

Peltoniemi (2007) bases the concept that he developed on elements drawn from the notions of both first and second generation of competence and knowledge management. During the FDF's competence and knowledge developing project, for example Virkkunen¹⁷ (2003) brought up critical factors. According to Virkkunen (2003, 8), a planned system represents first generation dimensions, namely, the development of education and training actions as well as human resource management linked to organizational planning processes and decision-making systems focusing on the cultivation of individual competence producible by means of education and training as well as career planning. Furthermore, Virkkunen (2003, 8–9) pointed out that both vertical career planning and horizontal circulation should be paid more attention to. Based on utilization of second generation methods, it is critical to determine the defence system's core competence activities. According to the theories of the learning organization, these methods should concentrate on optimizing collective learning processes. This should be done by means of local trial projects rather than a centralized execution of tautological operating models.

¹⁷ Virkkunen was a Professor at Center for Activity Theory and Developmental Work Research of University of Helsinki in 2003. He took part as a consultant in the FDF's competence and knowledge developing project.

On the other hand, Toiskallio and Salonen (2004, 37) have pointed out that competence and knowledge management is part of everyday planning and management process. The cultivation of personnel as well as a creation of learning and developing opportunities are guided by the set organizational vision and strategy at a strategic level. Individual competence and knowledge are managed by self-assessment and superior's guidance at an operational level. The aim is to ensure the alignment of both usability and progress direction with the strategic objectives of the organization.

According to Toiskallio and Salonen (2004, 37), the coordination of competence and knowledge integrates strategic guidance and operational actions by creating common processes and organizational structures. The aims of competence and knowledge management involve:

- identifying required communal and individual competencies
- assessing communal and individual competence potential
- analyzing possible lack of competencies
- pinpointing organizational competence and knowledge resources
- utilizing existing competence and knowledge resources for cultivation and developing
- motivating and awarding.

Toiskallio and Salonen (2004, 39) have pointed out that competence and knowledge management sets requirements for the organization. Those requirements can be developed separately to an extent, but a functional entity is only generated by means of interaction and learning by doing. In other words, the critical elements are exchange of information as well as competence and knowledge based on openness of atmosphere, co-operation and network-oriented actions in the given organization.

In *Developing Organization in a Changing Environment – Competence Management in the Finnish Defence Forces* (Trans. MP)¹⁸ from 2002 Salonen examines competence and knowledge management in the FDF from the perspective of a learning organization. Salonen (2002, 71–72) outlines that the essential elements of competence and knowledge management include accounting for: common vision and values, strategy, personnel, leadership culture and ways, processes, structure, teams and networks as well as individual competencies management.

¹⁸ *Kehittyvä organisaatio muuttuvassa ympäristössä – osaamisen johtaminen ja hallinta Puolustusvoimissa* (cf. (Salonen 2002, x).

According to Salonen (2002, 72–73), the basis of competence and knowledge management consists of vision and values taking into account the current state of affairs and resources of the FDF. By means of the existing and needed organizational core competencies as well as processes and strategy it can be determined, which elements are prerequisites for aiming at the set visions. A practical execution will be facilitated by systematic and open communication. The implementation begins by defining the strategy as well as the methods and their emphases. The next step is to evaluate the structural and cultural dimensions of an organization in need of development. These procedures are prerequisites for creating the methods that enable managing individual competencies.

Salonen (2002, 73) states that competence and knowledge management must be integrated into the management practices of the FDF from an individual's perspective all the way to the strategic level. Consequently, a development program was brought about that involved competence and knowledge, learning, quality management and efficiency to cater for the main idea of a learning organization. The objective is to achieve renewed comprehensive organizational competence and knowledge throughout individual cultivation processes. In the FDF, the methods for reaching these strategic planning -based aims include the combination of management by results and quality management implemented by principles of deep leadership emphasizing both efficiency and quality of actions.

According to Salonen (2002, 94–95), the strategic planning creates possibility to form a more profound organizational vision, which will sharpen the FDF's everyday action. Consequently, the daily activity may concentrate on carrying out the right thing instead of focusing on the method of acting. By being stated in the vision, organizational core competencies and actions are transferred from the strategic level to be part of the operational means in order to maintain and develop routines. This enables the elimination of overlapping actions by optimizing personnel utilization during different processes. The organization's ability to utilize individual competencies and knowledge is a crucial element of the FDF's competence and knowledge management, as Salonen (2002, 94) points out. Besides, those personnel's competencies and knowledge should be realized comprehensively, which requires taking into consideration physical, mental, social and ethical dimensions (Salonen 2002, 94; cf. Toiskallio 2009b, 49–50). Modern information technology allows for sustaining a wide network, which plays a crucial role in the streamlining of organizational actions. However, the advantages of information applications are easily left unused without suitable organization culture and

leadership (Davenport et al. 1998, 52; Nissinen 2001, 218 cf. Pääesikunta 2016b, Appendix 1: 1–2; 2016c, 4–6).

The seminal element of management by results is the focus on throughput, in which the quantitative ratio of input and output is planned and estimated. In this orientation, input including personnel is viewed as costs in need of reduction, whereas the quality of processes concerning input and output can be dealt with by quality management. Thus, to be able to attain the desirable level of competence and knowledge management in the FDF asks for open-mindedness. (Salonen 2002, 73.) Salonen (2002, 73–74) has concluded that the integration of quality management and management by results allows for viewing the personnel as a resource and an enabler. Therefore, the personnel's competence and knowledge should be taken into account in the organization's strategic planning process. According to Salonen (2002, 74), in the FDF this is achievable by means of management by results which offers a way to coordinate competence and knowledge creating, maintaining and developing from an organizational perspective.

From the perspective of self-leadership is worth noting that the principles of the Deep Leadership Model (DLM) are quite difficult to connect with particular mechanical management processes. Instead, the DLM is linked to the organization culture (Salonen 2002, 74; cf. Halonen 2007, 151–152), and as Nissinen (2007, 338–340) states, on the individual level, as part of competence and knowledge management deep leadership increases efficiency, which makes it possible to facilitate organizational action by means pedagogical leadership.

All in all, Salonen (2002, 101) summarizes that well motivated and cultivation oriented individuals are the core of the FDF's success in the dynamic environment. This is why competence and knowledge management should be based on the presumption that individuals are able to develop both themselves and the organization. This kind of mindset means that sustaining shared values and vision the organization will be managed by its personnel's competencies and organizational capacity in a self-directed manner. And further, it is the professional and devoted personnel who enable reaching the strategic aims of the FDF.

Regarding the recent development of competence and knowledge management in the FDF, it is noteworthy that during the past decade inter-organizational actions have been significantly developed (e.g. Puolustusministeriö 2016, 1–4; Pääesikunta 2012b, 5–6, 8–9). Furthermore, from 2012 to 2015, the most recent structural and functional reform was implemented in the

FDF and also practices concerning competence and knowledge management were up-dated, among other things, by publishing *Defence Forces' Personnel Strategy* (Pääesikunta 2015b) and *Defence Forces' Management and Guidance* (Pääesikunta 2015c) . In fact, the overall process involving the revision of leadership and management is still ongoing (Pääesikunta 2016a¹⁹; 2016b) and the focus is on the challenges and opportunities of the future, such as digitalization, competence and knowledge, leadership and management together with the transformation of the organizational culture (Pääesikunta 2015b, 5–8, 32–34; 2016b, Appendix 1: 32–34; 2016c, 4–6).

Over the last couple of decade competence and knowledge management has undergone significant changes in the FDF but done so by tackling the research-informed tendencies concerning this issue with delay. The evolution of competence and knowledge management via three generations in the FDF is outlined in Table 4.

Table 4

Evolution of Competence and Knowledge Management in the FDF

Competence and Knowledge Management in the FDF	
Era (circa)	Core of Transformation and Applied Concepts
The 1 st Generation Dominant 1995–2005 Supportive to an extent 2005–	Implementing quality management, management by results and human resource management by a renewed information and management systems. The introduction of strategic planning. The operative management (system) is also linked to system of up-dated competence and knowledge management.
The 2 nd Generation Supportive to an extent 1995–2005 Dominant 2005–	Taking into use the principles of learning organization, deep leadership and action competence. Integrating the methods of leadership and management by means of information and management systems.
The 3 rd Generation Supportive to an extent 2010–	Taking into use the principles of pedagogical leadership. Increasing inter-organizational networking with society and partners, aiming at organizational learning and innovative solutions while undergoing changes and applying alternative methods to create critical or core competence and knowledge.

¹⁹ The document is a request for statement by particular authorities. It contains a draft about a norm for management and guidance in the FDF (Pääesikunta 2016a).

4.4 Summary and Conclusions

Based on the reviewing of competence and knowledge management as outlined above, it is clear that the dimensions of competence and knowledge – feature and action from both the perspective of an individual that of organization are often interdependent as well as intertwined to an extent. However, individuals man in the central position in the processes of competence and knowledge management. Several researchers (cf. e.g. Hong & Ståhle 2005; Peltoniemi 2007; Salonen 2002; Snowden 2002; Toiskallio & Salonen 2004; Tuomi 2002) point out that, at the end of the day, competence and knowledge of organizations mainly rely on individual. From the viewpoint of self-leadership in the FDF, it is vital to recognize that fostering one´s competence and knowledge can be seen as the center of gravity of competence and knowledge management (cf. Salonen, 2002, 101). In addition, competence and knowledge are mutually-connected cognitive processes (Toiskallio & Salonen 2004, 32–34; see also Hong & Ståhle 2005, 130, 136), which is why it is reasonable to study competence management and knowledge management together.

From the point of competence and knowledge, the development of information technology has been the initiating factor of its management´s conceptual evolution in that over time technology has shifted from a mere instrument to a comprehensive method of management. It seems that a systematic development, learning and new or up-dated competence and knowledge have become integrated as part of organizational action and structure both in general and in the FDF. Those actions should be controlled throughout the whole organization and personnel co-operation forms the basis for both individual cultivation as well as organizational progress.

Concerning the first sub-question of this study:

- How is competence and knowledge management constructed in light of close concepts from the perspective of an individual and self-leadership in the FDF?

The key close concepts of competence and knowledge management can be divided into two main categories, which are competence and knowledge -related as well as management-related concepts. The first category includes (individual) action competence and (organizational) capability.

The close concepts of the second category can instead be divided in four sub-categories by means of the leadership and management fourfold as follows:

- the dimension of management includes strategic planning, operative management, execution guidance, human resource management, management by results and quality management
- the dimension of organizational structure includes information and management systems
- the dimension of organizational culture includes a learning organization
- the dimension of leadership includes deep leadership and pedagogical leadership.

The close concepts of competence and knowledge management are summarized and outlined from the perspective of an individual and self-leadership by means of the leadership and management fourfold as presented in the following Figure 4.



Figure 4. Key Close Concepts of Competence and Knowledge Management from Individual's and Self-Leadership's Perspective in the FDF.

In this modelling, interaction and co-operation enable transferring and creating individuals' competence and knowledge or action competence as well as integrating those in order to generate capability. Self-leadership is more or less part of individual competence and knowledge or action competence. The main point of operative management is to utilize

competence and knowledge, whereas the remaining sub-concepts of management concentrate on enabling learning and developing competence and knowledge. (cf. Table 3; Table 4.)

However, it has to be noted that the description of competence and knowledge introduced above in Figure 4 represents just a simplified and theoretical model of reality. Yet the modelling describes a system, which can be utilized in the FDF's context to demonstrate the relations between the close concepts of competence and knowledge management from individual's point of view. Thus it also formulates an appropriate perspective to conceptualize self-leadership in the FDF.

5 SELF-LEADERSHIP IN GENERAL AND IN FINNISH MILITARY CONTEXT IN PARTICULAR

Based on the analyzing construction of competence and knowledge management, it can be said that self-leadership is in a sense a baseline for all leadership and management as neither organizational actions nor processes exist without individuals. Besides, several researchers (see e.g. Drucker 1999; Furtner, Baldegger & Rauthmann 2013; Manz & Sims 1991; Neck, Mitchell, Manz, Cooper, Thompson 2000; Reichard, Walker, Putter, Middleton, & Johnson 2017) emphasize that self-leadership plays a crucial role in leadership and management. Furthermore, for example Furtner et al. (2013, 447–448) conclude that efficient self-leadership is associated with effectively leading others. Moreover, Drucker (2002, 206) points out that each knowledge worker regardless of their position in a given organization should be seen as a leader, who owns responsibility for themselves and also meaningfully influences the given organization. However, self-leadership cannot fully substitute external leadership, as Stewart et al. (2011, 185) note.

Despite the prevalent view, the significance endowed on self-leadership is not an established concept, but rather interpretations of and viewpoints on it vary considerably (cf. Furtner et al. 2013, 447). The poorly distinctive characteristics of self-leadership in relation to other theoretically related constructs (e.g. Andressen, Konradt & Neck 2012, 68–69; Furtner, Rauthmann & Sasche 2015, 105–106) have resulted in heterogeneous interpretations concerning the phenomenon. Therefore, the methods for examining and applying self-leadership vary (e.g. Manz 1992; Manz & Sims 1991; Neck & Houghton 2006; Neck et al. 2000; Reichard et al. 2017; Stewart et al. 2011; Sydänmaanlakka 2003, 2006; Åhman 2003, 2012). In brief, in spite of versatile and active research on self-leadership, no conceptual consensus has been achieved concerning the concept and its constituents.

This chapter examines the concept of self-leadership both in general and in the FDF's context in particular. This examination was informed by reviewing the generations of competence and knowledge management as regards the evolution of management paradigms, which in turn provided the frame, a specific pre-comprehension for the examining.

The aim is to respond to the problem of differentiation by progressing from the theoretical evolution of the concept to its current understanding and applications in the FDF context. The depth of reviewing is based on the parallel utilization of seminal fields of research both

civilian and military. Once the holistic reviewing is completed, a theoretical concept of self-leadership is formulated from the perspective of competence and knowledge management by means of the leadership and management fourfold.

As a result, the following sub-questions are answered:

- What are the attributes of self-leadership?
- How is self-leadership defined in the FDF's context?
- What are the relations and interfaces of self-leadership in the leadership and management fourfold?

Further, the main research question is accounted for:

- **What is the concept of self-leadership in the FDF?**

The conclusions of this chapter produce the last elements to be able to formulate integrated research results including the assessment of their validity and reliability as well as explicating needs for further research.

5.1 From Self-Management to Self-Leadership

The concept of *self-leadership* has been in use since the mid-1980s as an enlargement of the concept *self-management* (Manz 1986, 589–596; see also Neck & Houghton 2006, 270). As concerns the evolution of the concept of self-leadership, Manz (1991²⁰; 2015) clarified the difference between self-leadership and self-management by using three defining questions, namely, those of what, why and how. According to Manz (1991, 16–17), self-leadership is “A self-influence process and set of strategies that address what is to be done (e.g., Standards and Objectives) and why (e.g., Strategic analysis) as well as how it is to be done. – – [It] incorporates intrinsic motivation and has an increased focus on cognitive processes”. In contrast, self-management is “A self-influence process and set of strategies that primarily address how work is performed to help meet standards and objectives that are typically externally set. – – [It] tends to rely on extrinsic motivation and to focus on behavior.” (Manz 1991, 17.)

²⁰ The Finnish Publication Forum has not rated the *Journal of Management Systems*, but the article of Manz in that publication has been cited e.g. by Stewart et al. (2011) in the *Journal of Management* and by Manz (2015) in the *Academy of Management Perspectives* (Publication Forum 2017).

Over the past three decades, the concept of self-leadership has received favorable attention, as evidenced by the emergence of several practitioner-oriented self-leadership books (e.g. Manz 1983, 1992; Manz & Sims 1989; Sydänmaanlakka 2006; Åhman 2012; Waitley 1995; cf. Sovijärvi, Arina & Halmetoja 2016). Similarly, researchers have been keen on examining this concept from various points of view, as reflected in the steady flow of academic publications on self-leadership since the late 20th century (e.g. Anderson & Prussia 1997; Carmeli, Ravit & Weisberg 2006; Kazan 1999; Manz & Sims 1987, 1991; Manz, Skaggs, Pearce & Wassenaar 2015; Mielonen 2011; Neck & Houghton 2006, Quinteiro, Passos & Curral 2014; Stewart, Carson & Cardy 1996; Stewart et al. 2011; Stokes 1994; Sutinen 2012; Åhman 2003).

During the research-informed modification, the trajectory of self-leadership has been following a development trail, which includes the following changes in shifts of emphasis:

- from achieving aims to setting aims
- from extrinsic incentives to intrinsic motivation
- from control and maintenance to modification, fostering and enhancement
- from visible behavior to cognitive action
- from individualism to interaction
- from focusing on the present to increasingly future-oriented needs
- from operating in a single field of science to adopting a multidisciplinary approach (cf. Manz 2015; Neck & Houghton 2006; Stewart et al. 2011).

In short, the main trends of research in self-leadership account for intercultural and international issues, self-leadership contingency factors, his or her health and fitness as well as shared leadership in the very early 21st century (Neck & Houghton 2006, 286–287; see also Manz 2015, 136). Still, the notions of self-leadership or self-management can be seen to be unsettled (Furtner et al. 2013, 447; Furtner et al. 2015, 107; Manz 2015, 146), evident also in British and American dictionary entries (see Appendix 1). In fact, according to Neck and Houghton (2006, 283), the concept of self-leadership originates from self-regulation theory, social cognitive theory, intrinsic motivation theory and self-control theory. This explains the existence of such key close concepts of self-leadership as self-regulation, self-efficacy and self-control (cf. Neck & Houghton 2006, 275–285; Furtner et al. 2015, 107; Åhman 2003, 119–122). In addition, because self-leadership has been seen as a prerequisite for leading others, its close concept, managing oneself, can be identified (Drucker 1999; cf. Pääesikunta 1995, 63). Although, studies examining self-leadership are versatile in their approach, it is

possible to take a look at these studies with the focus on the behavioral and cognitive dimensions of self-leadership.

For example, according to Manz and Sims (1991, 23), “Self-leadership is the influence we exert on ourselves to achieve the self-motivation and self-direction we need to perform. The process of self-leadership consists of an array of behavioral and cognitive strategies – –”. Moreover, the strategies of self-leadership, while overlapping to an extent, are generally divided into following primary categories:

- behavior-focused strategies
- natural-reward strategies
- constructive thought-pattern strategies (Manz 2015, 135; see also Bailey, Barber & Justice 2016, 2–3; Furtner et al. 2015, 107; Kazan 1999, 56–64; Neck & Houghton 2006, 271–272).

Behavior-focused strategies comprise self-goal setting, self-observation including feed-back from others, self-cueing and self-reward as well as self-punishment. Behavior-focused strategies allow for increasing the self-awareness of an individual in order to control behavioral management, related to carrying out necessary but unpleasant tasks. (Neck & Houghton 2006, 271–272; see also Bailey et al. 2016, 2; Furtner et al. 2015, 107; Manz 2015, 135) According to Manz (2015, 135), behavior-focused strategies produce positive effects on performance and result in outcomes such as improved stamina or overall sense of well-being.

In contrast, the purpose of natural-reward strategies is to create conditions in which it is the activity itself that is appealing (Neck & Houghton 2006, 272; see also Bailey et al. 2016, 3; Furtner et al. 2015, 107; Manz 2015, 135–136). According to Manz (2015, 135), this approach encompass generating intrinsic motivation. Further, Neck and Houghton (2006, 272) divide natural reward strategies in two sub-categories. First, certain natural-reward strategies contain constructing more pleasurable attributes into the given tasks so that the activity itself becomes inherently enjoyable. The second sub-category of natural-reward strategies includes those means which transfer attention from the unpleasant features of a task to its rewarding aspects. All in all, Neck and Houghton (2006, 272) sum up that natural-reward strategies always aim to create feelings of self-competence and thus encourage improving one’s performance in a given task.

Constructive thought-pattern strategies are based on the formations of mindsets which aim to improve one's performance and their sub-processes involve recognizing and replacing impractical beliefs, positive self-talk as well as mental imagination. Related to one's performance, the harmful ways of thinking are strived to be identified and replaced by positive self-talk and imagination. (Neck & Houghton 2006, 272; see also Bailey et al. 2016, 2–3; Manz 2015, 136; Neck & Milliman 1994, 11.) Basically, according to Manz (2015, 136), the core of constructive-thought pattern strategies is an assumption that a person can influence his or her schemes and viewpoints. In consequence, these strategies focus on the ability of an individual to control mental activity and process cognitions.

Although the three categories of self-leadership strategies listed above can be viewed as distinct, they are also complementary, as indicated by Brown and Fields (2011, 276). Furthermore, according to Neck and Houghton (2006, 275), the concept of self-leadership is a normative that may operate within distinct theoretical contexts. It is clear that self-leadership is a more comprehensive phenomenon than being a matter of personality and self-regulation only (cf. Bailey et al. 2016; Furtner et al. 2015; Manz 2015). In fact, for example Drucker (1961²¹, 112–114) described the principles of management by objectives, which were based on self-control, already in the mid-20th century and, on the other hand, Drucker (1999) as well as Manz and Sims (1991) formulated the unambiguous hypothesis on the relationship between external leadership and self-leadership in the 1990s.

Therefore, the concept of self-leadership is undoubtedly worth understanding as an individual, communal and organizational method of leadership and management. This assumption is also identifiable in some form in research produced over the past few years (e.g. Breevaart, Bakker, Demerouti & Derks 2016; Brown & Fields 2011; Furtner et al. 2013; Ghosh 2015; Konradt 2014; Stewart et al. 2011). The examining of the evolution of the concept of self-leadership continues in the multidisciplinary approaches adopted, for instance, in connection with more clearly common leadership theories (e.g. Amundsen & Martinsen 2014, 2015; Andressen et al. 2012; Brown & Fields 2011; Furtner et al. 2013; Steinbauer, Renn, Taylor & Njoroge 2014). On the other hand, the uniqueness of self-leadership has become pronounced at the same time in how, for example, according to Furtner et al. (2015, 121), self-leadership represents a distinct dimension separate from other similar constructs.

²¹ Originally *The Practice of Management* was published in 1955.

The methods for affecting individual, communal and organizational performance have been researched from several viewpoints. The application of different approaches to examining the concept of self-leadership has resulted in outlining a number of findings or performance mechanisms including creativity, innovation, trust, commitment, independence, psychological empowerment, physical fitness, self-efficacy, positive affect, job satisfaction and team potency or efficiency (e.g. Amundsen & Martinsen 2014, 2015; Breevaart et al. 2016; Ghosh 2015; Lovelace, Manz & Alves, 2007; Neck & Houghton 2006; Manz 2015; Quinteiro et al. 2014; Unsworth & Mason 2012). In summary, according to Manz (2015, 136), current areas of emphasis concerning the dimensions of self-leadership include, among other things, the following: behavior, cognition, personal values, emotion as well as physiology, including health and wellness.

Consequently, self-leadership has especially been viewed in the context of emotional self-leadership, teams or shared leadership, authenticity and concordance as well as cultural issues over the mid-2010s (e.g. Houghton, Carnes & Ellison 2014; Konradt 2014; Manz 2015; Manz et al. 2015; Manz, Houghton, Neck, Fugate & Pearce 2016; Quinteiro et al. 2014; Unsworth & Mason 2016). And, as noted earlier, in the context of common leadership approaches self-leadership has been in the focus (e.g. Amundsen & Martinsen 2014, 2015; Andressen et al. 2012; Brown & Fields 2011; Furtner et al. 2013; Steinbauer, et al. 2014). Although also other tendencies are featured in current research, it is not feasible to list these studies exhaustively. However, the most recent main contexts and dimensions of self-leadership, which are summarized in Table 5 below, give an appropriate overview of the latest orientations.

Table 5

Primary Tendencies in the Field of Self-Leadership in mid-2010s

Context	Key Dimensions	Primary Objectives of Strategy
Emotional Self-Leadership	a) Behavior b) Cognition c) Emotion d) Physiology	a) One's personal well-being b) Creating a favorable emotional atmosphere c) Increasing individual and communal or organizational effectiveness
Teams and Shared Leadership	a) Behavior b) Cognition c) Personal values	a) Increasing one's personal responsibility and spontaneity b) Alleviating the need for formal supervision c) Fostering exchange of information and co-operation d) Increasing communal and organizational effectiveness

(continues)

Table 5 (continues)

Context	Key Dimensions	Primary Objectives of Strategy
Authenticity and Concordance	a) Behavior b) Cognition c) Personal values d) Emotion e) Physiology	a) Sustaining balance between set tasks and one's identity as well as values b) Transforming values and achieving of longer term goals increasing individual and communal or organizational effectiveness
Cultural Issues	a) Behavior b) Cognition c) Personal values d) Physiology	a) Developing quality of self-leadership
Leadership and Management	a) Depending on the applied leadership approach	a) Developing quality of self-leadership as part of leadership and management from the perspective of the applied leadership approach such as ethical, empowering, transformational, transactional and/or laissez-faire (self)-leadership

Because the aim is to define the concept of self-leadership in the FDF context, the following takes a look at Finnish studies on the concept, which include, Åhman's (2003) *Own Mind-Leadership – Views and Experiences about Individual Success in a Postmodern Organisation*²², Sydänmaanlakka's (2003) *Intelligent Leadership and Leadership Competencies. Developing a Leadership Framework for Intelligent Organizations* and Mielonen's (2011) *Making Sense of Shared Leadership. A Case Study of Leadership Processes and Practices without Formal Leadership Structure in the Team Context*. dissertations. Åhman (2003) developed a model of *Own Mind-Leadership* whereas Sydänmaanlakka (2003) viewed leadership for intelligent organizations and related to self-leadership outlined a *Self Ltd* -model as well as the concept of *total wellness*. Furthermore, in accordance with the international tendency for viewing the topic, Mielonen (2011) has reviewed self-leadership in the context of shared leadership in teams in his dissertation. In what follows the core elements of those models and concepts as well as perspectives are introduced.

²² *Oman mielen johtaminen – näkemyksiä ja kokemuksia yksilön menestymisestä postmodernissa organisaatiossa*

Åhman (2003, 4) defines that the model of Own Mind-Leadership equals “steering ones thoughts, emotions and will”. According to Åhman (2003, 222–224), own mind leading contains four sub-processes of flexibility including:

- self-flexibility (self-image and self-awareness)
- result-flexibility (goal orientation and values)
- thought-flexibility (concept of human being and social networking)
- alternation-flexibility (paradigms, beliefs and attitudes).

The end state of excellent own mind leading is himself or herself satisfaction with his or her particular personal life situation, which is experienced by utilizing his or her potential (Åhman 2003, 225). Furthermore, Åhman (2003, 225) points out that implementation of own mind leading equals the process of influencing oneself and learning to control one’s thoughts, emotions and will by means of critical self-reflection.

On the other hand, based on the model of Self Ltd and the concept of total wellness, Sydänmaanlakka (2006, 302–303) defines intelligent self-leadership as “the process of influencing oneself and learning to control body, mind, emotions and values by self-reflection” (Trans. MP). The aim of intelligent self-leadership is a comprehensive, practical and profound fostering of self-awareness as well as his or her total wellness. In addition, total wellness contains physical, social, mental and professional dimensions (Sydänmaanlakka 2003, 69–70; 2006, 297).

By contrast, in the context of shared leadership, Mielonen (2011, 214) notes that self-leadership is a significant enabler of shared leadership. Proactive behavior relies on individuals who are motivated and spontaneous. Self-cueing and personal motivation are achieved by individuals’ self-leadership. Rather than trying to define a renewed concept of self-leadership, Mielonen views the concept in a context-oriented way.

Based on the different definitions presented above and the tendencies present in studies on self-leadership, particular core attributes are attached to this concept. As discussed in Section 4.1, examining competence and knowledge has involved resorting to nouns (feature) and verbs (action), and a similar approach is applied in structuring the concept of self-leadership. As a result, the attributes used represent expressions denoting behavioral and cognitive categories. Because both leadership and military leadership are carried out by particular methods in order to achieve a given objectives and end state (e.g. Nissinen 2001, 84–88;

Pääesikunta 2013, Appendix 2: 1), the behavioral and cognitive attributes of self-leadership are listed as part of a linear process comprising higher-order categories: ways (verbs), means (nouns), objectives (verbs) and an end state (nouns) (cf. e.g. Eikmeier 2007²³, 64; Pääesikunta 2009b, 3-3-3-4, 3-7-3-8). However, it crucial to be aware of how behavioral and cognitive dimensions inevitably overlap to an extent and self-leadership contains almost always attributes from both dimensions. Consequently, a separation between the behavioral and cognitive elements only represents the main point of effort concerning a particular theoretical perspective or paradigm, as outlined in Table 6.

Table 6
Core Features of Self-Leadership

	Behavioral Perspective	Cognitive Perspective
Ways (Procedures)	a) To observe oneself b) To set personal goals c) To control personal behavior d) To reward oneself e) To punish oneself	a) To observe oneself b) To set personal goals c) To control personal action d) To address oneself e) To imagine f) To be flexible
Means (Methods)	a) Self-awareness b) Self-reflection (introspection) c) Self-cueing	a) Self-awareness b) Self-flexibility c) Self-reflection (introspection) d) Result-flexibility e) Thought-flexibility f) Alternation-flexibility g) Replacing of impractical beliefs h) Self-determination i) Maintaining total condition

(continues)

²³ The Finnish Publication Forum has not rated the journal *Military Review* (Publication Forum 2017).

Table 6 (continues)

	Behavioral Perspective	Cognitive Perspective
Objectives	a) To control behavioral actions, related to carrying out a necessary unpleasant task b) To create feelings of self-competence and thus contribute to one's performance-enhancing behavior in a task	a) To control one's body, mind, thoughts, emotions, values and willingness b) To create feelings of competence and self-competence and thus contribute to one's performance-enhancing action in a task
End State	a) Control, influencing and leading oneself b) Ability to interaction and co-operation	a) Realization of one's potential and reaching balance of life so as to aim for success b) Comprehensive, practical and profound cultivation of self-awareness as well as one's total condition

Although no definite and agreed-upon term for denoting the concept of self-leadership exists among researchers, some common attributes are identifiable from all the definitions used for research purposes. Thus the attributes of self-leadership include control, performance, aiming for fostering and enhancement, systemic, interdependent as well as physical, mental, social and ethical dimensions.

As for listing the key close concepts of self-leadership, the list comprises self-regulation, self-efficacy, self-control and managing oneself. It is essential to understand that in the case of self-leadership the leader and the subordinate are the same person. (Sydänmaanlakka 2003, 68). Obviously, the evolution of competence and knowledge management has influenced the conceptual development of self-leadership (see Section 4.3). Flexibility, readjustment, creativeness as well as the ability to learn and foster are required both at the organizational and individual levels. Furthermore, interaction and co-operation among the personnel forms the basis for both individual fostering and organizational progress to take place.

5.2 Self-Leadership in the Finnish Defence Forces

In the FDF's context, the importance of the concept of self-leadership as an integral part of leadership and management has been recognized in several contexts (e.g. Huhtinen 2006a, 48; 2006b, 59; Mäkinen 2009b, 78; Pääesikunta 1995, 63; 2016b, Appendix 1: 27; Siltala 2006, 31–34). In fact, it can be said that, when viewed as a phenomenon, the notions of self-leadership or self-management have a solid history in the FDF. For instance, in 1990 the Defence Command published a renewed manual series on military leadership and management (Pääesikunta 1995, 7). According to the first part of this series of manuals, the notions of leadership is usually divided into three levels including leading oneself, leading a team, and leading the organization's personnel (Pääesikunta 1995, 63). As a result, also the notion of leader's self-awareness and personal enhancement (e.g. Pääesikunta 1990, 75–78; 1995, 14–23, 68–69; see also Kauppinen 1995, 1, 29–31) were taken into account. Besides, a soldier's spontaneous ability to have initiative (e.g. Toiskallio 2009a, 16–18; Halonen 2007, 51–52) has a strong tradition in the FDF. Nevertheless, the term self-leadership has not been conceptualized until now. Rather, it is concepts of deep leadership, pedagogical leadership and action competence that are currently utilized in the FDF. Each of these constructs contains elements of self-leadership.

The concept of deep leadership is based on the chances of a leader to influence his or her own attitudes and values and those of his or her subordinates (Nissinen 2001, 212). Moreover, when accounting for the current tendencies of self-leadership, such as cross cultural issues (e.g. Houghton et al. 2014) and balance between transformational, transactional and laissez-faire leadership (e.g. Andressen et al. 2012; Furtner et al. 2013), it can be stated that these tendencies link deep leadership even more clearly with self-leadership. On the other hand, pedagogical leadership both relies, among other things, on deep leadership, and strengthens the connection between leadership and pedagogy in the FDF (Nissinen 2007, 338–340). Along the same lines, Mäkinen (2009b, 78) notes that from the perspective of action competence every soldier is a leader not only of his or her subordinates but also of himself or herself. Furthermore, Defence Command has developed for a few years a program of the self-cueing based cultivation of soldier's action competence (Pääesikunta 2016d, 1–2, Appendix 1: 2–3) It can be said that the concepts of deep leadership, pedagogical leadership and action competence serve as guidelines for self-leadership in the FDF.

The findings outlined in Chapter 4 and Section 5.1 that will support viewing both deep leadership, including individual dimensions of pedagogical leadership, and action competence, which in turn will provide the basis for defining the concept of self-leadership in the FDF. This conceptualization of self-leadership is formulated by adapting the leadership and management fourfold.

5.2.1 Deep Leadership

In the FDF since 1995, education and training activities involving military leadership and management have concentrated on human leadership, in particular, in order to be able to respond better to the challenges of wartime leadership than before by adopting step by step the *Deep Leadership Model* generated by Nissinen (Nissinen, 2000, 40; 2001, 209, 235; 2004, 63–64). This model forms the basis of the FDF's personnel leadership and interaction coaching (Maanpuolustuskorkeakoulu 2009) as well as conscripts' military leadership education and training (Pääesikunta 2009a). The theoretical background of the DLM is the paradigm of transformational leadership, particularly Bass's views concerning it (Nissinen 2001, 80–83; cf. Bass et al. 2003). Consequently, as a concept, deep leadership can be derived straight from transformational leadership. This paradigm of transformational leadership begins with the human being and his or her window of opportunities (Bass et al. 2003, 208–209). However, it is worth noting that transformational and transactional dimensions of leadership are not mutually exclusive extreme opposites of each other (Bass 1999, 21). Bass (1999, 21) states that “transformational leadership adds to the effectiveness of transactional leadership; transformational leadership does not substitute for transactional leadership – –. The best leaders are both transformational and transactional.”

According to Nissinen, (2001, 209–212), deep leadership complements the transformational perspective in the form of two significant dimensions, which are deep learning and the characteristics of the Finnish culture. It means that both the leadership training and development of leadership in the FDF is connected to the enhancement and fostering of a human being.

Thus, in the FDF, the primary premise of the current leadership education and training originates from the paradigm of transformational leadership and the constructive concept of

learning. The applied education and training programs are based on the following five meta-scientific assumptions:

1. An excellent leadership behavior is being characterized through the DLM. This kind of leadership behavior is based on the appreciation of a human being and the supply of fostering of an individual, but at the same time, the excellent leadership behavior is also efficient and productive from the organizational viewpoint.
2. The excellent leadership behavior can be modelled in universally.
3. The modelled leadership behavior forms the core around which an efficient education and training program of leadership can be constructed.
4. Leadership behavior can be evaluated by using a questionnaire structured on the basis of the DLM by following of the principles of 360-degree feedback.
5. The progress of leadership behavior is based on enhancing personal capabilities and it is fundamentally one's internal and continuous process. (Nissinen 2001, 134–135.)

In addition, in relation to the DLM, Nissinen (2001, 87) defines military leadership as follows:

Military leadership is an [sic] continuous activity of a military leader and a sub-concept of military command. The function of military leadership is to commit people to their task and mission. The basis of military leadership is the potential of a military leader. The activity is seen as effective leadership behavior in changing operating environments. Military leadership behavior is followed by measurable organizational outcomes.

As a result, according to Nissinen (2001, 95), deep leadership enables integrating theoretical knowledge and practical experiences to the concept of military leadership in a meaningful way. However, it requires that every military leader seeks for personal enhancement. This personal progress can be implemented by measuring the patterned excellent leadership behavior and that is why the DLM includes ten dimensions that can be evaluated in a reliable manner with external feedback. Three of those dimensions are outcomes of leadership, six sections pertaining to leadership behavior, and one is a foundation of behavior. (Nissinen 2001, 218–220.)

According to Nissinen (2001, 219–223), the dimensions of deep leadership can be seen to comprise:

- professional skills as a foundation of behavior
- building trust and confidence as a dimension of behavior (sub-section of deep leadership)
- inspirational motivation as a dimension of behavior (sub-section of deep leadership)
- intellectual stimulation as a dimension of behavior (sub-section of deep leadership)
- individualized consideration as a dimension of behavior (sub-section of deep leadership)
- controlling and corrective leadership as a dimension of behavior
- passive leadership as a dimension of behavior.

It is essential to note that deep leadership is never a desired end state. Instead, it is a method for continuous individual enhancement by means the DLM (Nissinen 2001, 228). Nissinen (2001, 94–95) has pointed out that the process of enhancing and fostering one's personal capabilities is to be viewed as a life-long learning process, in how one should develop his or her self-awareness on the basis of the feedback accrued on his or her behavior. The ensuing progress has to do with changes in personal schemes and viewpoints. This process of personal enhancement is aim-oriented, time-consuming and asks for willpower.

Because deep leadership is draws from the same cognitive processes as deep learning (Nissinen 2001, 211), the cultivation of action competence can also be recognized in the pedagogical purposes of the DLM (Nissinen 2001, 53–54). The aim is that leader will cultivate action competence as part of personal potential. Furthermore deep leader will motivate and support subordinates to take care of their action competence (Nissinen 2007, 340; Pääesikunta 2009a, 3; see also Nissinen 2000, 62–63, 115–117, 134–135).

On the other hand, regarding the organizational aims, leadership behavior has a two-dimensional feature. It is a workable means to achieve both individual and organizational objectives at every level. (Nissinen 2001, 93.) It can be summarized that the DLM is a way to develop an organization by means of individuals' enhancement processes (Nissinen 2001, 93; 2007, 338–343). This connects deep leadership with pedagogical leadership and also competence and knowledge management (Nissinen 2007; cf. Tuominen 2012, 83–85; Viitala 2002, 184–201). According to Nissinen (2007, 339–340), pedagogical leadership is part of every leaders' leadership and management activities, and deep leadership reflects in an excellent way the essence of it in a learning organization, such as the FDF.

In practice, the DLM together with means of military pedagogy makes it possible to apply the principles of pedagogical leadership (Nissinen 2007, 339; see also Maanpuolustuskorkeakoulu 2009 Session 1). In the FDF, pedagogical leadership applied in the form of the DLM is emphasized in peace time education and training, when action competence is being constructed, whereas in war time actions the utilization of action competence focuses on leading and managing in order to gain success in battle. (e.g. Nissinen 2007, 339; Pääesikunta 2015a, 31–33). A military leader is always both a leader as well as an instructor both in the peacetime and wartime environments, as Nissinen (2001, 45) notes.

5.2.2 Action Competence

In the field of military pedagogy, the concept of *action competence* has been viewed intensively since the mid-1990s (Toiskallio 2009b 57–58). It is one of the most essential concepts in leadership education and training in the FDF that heavily relying on Toiskallio's views. Toiskallio's (2009b, 50–57) definition of action competence based on applying the concepts of *practical wisdom* (phronesis) and “action” (praxis) as applied from the ethics of Aristotle.

Action competence is a holistic construction comprising physical, mental, social and ethical components (Toiskallio 2009b, 49–50; see also Puolustusvoimien tutkimuslaitos 2016, 7–8; Pääesikunta 2012a, 58; 2015d, 5). According to Toiskallio (2009b, 49–50), physicality means corporality, which is the basis for human being and acting. Sociality takes shape from community, language and culture in which one interacts, and put together, physicality and sociality form what is referred to as embodied agency. The mental dimension concerns the experiences in one's cognition, which are formed on the basis of and informed by an individual's physicality and sociality. The ethical component represents both a cohesive force and an embodiment of action competence.

The components of action competence can be summarized as follows:

- physical: endurance, strength, speed, coordination and motoric faculties
- mental: self-image, observing and processing of information, memory, emotions, stress tolerance, decision-making, military discipline as well as the will to fulfil the task and to aim at achieving the set objective
- social: interaction, co-operation abilities, consideration and team spirit (spirit de corps)

- ethical: morale, fairness, responsibility, common sense, laws of wars and values (Toiskallio 1998, 177–178 see also Puolustusvoimien tutkimuslaitos 2016, 7–8; Pääesikunta 2012a, 58–59; Toiskallio 2009b 49–50).

Toiskallio and Salonen (2004, 31) have defined that: “action competence is physical, mental, social and ethical preparedness to act in a context-oriented, creative and responsible way in varied, uncertain, conflicting and unexpected conditions” (Trans. MP). Thus action competence refers to solve problems, make decisions and accountability of actions. Although action competence equals both capacity and willingness, it is not a static feature of an individual. (Toiskallio 2009b, 49–51; Toiskallio & Salonen 2004, 30–32.) As regards the connection between deep leadership and action competence, it is noteworthy that the moral or ethical dimensions have a notable position in transformational leadership (Bass 1999, 15; Bass et al. 2003, 208–209, 215; cf. Gilbert, Horsman, & Kelloway 2016, 175; Hoch, Bommer, Dulebohn & Wu 2016, 26). On the other hand, currently the viewpoint of an individual is increasingly emphasized in the field of military ethics (Aalto 2016, i, 121), which is relevant from the perspective of self-leadership in the context of the FDF.

The definition of action competence has been transferred to the FDF’s daily procedures, for example, in the form of *Defence Forces’s Personnel Strategy*. In this norm Personnel Division (Pääesikunta 2015b, 36) states that “action competence equals physical, mental, social and ethical preparedness to do and act as required by the situation, the set aims and conditions” (Trans. MP).

Action competence has an obvious connection to the basis of deep leadership. The enhancement of action competence is a lifelong process and also part of leadership capacity. On the whole, every leader should consider and evaluate his or her personal values, attitudes, action competence and leadership behavior. (Nissinen 2001, 46–48, 220–221; Pääesikunta 2009a, 3; cf. Pääesikunta 2016d, Appendix 1: 2–3.)

5.2.3 Self-leadership Is Based on the Integration of Deep Leadership and Action Competence

As discussed above, the concept of action competence refers to the potential to act in forthcoming situations. It is a personal feature, which enables operating both individually and communally. Thus, from the perspective of self-leadership, action competence plays a crucial

role. A leader's personal action competence includes his or her current physical, mental, social and ethical qualities as well as the capacity to enhance individual abilities and characteristics. This approach is compatible with the principles for appreciating human beings and encouraging individual enhancement, which according to Nissinen (2001, 134–135), are essential background assumptions of the DLM.

For example Mäkinen (2009a, 102) presents a general frame, which can be utilized when viewing issues of military leadership and management as well as military pedagogy together. The format of this theoretical construction follows the logic of the leadership behavior frame of the DLM (Mäkinen 2009a, 101). By applying Mäkinen's (2009a 101–102) frame, it is possible to outline the current views on self-leadership in the FDF. An individual's potential is personal action competence, which is the basis for individual enhancement by applying behavioral and cognitive strategies of self-leadership. These two strategies of self-leadership overlap to an extent and should be understood as complementary. Furthermore, it is easy to notice a holistic relation between action competence and deep leadership concerning self-leadership as outlined in Figure 5.

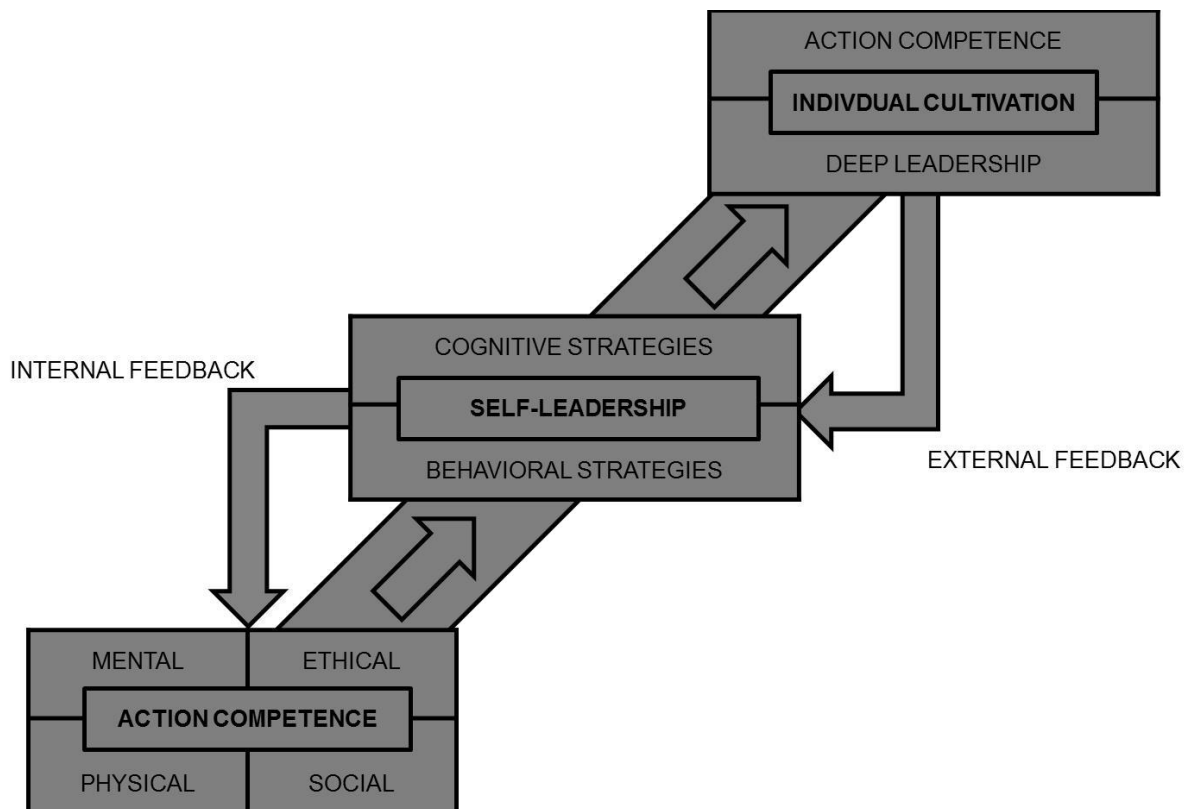


Figure 5. Modelling of Self-Leadership in the FDF (adapted from Mäkinen 2009a, 101–102).

The reviewing of self-leadership disclosed that the applicable method for defining the multidisciplinary concept of self-leadership include accounting for deep leadership and the related dimensions of pedagogical leadership and action competence as discussed in current research in the field of military sciences. However, the current leadership education and training program in the FDF draws from the DLM and concentrates on leadership behavior (Nissinen 2001, 134–135). Therefore it is necessary to mention that an openly tautological behavior-oriented perspective can also be problematic to successful leadership and management both now and in the future, as Mäkinen (2009b, 101–102) has pointed out. According to Hanska (2015, 56), even though the measurability of visible and universal leadership behavior is naturally the strength of the DLM, this model should not be overly dominant. Among others Hanska (2015, 56–57) as well as Mäkinen (2009b, 93) have brought up that the alternative military scientific viewpoints are needed to ensure validity of leadership and management in the FDF. In the case of self-leadership, the leadership and management as an action have to be understood to be a more extensive concept than that of learning, as Huhtinen (2002a, 10) has pointed out.

Despite the behavior-oriented features, introspection and self-awareness have also been identified in the DLM. According to Nissinen (2001, 143), an essential part of deep leadership relies on the supposition that development as a leader is not possible without introspection. It is through intimate and deep-reaching processes that an individual can transform both his or her visually observable leadership behavior and his or her personalized capabilities, which are, in fact, the basis for all the externally observable actions. Consequently, introspection achieved by means self-reflection and self-awareness, is a vital prerequisite for enhancement of a human being and a leader.

According to Nissinen (2001, 144–145), in the framework of the DLM, the development of self-awareness and conceptual thinking aspire to support comprehensive self-reflection and individual enhancement. Yet, an individual's enhancement carries a positive influence on one's self-confidence, and therefore, as regards the development of leadership behavior, rather than concentrating on observable interactive skills only, the focus needs to be on fostering of an individual's core abilities, such as capability to envision, intra- and interpersonal competence as well as situational awareness.

On the other hand, leader's ability to recover from the stress induced by activities can be seen an essential part of his or her action competence (cf. Puolustusvoimien tutkimuslaitos 2016,

7–10, Toiskallio 1998, 167, 177–178). According to Huhtinen (2015, 145), successful leadership and management are increasingly based on invisible factors, which create the foundation for the visible actions of a leader. Undoubtedly, a leader's ability to regulate an individual's action competence in holistic way is one of the most crucial enablers of successful leadership and management. As Huhtinen (2006b, 59) has pointed out, it could be worth increasing and deepening leader's self-evaluation abilities.

Moreover, in the FDF, the examination of action competence has accounted for recognizing essential elements of self-leadership, such as self-awareness, self-confidence and feelings of competence as well as self-determination. Further, in accordance with the DLM, this empirical viewing of action competence has resulted in understanding willpower and emotional intelligence from a mental perspective. (e.g. Puolustusvoimien tutkimuslaitos 2016, 7–11.) Still, all the four dimensions of action competence, physical, social, mental and ethical, represent significant elements of self-leadership and this holistic entity can also be labelled his or her total wellness (cf. Pääesikunta 2016d, Appendix 1: 2–3; Sydänmaanlakka 2003, 69–70).

5.3 Summary and Conclusions

Based on the discussion outlined above on self-leadership as part of competence and knowledge management, it can be said that the concept self-leadership is recognized but not yet defined as such in the FDF. On the other hand, self-leadership as an overall notion is not an established concept so far, and interpretations and viewpoints concerning its contents vary considerably. All in all, the methods for carrying out self-leadership represent a heterogeneous entity. However, this existence of a versatile field of views on self-leadership can be clarified by means of examining the behavioral and cognitive dimensions of the phenomenon (cf. Neck & Houghton 2006, 270). Furthermore, among others Manz (2015, 135) states that those two dimensions both overlap to an extent and are generally divided into following partly intertwined categories:

- behavior-focused strategies
- natural-reward strategies
- constructive thought-pattern strategies.

Although no actual agreed-upon terms for the concept of self-leadership are available among researchers, still it is possible to identify some common features shared by all the definitions presented.

As for the second sub-question of the research:

- What are the attributes of self-leadership?

The answer to this sub-question is that the attributes of self-leadership include control, performance, aiming for fostering and enhancement, systemic, interdependent as well as physical, mental, social and ethical dimensions. Furthermore, the key close concepts comprising, borderline and related cases include self-regulation, self-efficacy, self-control and managing oneself.

As concerns the attributes of self-leadership, control enables an individual's processes and actions in accordance with the set aims (how something is to be done) and the performance is an outcome of the ways and means implemented. Aiming for fostering and enhancement is in setting a desired end state (why something is to be done) and objectives (what is to be done). The end state is reachable by reaching the objectives. (cf. Manz 2015, 135; see also Table 6.) The systemic dimension describes the holistic entity of an individual, in whom physical, mental, social and ethical dimensions are interdependently connected (cf. action competence or total wellness). The holistic entity is both the subject and object of leading.

When it comes to the third sub-question of the research:

- How is self-leadership defined in the FDF's context?

It can be concluded that self-leadership has also been recognized in the FDF for a couple of decades. However, self-leadership has not been conceptualized until now, and it has been referred to by using varied concepts, such as deep leadership and pedagogical leadership as well as action competence, which all are directly connected with self-leadership in that these constructs contain elements of self-leadership. Managing or leading oneself was seen to be inseparable part of leadership. On the other hand, from perspective of competence and knowledge management, definitions of individuals' competence and knowledge invariably contain dimensions of abilities and action, and thus related to the concepts of action competence and deep leadership in the FDF.

The reviewing of self-leadership disclosed that the applicable methods for defining the multidisciplinary concept of self-leadership in the FDF currently translate into accounting for deep leadership including individual related dimensions of pedagogical leadership and action competence. For example Mäkinen (2009a, 102) presents a general frame, which can be utilized in viewing issues of military leadership and management as well as military pedagogy together. The format of that theoretical construction follows the logic of leadership behavior frame of the DLM. In addition, the practice-oriented convergence of deep leadership and action competence is apparent in how, pedagogical leadership has been viewed as an integral part of deep leadership in education and training of salaried personnel for several years (e.g. Erkkilä 2014; Maanpuolustuskorkeakoulu 2009; Siilasto 2015). As of 2012 there has been a handbook (Pääesikunta 2012a) available which views action competence and deep leadership in connection with each other. The conceptual evolution of action competence and deep leadership in the FDF is presented in Appendix 2.

Because this reviewing resulted in noticing lack of definition of self-leadership in the FDF, the existing views about self-leadership were integrated by applying the above mentioned frame developed by Mäkinen (2009a, 101–102). The modelling of self-leadership in the FDF is determined by the integration of action competence and deep leadership behavior including individual dimensions of pedagogical leadership as outlined in Figure 5.

However, it can be stated that the present one-sided applying of behavior-oriented deep leadership has been questioned also to some extent in military sciences. The measurability of visible and universal leadership behavior is an obvious strength of the DLM, but a providing an implementation-oriented assessment of leader with situational feedback instead of general behavior assessment could be more beneficial for the given leader in question as leadership is always carried out in a context-related way (cf. Hanén 2017, 135–137, 146–147; Sutinen 2012, 157; Virtaharju 2016, 49–51). Moreover, because successful leadership and management are increasingly based on invisible factors, in which the leader's abilities of self-evaluation are essential (e.g. Huhtinen 2015, 145), probably capability to introspection also broadens a leader's understanding concerning his or her actions from a behavioral perspective. Overall, alternative scientific perspectives are needed for in the field of military leadership and management, which affects the concept of self-leadership both now and in the future.

On the fourth sub-question of the research:

- What are the relations and interfaces of self-leadership in the leadership and management fourfold?

To sum up, it can be presented that self-leadership represents a holistic entity, which contains elements of deep leadership, pedagogical leadership and action competence in the context of the FDF. The leadership and management fourfold provides an aid in visualizing the relations and interfaces between the elements of self-leadership, as outlined in Figure 6. However, it has to be noted that the visualization in Figure 6 is just a modelling and as such simplifies reality (cf. Juuti 2001, 7).

The modelling describes self-leadership's dimensions holistically by four elements of action competence together with behavioral and cognitive aspects as well as three defining questions, namely, those of what, why and how. According to the main principles of the dimensions of the leadership and management fourfold, physicality can be seen to represent a structure, sociality a culture, mental features management, and ethicality leadership. On the other hand, the notions of physicality and structure together with sociality and culture are emphasized in the behavioral dimensions of self-leadership, whereas ethicality and leadership together with mentality and management are emphasized in the cognitive dimensions of self-leadership. Describing self-leadership by means of the management paradigms is an applicable way to connect together individual and organizational aspects of competence and knowledge as well as leadership and management (cf. Sydänmaanlakka 2006 29–30). This enables structuring complex and extensive background of self-leadership and may serve as a useful construction for conceptualizing and applying self-leadership in the FDF's context.



Figure 6. Positioning of Self-Leadership in Construct of Management by Means of the Leadership and Management Fourfold.

And, concerning the main research question:

- **What is the concept of self-leadership in the FDF?**

By having provided an answer to the sub-questions of the research it has been possible to develop a particular viewpoint on the concept of self-leadership in the FDF. By integrating the core attributes of self-leadership into certain sub-elements of the referring concepts of self-leadership, as identified in the Finnish military context, it can be concluded that:

In the FDF, self-leadership is the process through which an individual controls the holistic construction of physical, mental, social and ethical features by applying cognitive and behavioral strategies in order to influence his or her thoughts and actions, enhance his or her skills and abilities, and lead himself or herself in a context-oriented way aiming to meet both individual and organizational objectives concerning tasks and aims.

The definition presented above is based on the following:

- Control enables individual's processes and actions in accordance with the set aims (how something is to be done).
- Holistic construction of physical, mental, social and ethical features is seen as his or her action competence or total wellness.

- Applying cognitive and behavioral strategies in order to influence his or her thoughts and actions, enhance his or her skills and abilities, and lead himself or herself in a context-oriented way to describe performance. It is subordinate to control and is executed by means of the holistic construction of physical, mental, social and ethical features of himself or herself.
- Aiming to meet both individual and organizational objectives concerning tasks and aims describes both a desired end state (why something is to be done) and objectives (what is to be done). In the FDF, both individual and organizational aims are invariably interconnected to some extent (See Section 5.2.1; cf. Figures 4 and 6).

6 DISCUSSION

The main purpose of this research was both to examine and outline the position and concept of self-leadership in the FDF's competence and knowledge management. According to the determined research objectives, the concepts of competence and knowledge management as well as the self-leadership in the FDF were analyzed and interpreted by means of the leadership and management fourfold. The aim was to define the relation and interfaces in connection with deep leadership, including the individual dimensions of pedagogical leadership, and action competence as well as competence and knowledge management in the context of the FDF. The perspective adopted was that of leadership, and the reviewing was narrowed down to concern the area of self-leadership as part of competence and knowledge management.

6.1 Conclusions

This research adopted a theoretical approach that involved applying a triangulation of content analysis and interpretative concept analysis. The purpose of the hermeneutic paradigm was not to settle solely for the identifying of cause-effect relations, but to aim at understanding and interpreting. An essential feature of hermeneutic orientation is the acceptance of a researcher's personal experience and knowledge influences. This is why the analysis and interpretation has drawn from Berger's and Luckman's (1991) thoughts about social constructionism -based ontology. Social reality is structured via different actions and discourses, which are viewed subjectively in a given social reality. In other words, human reality is understood as socially constructed reality (Berger & Luckman 1991, 210–211). The grounds for and quality of interpretations were positioned during the exploration on a hermeneutic circle, in which self-leadership was viewed as part of competence and knowledge management in the context of the FDF both as an entity and in detail aiming to construct an improved understanding of the construct of these.

The conducted concept analysis of competence and knowledge management as well as self-leadership resulted in being able to create applicable terminology for examining this topic by a two-step process:

1. Viewing and recognizing a novel or existing phenomenon in different contexts.
2. Formulating new concepts or re-structuring the existing concepts based on the results of the previous phase.

6.1.1 Competence and Knowledge Management

On the basis of the discussion outlined above, the contents of the concept of competence and knowledge management remain varied. In the context of the FDF, the strategies of competence and knowledge management are heavily based on the theories of a learning organization. On the other hand, it is also necessary to account for how the development of information technology has been the initiating factor of the conceptual evolution over the past couple of decades. Consequently, for the purposes of this study it was reasonable to examine competence and knowledge and their management together from the level of an individual to very highest organizational level.

The key close concepts of competence and knowledge management in the FDF can be divided into two main categories, which are competence and knowledge related and management related concepts. The first category includes (individual) action competence and (organizational) capability. The close concepts of the second category can instead divided in four sub-categories by means of leadership and management fourfold in the following way: strategic planning, operative management, execution guidance, human resource management, management by results and quality management represent the dimension of management, whereas information and management systems the dimension of organizational structure. A learning organization represents the dimension of organizational culture. Deep leadership and pedagogical leadership instead represent the dimension of leadership. The key close concepts of competence and knowledge management from individual's and self-leadership's point of view are outlined in Figure 4.

Over time technology has shifted from representing an object to equaling a method for competence and knowledge management. It can be claimed that development, learning as well as new or up-dated competence and knowledge were integrated in the organizational action and structure. Thus, personnel co-operation is both the basis for individual capacity and enhancement as well as organizational capability in every operating environment. In practice, the fostering one's competence and knowledge can be seen as the center of gravity of competence and knowledge management in the FDF.

6.1.2 Self-Leadership

The primary result of this research is the conceptualizing of the self-leadership as part of competence and knowledge management in the Finnish military context as well as the defining of the core concepts related to the concept of self-leadership. In the FDF, these outcomes can be utilized in advancing further research related to the developing of competence and knowledge management as well as in fostering self-leadership and developing education. This study contributes to the examining of competence and knowledge management with the produced view on self-leadership.

Although the concept of self-leadership as an integral part of leadership and management has already being recognized for over a couple decades and self-leadership or self-management as a phenomenon has an even longer history in the FDF., still a definition of the concept of self-leadership has been missing, although there are nowadays many different concepts referring to self-leadership, such as deep leadership and pedagogical leadership as well as action competence. Since even the concept of self-leadership lacks a definition, it has been necessary to research the evolution of self-leadership in general as well as in the FDF in particular. This examination involved challenges in, for instance, how it was difficult to define the relation between the theoretical approaches to and practical development of self-leadership. It is evident that, to an extent, theoreticians have modified the concept of self-leadership, but they have also described the current understanding about the phenomenon.

The concept analysis that was carried out proved that several researchers have influenced each other either directly by co-operation or indirectly by expanding the field of knowledge about self-leadership. Despite the heterogeneous viewpoints adopted in varying studies, some features of self-leadership can be acknowledged. Those are control, performance, aiming for fostering and enhancement, systemic, interdependent as well as physical, mental, social and ethical dimensions. The core close concepts include self-regulation, self-efficacy, self-control and managing oneself.

Over the past three decades the significance of self-leadership has become evident in leadership and management research and practices. As part of the evolution of competence and knowledge management, self-leadership is seen as a means to respond to the challenges of the rapidly changing operating environment of organizations. Both at the organizational and individual levels the requirements concern flexibility, readjustment, creativity as well as

the ability to learn, foster and enhance (cf. Sydäänmaanlakka 2003, 68) and these were also recognized in the FDF (Pääsikunta 2015b, 6–8). Furthermore, it can be stated that co-operation among the personnel forms the basis for both individual enhancement and organizational progress. This is why the evolution of competence and knowledge management has influenced the conceptual development of self-leadership.

Self-leadership can be viewed as the basis for all leadership and management. Before one can lead others or manage things, one has to be able to lead oneself, as Manz and Sims (1991, 25) have noted. Among others, according to Sydäänmaanlakka (2003, 67–68), by means of self-leadership one can learn to know oneself better, which enables improved enhancing and steering of his or her actions. On the other hand, it is also essential to understand that in the case of self-leadership, the subject and object of leading become intertwined.

In the FDF, the dimensions of self-leadership can be integrated on the basis of the discipline of leadership and management as well as military pedagogy. The concept of action competence provides the basis for self-leadership in representing a holistic combination of physical, mental, social and ethical sections that sustains individual preparedness to act context-orientedly, creatively and responsibly in different conditions. Rather than being a static feature of an individual, action competence focuses on the capacity and willingness for learning by doing. (cf. Toiskallio 2009b, 49–51.) Therefore, the enhancement of action competence is both a life-long process and part of leadership capacity. According to the principles of deep leadership, one should continuously consider and evaluate his or her personal values, attitudes, action competence and leadership behavior (cf. Nissinen 2001, 220–221). In addition, it can be seen that self-leadership is deep leading from the leader's, equal's and subordinate's point of view. The differences between those three positions result in the effects and outcomes in one's leadership. The leader leads others by leading himself or herself. The equal and the subordinate lead themselves by acting individually and communally in obeying the superior.

Based on the comprehensive reviewing of self-leadership, it can be defined that in the FDF, self-leadership is the process through which an individual controls the holistic construction of physical, mental, social and ethical features by applying cognitive and behavioral strategies in order to influence his or her thoughts and actions, enhance his or her skills and abilities, and lead himself or herself in a context-oriented way aiming to meet both individual and organizational objectives concerning tasks and aims. Besides, by integrating the modelling of

self-leadership in the FDF (see Figure 5) and the positioning of self-leadership in the construct of management by means of the leadership and management fourfold (see Figure 6), the following framework for the concept of self-leadership in the FDF can be proposed, as outlined in Figure 7.

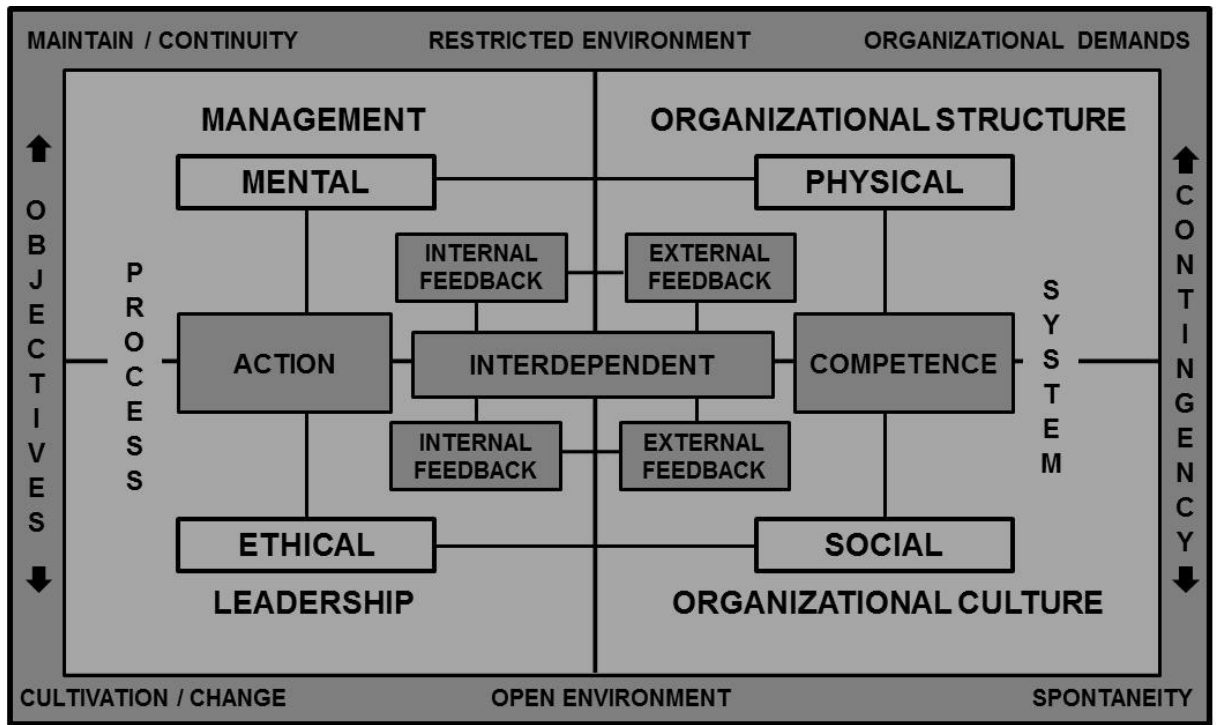


Figure 7. Framework for Concept of Self-Leadership in the FDF.

6.2 Evaluation of Research Validity and Reliability

In Section 2.6, the particular validation criteria applied in this study were identified. The following discusses research relevance and the evaluation of reliability, construct validity, internal validity, external validity as well as communicative plausibility and the researcher’s objectivity.

This study improved research relevance by applying the multidisciplinary approach, which enabled examining the concept of self-leadership as a part of competence and knowledge management comprehensively, as outlined Chapters 4 and 5. Furthermore, the researcher’s competence can be said to have distorted the data somewhat, but first of all, it has facilitated to form conclusions in accordance with the objectives of the research. Thus, the significance of self-leadership as a part of competence and knowledge were aimed to prove in accordance

with the purposes of research. Furthermore, as this topic is very current at the moment, this research tried to develop some new knowledge about self-leadership from competence and knowledge management's point of view.

The notion of reliability is understood to denote how the operations of a research can be replicated with same results. The research design, data collection, analyzing and interpretations were described as closely as possible. The operations were documented to enable following the development of interpretations and conclusions. Although the acceptable level of reliability should be guaranteed, it is acknowledged that social reality is basically subjective, and in accordance with the hermeneutic orientation, including the influence of the researcher's personal experience and knowledge.

Concerning construct validity, the core concepts analyzed and interpreted included competence, knowledge, competence and knowledge management as well as self-leadership taking into account action competence, deep leadership and pedagogical leadership. In order to guarantee acceptable construct validity, the operationalization of the concepts was based on the triangulation of the content and concept analysis (cf. Tuomi & Sarajärvi 2013, 143–149). These analyzing processes were guided by a theoretic review about management paradigms, whereas interpretations were formulated by means of the leadership and management fourfold. The operationalization of the reviewed concepts was carried out in practice by outlining the examined items systemically in tables and interpreting the resulting findings in the form of the leadership and management fourfold.

According to Saunders et al. (2012, 193), internal validity is understood to establish a causal relationship between two variables. As such, internal validity concerns the broader question of making interpretations and drawing conclusions. The internal validity was improved by applying concept and content analysis together with the theoretical framework based on the management paradigms.

As for external validity, both theoretic and practical approaches were being applied to guarantee accuracy, generalizability and realism (cf. Saunders et al. 2012, 194). The data analyzed contained overall scientific views as well as those of national military sciences in particular. The practical viewpoint was accounted for by examining the official documents as well as the reports of empirical studies.

In this study, self-leadership was not examined from an international military perspective as such, but taken into account to an extent when viewing this concept. This approach was motivated by how the concept of self-leadership is not defined as such and the emphasis was the national perspective together with the practical need to restrict the amount of data utilized. Moreover, the international military aspects concerning self-leadership are also based on scholars' views (e.g. Lucke & Furtner 2015; Wong, Bliese & McGurk 2003; cf. Sewell 2009²⁴) and the concepts referring to self-leadership available in the FDF are linked with the national operating context. For example, according to Royl (2010, 69), the particular strength of Finnish military pedagogy is the emphasis on ethics in the core of action competence. On the other hand, the notion of action competence in particular is connected with the beginning phase of Finnish military pedagogy based on education relying on national defence (Toiskallio 2009a, 27). Additionally, this national context is evident in how, according to Nissinen (2001, 209), the DLM has been generated in the Finnish cultural environment.

From the point of accuracy, generalizability and realism view it can also be brought out that the research was non-empirical, which influences the coverage of external validity. Furthermore, some of the FDF's norms and manuals about leadership as well as competence and knowledge management were outdated. However, those documents still represent the best guides and norms available defining the concepts, functions and routines in this field of the FDF.

Finally, concerning communicative plausibility it has to be stated that the researcher's objectivity plays a key role both during the research process as noted above, and during the writing process also (cf. Ehnrooth 1990, 37–39). Therefore, argumentation has been tailored for the recipient in accordance with the conventions of the discipline and by taking the likely readerships' expectations into account. Thus both the scientific community and the primary readership have influenced the forms of expression utilized in this study.

6.3 Need for Further Study

Rather than pinpointing which one would be the most essential one of the open questions examined to be provided a solution, it is the diversity of the subject that motivates the need to view it further. This sets the scene for an infinite field of study and asks for defining the

²⁴ The Finnish Publication Forum has not rated the journal *Military Review* (Publication Forum 2017).

priority of orienting research. However, some obvious and compactly interrelated main lines of inquiry can be adduced and considered to be the most significant ones.

From the perspective of competence and knowledge management it can be brought out that the current and future professional requirements challenge the traditional roles of personnel in the FDF. For example, it is no longer obvious that an officer should currently be first and foremost a leader, trainer and teacher or military specialist (e.g. Huhtinen 2006b, 53; Mäkinen 2009a, 94; cf. Tuominen 2012, 87– 88). Undoubtedly, regardless of the order of priority concerning professional duties, the focus continues to be on an individual's cultivation as well as competence and knowledge. On the other hand, it can also be expected that self-leadership is not a static entity feature of an individual. Rather, self-leadership is a way and means as well as an object of himself or herself cultivation. Therefore, self-leadership as solid part of competence and knowledge management is here to stay.

In relation to the reviewing of conceptual evolution of self-leadership in the FDF, there is still a need to continue the dialogue both between military pedagogy and leadership and management as well as also other disciplines of military sciences. As regards, the current views about self-leadership in the FDF, the paradigm of deep leadership is dominant. From the educational perspective of training wartime troops, the DLM can be considered justified, but a lot of space is left for other paradigms and theories in the field of military sciences, as Mäkinen (2009b, 93–94) has pointed out. From the FDF's point of view ensuring a more extensive and reliable knowledge base about the leadership and management requires for integrating the interests of individual researchers and those of the organization. It is clear that the conceptual transformation of self-leadership will continue in a way or another, both in general as in military context.

To summarize the needs for further study, it can be stated that the approaches adopted have to be interdisciplinary to allow for examining leadership and management of a military organization diversely and as part of a concise whole. The present study produced a viewpoint on the subject, which has been and will probably continue to be an object of interest both nationally and internationally. In light of this research, it seems that an integration of action competence and deep leadership make it possible to develop individual competence and knowledge by means of self-leadership in the FDF. On the other hand, empirical-based, context-oriented and multidisciplinary research perspectives can be proposed to be the three

key points of view both to utilize and test conclusions of this research. The most significant aspects of further inquiry, based on this research, are summarized in Table 7.

Table 7

Primary Aspects of Further Inquiries Based on Results and Conclusions of This Research

Input from This Research	Specified Need for Further Study on Based on Input
Theoretical approach and the restrictions of the used data	<p>a) Empirical research about contextual variables related to self-leadership, such as:</p> <ul style="list-style-type: none"> - One's age, gender or the dimensions of action competence - One's position in an organization - One's personnel group - Environmental conditions and one's set task or action <p>b) Multidisciplinary approach within the national military sciences in comparison to military scientific research in other militaries</p>
The findings about the existence of heterogeneous interpretations concerning the concept self-leadership in general	a) Multidisciplinary approach in overall academic research and methodological triangulation
The findings about the lack of admitted conceptualization of self-leadership in the Finnish Defence Forces	a) Multidisciplinary approach within the national military sciences in comparison to military scientific research in other militaries and methodological triangulation
The findings about the main background theories of self-leadership in the Finnish Defence Forces: (behavior-oriented Deep Leadership and pedagogy-related action competence)	<p>a) Empirical research about contextual variables related self-leadership, for example:</p> <ul style="list-style-type: none"> - Adopting a short-term perspective (individual and organizational) - In long-term development (individual and organizational) <p>b) Multidisciplinary approach within the national military sciences</p>

(continues)

Table 7 (continues)

Input from This Research	Specified Need for Further Study Based on Input
The findings about the relations between self-leadership and competence and knowledge management	a) Research based on the set context-related requirements as defined by the Finnish Defence Forces b) Multidisciplinary approach within the national military sciences in comparison to military scientific research in other militaries and methodological triangulation

6.4 To End Up With

While keeping in mind the preface of this study which states that the future competitiveness and capability of the every organization will increasingly be relied on the appropriate human competence and knowledge available, it is easy to recognize the self-leadership's key role for organizational success. In general, competence and knowledge management as well as leadership and management can be approached either from individual, communal or organizational perspective, it is the generating of a synthesis on the basis of these separated dimensions that remains challenging. This research suggests that it is not even necessary to set any strict limits between the individual and different organizational levels of leadership and management. By contrast, if one adopts too absolute an approach in which a particular dominates, the other levels may become underrated. Therefore a balanced integration of different levels is advisable. In brief, individual competence and knowledge should be transformed to be part of organizational capability by means of leadership and management – including self-leadership.

“To know thyself is the beginning of wisdom.” (Socrates 469–399 BCE/2017).

REFERENCES

Literature and Theses

- Aalto, J. 2016. *Hyvä sotilas – oikea toiminta. Miksi asevoimissa opetetaan sotilasetiikkaa?* Akateeminen väitöskirja, Julkaisusarja 1: Tutkimuksia nro 7. Helsinki: Maanpuolustuskorkeakoulu.
- Alvesson, M. 2002. *Understanding Organizational Culture*. London: Sage Publications.
- Argyris, C. 1957. *Personality and Organization. The Conflict Between System and the Individual*. New York: Harper & Row.
- Barnard, C. I. 1968. *The Functions of the Executive. Thirtieth Anniversary Edition*. Cambridge: Harvard University Press. First published in 1938.
- Berger, P. L. & Luckman, T. 1991. *The Social Construction of Reality - A Treatise in the Sociology of Knowledge*. 6th edition (reprinted). London: Penguin Books. First published in 1966.
- Berqvist, H. 1994. Joukko-osaston tulosjohtaminen ja siihen liittyvä hallinnollinen huolto. In Palmu, P., Rantala, V., Norvio, L., Häkkinen, R., Pulsa, H. & Viik, P. (Eds.) *Ilmatorjunnan vuosikirja 1994–1995*. Tuusula: Ilmatorjuntasäätiö, 114–133.
- Bryman, A. 1992. *Charisma and Leadership in Organizations*. London: Sage Publications.
- Drucker, P. F. 1961. *The Practice of Management*. 2nd edition (reprinted) London: Mercury Books. First published in 1955.
- Drucker, P. F. 2002. *Druckerin parhaat Valittuja kirjoituksia Peter F. Druckerin teoksista*. (Trans.) Liljamo, R. Helsinki: Werner Söderström Osakeyhtiö. Originally published in 2001, [Essential Drucker].
- Egelid, E., Mattila, J., Mustonen, A., Salonen, T., Virolainen, J. & Vähätiitto, J. 2003. Kulttuuri, arvot ja osaaminen – avaimet menestykseen tulevaisuudessa. In Räsänen, H. (Ed.) *Strateginen osaaminen puolustushallinnossa. Näkökulmia strategisen osaamisen käsitteeseen, tasoon ja tarpeeseen*. Johtamisen laitos, Julkaisusarja 2: Artikkelikokoelmat nro 10. Helsinki: Maanpuolustuskorkeakoulu 29–54.
- Ehnrooth, J. 1990. Intuitio ja analyysi. In Mäkelä K. (Ed.) *Kvalitatiivisen aineiston analyysi ja tulkinta*. Helsinki: Gaudeamus, 30–41.
- Ferguson, J. E., Mchombu, K. & Cummings, S. 2008. *Management of Knowledge for Development: Meta-review and Scoping Study*. IKM Working Paper No 1. IKM Emergent Research Programme, European Association of Development Research and Training Institutes (EADI), Bonn. [online].
Cited 3.1.2017.
<http://ikmemergent.net/files/080421-ikm-working-paper-no1-meta-review-and-scoping-study-final.pdf>
- Feyerabend, P. 1993. *Against Method. Outline of Anarchist Theory of Knowledge*. 3rd edition (revised). London: Verso. First published in 1975.

- Grant, R. M. 2010. *Contemporary Strategy Analysis: Concepts, Techniques, Applications*. 7th edition (text edition). Chichester: John Wiley & Sons. First published in 1991.
- Guillén, M. F. 1994. *Models of Management. Work, Authority, and Organization in a Comparative Perspective*. Chicago: University of Chicago Press.
- Halonen, P. 2007. *Puolustusvoimien koulutuskulttuurin rakentuminen*. Akateeminen väitöskirja, Koulutustaidon laitos, Julkaisusarja 2: Tutkimuksia nro 18. Helsinki: Maanpuolustuskorkeakoulu.
- Hanén, T. 2017. *Yllätysten edessä. Kompleksisuusteoreettinen tulkinta yllättävien ja dynaamisten tilanteiden johtamisesta*. Akateeminen väitöskirja, Julkaisusarja1: Tutkimuksia nro 11. Helsinki: Maanpuolustuskorkeakoulu.
- Hanska, J. 2015. Tohtoriupseeri – kriittinen tutkija vai selvitysmies? Tieteellisyyden ja upseeriuden yhdistäminen puolustusvoimien tutkimuskentän pyörteissä. In Nokkala, A., Hanska, J. & Häyry, M. (Eds.) *Akateemisuus ja upseerius – Tieteen, tutkimuksen ja johtamisen ristivetoa puolustushallinnossa*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja, 2: Artikkelikokoelmat nro 15. Helsinki: Maanpuolustuskorkeakoulu, 39–66.
- Hartikainen, R. 2015. *Johtamista vai ohjausta? Puolustusvoimien moninaiset johtamis- ja ohjausmallit*. Diplomityö, Yleisesikuntaupseerikurssi 57. Helsinki: Maanpuolustuskorkeakoulu.
- Heaslip, R. J. 2014. *Managing Complex Projects and Programs. How to Improve Leadership of Complex Initiatives Using a Third Generation Approach*. Hoboken: John Wiley & Sons.
- Hirsjärvi, S., Remes, P. & Sajavaara, P. 2005. *Tutki ja kirjoita*. 11th edition. Helsinki: Kustannusosakeyhtiö Tammi. First published in 1997.
- Huhtinen, A.-M. 2002a. Esipuhe. In Huhtinen, A.-M. (Ed.) *Sotilasjohtamisen tutkimuksen tieteenfilosofiset perusteet ja menetelmät*. Johtamisen laitos, Julkaisusarja 2: Artikkelikokoelmat nro 9. Helsinki: Maanpuolustuskorkeakoulu, 10–11.
- Huhtinen, A.-M. 2002b. Sotilasjohtamisen tutkimus. In Huhtinen, A.-M. (Ed.) *Sotilasjohtamisen tutkimuksen tieteenfilosofiset perusteet ja menetelmät*. Johtamisen laitos, Julkaisusarja 2: Artikkelikokoelmat nro 9. Helsinki: Maanpuolustuskorkeakoulu, 12–54.
- Huhtinen, A.-M. 2006a. Sotilasjohtaja laadullisessa ja eettisessä tutkimusotteessa. In Huhtinen A.-M. (Ed.) *Sotilasjohtamisen tiedonkohteet. Johdatus sotilasjohtamisen perustutkimukseen*. Johtamisen laitos, Julkaisusarja 2: Artikkelikokoelmat nro 16. Helsinki: Maanpuolustuskorkeakoulu, 43–62.
- Huhtinen, A.-M. 2006b. Sotilasjohtamisen toimintaympäristöt. In Huhtinen, A.-M. & Toiskallio, J. (Eds.) *Maanpuolustuskorkeakoulu – kehittyvä sotatieteellinen yliopisto. Professori Mikko Viitasalon juhla-kirja*. Helsinki: Maanpuolustuskorkeakoulu, 38–63.
- Huhtinen, A.-M. 2015. Lepo vaan! Oikea harjoittelu tekee mestarin. In Nokkala, A., Hanska, J. & Häyry, M. (Eds.) *Akateemisuus ja upseerius – Tieteen, tutkimuksen ja johtamisen ristivetoa puolustushallinnossa*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja, 2: Artikkelikokoelmat nro 15. Helsinki: Maanpuolustuskorkeakoulu, 145–166.

- Huttunen, M. 2010. *Monimutkainen taktiikka*. Akateeminen väitöskirja, Julkaisusarja 1: Taktiikan tutkimuksia nro 2. Helsinki: Maanpuolustuskorkeakoulu.
- Hyrkäs, E. 2009. *Osaamisen johtaminen Suomen kunnissa*. Akateeminen väitöskirja, Acta Universitatis, Lappeenrantaensis 338. Lappeenranta: Lappeenrannan teknillinen yliopisto.
- Hyytiäinen, M. 2015. Suomalaisen sovelletun taktiikan tutkimuksesta. In Nokkala, A., Hanska, J. & Häyry, M. (Eds.) *Akateemisuus ja upseerius –Tieteen, tutkimuksen ja johtamisen ristivetoa puolustushallinnossa*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja 2: Artikkelikokoelmat nro 15. Helsinki: Maanpuolustuskorkeakoulu, 87–98.
- Hänninen, T. 2011. *Puolustusvoimat 2020 – Huippuosaajia Huippuorganisaatioissa*. Diplomityö, Yleisesikuntaupseerikurssi 55. Helsinki: Maanpuolustuskorkeakoulu.
- Juuti, P. 2001. *Johtamispuhe*. Jyväskylä: PS-kustannus.
- Juuti, P. & Luoma, M. 2013. *Henkilöstöjohtaminen ja innovatiivisuus*. Helsinki: Management Institute of Finland MIF.
- Kauppinen, H. 1995. *Johtamiskoulutus: Johtamisopin opetus ja arviointi kantahenkilökunnan koulutuksessa Pioneerikoulussa*. Diplomityö, Yleisesikuntaupseerikurssi 43. Johtamisen ja hallinnon laitos, Julkaisusarja 1: Tutkimuksia nro 2. Helsinki: Maanpuolustuskorkeakoulu.
- Kazan, A., L. 1999. *Exploring the Concept of Self-Leadership: Factors Impacting Self-Leadership of Ohio Americorp's Members*. Doctoral dissertation, School of the Ohio State University. [online].
Cited 24.3.2016.
https://etd.ohiolink.edu/rws_etd/document/get/osu1243518459/inline
- Kerlinger, F. N. 1986. *Foundations of Behavioral Research*. 3rd edition. New York: CBS College Publishing. First published in 1964.
- Koskiahho, B. 1990. *Ohi, läpi ja reunojen yli. Tutkimuksenteon peruskysymyksiä*. Helsinki: Oy Gaudeamus Ab.
- Kuhn, T. S. 1970. *The Structure of Scientific Revolutions*. 2nd edition (enlarged). Chicago: The University of Chicago. First published in 1962.
- Manz, C.C. 1983. *The Art of Self-Leadership: Strategies for Personal Effectiveness in Your Life and Work*. New Jersey: Prentice Hall.
- Manz, C.C. 1992. *Mastering Self-Leadership. Empowering Yourself for Personal Excellence*. New Jersey: Prentice-Hall. First published with the title *The Art of Self-Leadership*.
- Manz, C. C. & Sims, H. P. Jr. 1989. *Superleadership: Leading Others to Lead Themselves*. New Jersey: Prentice-Hall.
- McAuley, J. 2004. Hermeneutic Understanding. In Cassell, C. & Symon, G. (Eds.). *Essential Guide to Qualitative Methods and Analysis in Organizational Research*. London: Sage Publications, 192–202.

- Metsämuuronen, J. 2006. *Tutkimuksen tekemisen perusteet ihmistieteissä. Opiskelijalaitos*. 3rd edition (renewed). Helsinki: International Methelp Ky. First published in 2002.
- Mielonen, J. 2011. *Making Sense of Shared Leadership. A Case Study of Leadership Processes and Practices without Formal Leadership Structure in the Team Context*. Doctoral Dissertation, Acta Universitatis, Lappeenrantaensis 451. Lappeenranta: Lappeenranta University of Technology.
- Morgan, G. 1997. *Images of Organization*. 2nd edition (additional edition). Thousand Oaks: Sage Publications. First published in 1997.
- Mäkinen, J. 2009a. Sotilaspedagogiikka tieteiden ja käytännön kentässä. In Toiskallio, J. & Mäkinen, J. (Eds.) *Sotilaspedagogiikka: Sotiluuden ja toimintakyvyn teoriaa ja käytäntöä*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja 1: Tutkimuksia nro 3. Helsinki: Maanpuolustuskorkeakoulu, 81–111.
- Mäkinen, J. 2009b. Sotiluus sotilaspedagogiikan käsitteenä. In Toiskallio, J. & Mäkinen, J. (Eds.) *Sotilaspedagogiikka: Sotiluuden ja toimintakyvyn teoriaa ja käytäntöä*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja 1: Tutkimuksia nro 3. Helsinki: Maanpuolustuskorkeakoulu, 74–80.
- Nadin, S. & Cassell, C. 2004. Using Data Matrices. In Cassell, C. & Symon, G. (Eds.) *Essential Guide to Qualitative Methods and Analysis in Organizational Research*. London: Sage Publications, 271–287.
- Niiniluoto, I. 2002. *Johdatus tieteenfilosofiaan. Käsitteen- ja teorianmuodostus*. 3rd edition. Helsinki: Otava. First published in 1980.
- Nissinen, V. 2000. *Puolustusvoimien johtajakoulutus. Johtamiskäyttötymisen kehittäminen*. Johtamisen laitospuolustusvoimien julkaisusarja 1: Tutkimuksia nro 13. Helsinki: Maanpuolustuskorkeakoulu.
- Nissinen, V. 2001. *Military Leadership. A Critical Constructivist Approach to Conceptualizing, Modeling and Measuring Military Leadership in the Finnish Defence Forces*. Doctoral dissertation, Department of Management and Leadership Publication Series 1: Research Reports No. 20. Helsinki: Defence Command.
- Nissinen, V. 2004. Syväjohtaminen mahdollistaa muutosjohtamisen. In Pääesikunnan koulutusosasto & asiantuntijatyöryhmä (Eds.) *Puolustusvoimien palkatun henkilöstön osaamisen kehittämisen strategia. Asiantuntijatyöryhmän näkemyksiä ja ajatuksia. Taustamuistio*. Koulutustaidon laitos, Julkaisusarja 1: Oppikirjat nro 1. Helsinki: Maanpuolustuskorkeakoulu, 63–72.
- Nonaka, I. & Takeuchi, H. 1995. *The Knowledge-Creating Company. How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Nordberg, E. 2004. Alkusanat. In Pääesikunnan koulutusosasto & asiantuntijatyöryhmä (Eds.) *Puolustusvoimien palkatun henkilöstön osaamisen kehittämisen strategia. Asiantuntijatyöryhmän näkemyksiä ja ajatuksia. Taustamuistio*. Koulutustaidon laitos, Julkaisusarja 1: Oppikirjat nro 1. Helsinki: Maanpuolustuskorkeakoulu, [unnumbered].

- Oikarinen, T. & Pihkala T. 2010. Monenlaista osaamisen johtamista. In Uotila T.-P. (Ed.) *Ikkunoita osaamisen johtamisen systeemiseen kokonaisuuteen*. Vaasan yliopiston julkaisuja, Tutkimuksia 293, Liiketaloustiede 106, Johtaminen ja organisaatiot. Vaasan yliopisto, 48–73. [online].
Cited 2.1.2016.
http://www.uva.fi/materiaali/pdf/isbn_978-952-476-313-4.pdf
- Palonen, K. 1998. *Tekstistä politiikkaan. Johdatus tulkintataitoon*. Tampere: Vastapaino.
- Peltoniemi R. 2004. Selonteosta osaamiseen – osaamisen johtaminen Puolustusvoimissa. Pääesikunnan koulutusosasto & asiantuntijatyöryhmä (Eds.) *Puolustusvoimien palkatun henkilöstön osaamisen kehittämisen strategia. Asiantuntijatyöryhmän näkemyksiä ja ajatuksia. Taustamuistio*. Koulutustaidon laitos, Julkaisusarja 1: Oppikirjat nro 1. Helsinki: Maanpuolustuskorkeakoulu, 44–52.
- Peltoniemi, R. 2007. *Suomen puolustusjärjestelmän ydinosaamisalueet ja niiden muutoshasteet mahdollisessa Nato-jäsenyydessä*. Akateeminen väitöskirja, Koulutustaidon laitos, Julkaisusarja 2: Tutkimuksia nro 17. Helsinki: Maanpuolustuskorkeakoulu.
- Peters, T. J. & Waterman, R. Jr. 1983. *Menestyksen Profiileja. Hyvin hoidettuja yrityksiä ja mitä niistä opimme*. 2nd edition. (Trans.) Lehmuskoski, M. J. Helsinki: Oy Rastor Ab. Originally published in 1982, [In Search of Excellence. Lessons from America's Best Run Companies].
- Rantapelkonen, J. & Koistinen, L. 2016. *Pohdintoja sotatieteellisistä käsitteistä*. Sotataidon laitos, Julkaisusarja 2: Tutkimuslustoista nro 1. Helsinki: Maanpuolustuskorkeakoulu.
- Royl, W. 2010. Military Pedagogy in the Future. In Mäkinen, J. & Tuominen, J. (Eds.) *Toimintakykyä kehittämässä: Jarmo Toiskallion juhla kirja. Military Pedagogical Reflections*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja 1: Tutkimuksia nro 6. Helsinki: Maanpuolustuskorkeakoulu, 65–78.
- Salonen, T. 2002. *Kehittyvä organisaatio muuttuvassa ympäristössä – osaamisen johtaminen ja hallinta Puolustusvoimissa*. Diplomityö, Yleisesikuntaupseerikurssi 49. Johtamisen laitos, Julkaisusarja 1: Tutkimuksia nro 24. Helsinki: Maanpuolustuskorkeakoulu.
- Saunders, M., Lewis, P. & Thornhill, A. 2012. *Research Methods for Business Students*. 6th edition (updated). Harlow: Pearson Education Limited. First published in 1997.
- Seeck, H. 2008. *Johtamisopit Suomessa. Taylorismista innovaatioteorioihin*. Helsinki: Gaudemus Helsinki University Press.
- Siltala, H. 2006. Johtajuus. In Huhtinen A.-M. (Ed.) *Sotilasjohtamisen tiedonkohteet. Johdatus sotilasjohtamisen perustutkimukseen*. Johtamisen laitos, Julkaisusarja 2: Artikkelikokoelmat nro 16. Helsinki: Maanpuolustuskorkeakoulu, 27–42.
- Simon, H. A. 1982. *Päätöksenteko ja hallinto*. Ekonomia sarja 58. (Trans.) Rajala, P. 2nd edition. First published in 1979. Espoo: Welin+Göös. Originally published in 1947, [Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization].
- Sovijärvi, O., Arina, T. & Halmetoja, J. 2016. *Biohakkerin käsikirja. Päivitä itsesi ja vapauta sisäinen potentiaalisi*. Helsinki: Biohacker Center BHC Oy.

- Sutinen, P. 2012. *Johtajana kehittymisen olemus kunta-alan johtajan kokemana*. Akateeminen väitöskirja, Tampereen yliopisto, Acta 233. Helsinki: Suomen Kuntaliitto.
- Sydänmaanlakka, P. 2003. *Intelligent Leadership and Leadership Competencies. Developing a Leadership Framework for Intelligent Organizations*. Doctoral dissertation, Helsinki University of Technology (HUT), Industrial Management and Work and Organisational Psychology, Dissertation Series No 4. Espoo: University of Technology.
- Sydänmaanlakka, P. 2006. *Älykäs itsensä johtaminen. Näkökulmia henkilökohtaiseen kasvuun*. Helsinki: Talentum Media Oy.
- Taylor, F. W. 2004. *Principles of Scientific Management*. (reprinted). Whitefish: Kessinger Publishing. First published in 1911.
- Thrift, N. 2005. *Knowing Capitalism*. London: Sage Publications.
- Tirkkonen, M. 2014. Suorituksen johtamisesta onnistumisen johtamiseen. In Sydänmaanlakka, P. (Ed.) *Tulevaisuuden johtaminen 2020. Älykkään johtamisen näkökulmia*. Espoo: Pertec Consulting Oy, 74–87.
- Toiskallio, J. 1998. Kohti sotilaan toimintakyvyn teoriaa. In Toiskallio, J. (Ed.) *Toimintakyky sotilaspedagogiikassa*. Koulutustaidon laitos, Julkaisusarja 2: Tutkimuksia nro 4, Helsinki: Maanpuolustuskorkeakoulu, 161–185.
- Toiskallio, J. 2009a. Aatehistoriallista taustaa. In Toiskallio, J. & Mäkinen, J. (Eds.) *Sotilaspedagogiikka: Sotiluuden ja toimintakyvyn teoriaa ja käytäntöä*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja 1: Tutkimuksia nro 3. Helsinki: Maanpuolustuskorkeakoulu, 12–47.
- Toiskallio, J. 2009b. Toimintakyky sotilaspedagogiikan käsitteenä. In Toiskallio, J. & Mäkinen, J. (Eds.) *Sotilaspedagogiikka: Sotiluuden ja toimintakyvyn teoriaa ja käytäntöä*. Johtamisen ja sotilaspedagogiikan laitos, Julkaisusarja 1: Tutkimuksia nro 3. Helsinki: Maanpuolustuskorkeakoulu, 48–73.
- Toiskallio, J. & Salonen, T. 2004. Osaaminen, toimintakyky ja suorituskky. In Pääesikunnan koulutusosasto & asiantuntijatyöryhmä (Eds.) *Puolustusvoimien palkatun henkilöstön osaamisen kehittämisen strategia. Asiantuntijatyöryhmän näkemyksiä ja ajatuksia. Taustamuistio*. Koulutustaidon laitos, Julkaisusarja 1: Oppikirjat nro 1. Helsinki: Maanpuolustuskorkeakoulu, 27–43.
- Tuomi, J. & Sarajärvi, A. 2013. *Laadullinen tutkimus ja sisällönanalyysi*. 10th edition (renewed). Helsinki: Kustannusosakeyhtiö Tammi. First published in 2002.
- Uden, L., Wang, L. S. L., Rodríguez, J. M. C., Yang, H.-C. & Ting, I.-H. 2014. Preface. In Uden, L., Wang, L. S. L., Rodríguez, J. M. C., Yang, H.-C. & Ting, I.-H. (Eds.) *The 8th International Conference on Knowledge Management in Organizations. Social and Big Data Computing for Knowledge Management*. Dordrecht: Springer Science & Business Media, v–vi.

- Uotila, T.-P., Viitala, R. & Pihkala, T. 2010. Johdanto. In Uotila T.-P. (Ed.) *Ikkunoita osaamisen johtamisen systeemiseen kokonaisuuteen*. Vaasan yliopiston julkaisuja, Tutkimuksia 293, Liiketaloustiede 106, Johtaminen ja organisaatiot. Vaasan yliopisto, 1–19. [online]. Cited 2.1.2016.
http://www.uva.fi/materiaali/pdf/isbn_978-952-476-313-4.pdf
- Åhman, H. 2003. *Own Mind-Leadership – Views and Experiences about Individual Success in a Postmodern Organisation*. Doctoral dissertation, Helsinki University of Technology (HUT), Industrial Management and Work and Organisational Psychology, Dissertation Series No 12. Espoo: Monikko Oy. In Finnish, [*Oman mielen johtaminen – näkemyksiä ja kokemuksia yksilön menestymisestä postmodernissa organisaatiossa*].
- Åhman, H. 2012. *Mielen johtaminen organisaatiossa*. 2nd edition, Helsinki: Sanoma Pro Oy. First published in 2012.
- Viitala, R. 2002. *Osaamisen johtaminen esimiestyössä*. Akateeminen väitöskirja, Acta Wasenia No 109, Liiketaloustiede 44, Johtaminen ja organisaatiot. Vaasa: Universitas Wasaensis.
- Virtaharju, J. 2016. *Making Leadership. Performances, Practices, and Positions that Construct Leadership*. Doctoral dissertation, School of Science. Department of Industrial Engineering and Management, Doctoral Dissertations 188. Helsinki: Aalto University.
- Waitley, D. 1995. *Empires of the Mind: Lessons to Lead and Succeed in a Knowledge-Based World*. New York: William Morrow and Company Inc.
- Wilson, J. 1963. *Thinking with Concepts*, Cambridge: Cambridge University Press.
- Wisher, R. A., Sabol, M. A. & Ellis, J. A. 1999. *Staying Sharp: Retention of Military Knowledge and Skills*. Special Report 39. U.S. Army Research Institute. [online]. Cited 3.1.2016.
<http://www.dtic.mil/get-tr-doc/pdf?AD=ADA366825>
- Ylimartimo, J. 2010. *Pitkän tähtäyksen suunnittelusta strategiseen suunnittelun Puolustusvoimissa*. Tutkielma, Esiupseerikurssi 62. Helsinki: Maanpuolustuskorkeakoulu.
- Ylimartimo, J. 2011. *Yhteiskunnan elintärkeiden toimintojen turvaamisen 2006 strategian jalkautuminen puolustushallinnossa*. Diplomityö, Yleisesikuntaupseerikurssi 55. Helsinki: Maanpuolustuskorkeakoulu.
- Yukl, G. 2009. *Leadership in Organizations*. 7th edition (global edition). New Jersey: Pearson Prentice Hall. First published 1981.

Journals

- Abrahamson, E. 1991. Managerial Fads and Fashions. The Diffusion and Rejection of Innovations. *Academy of Management Review* 16(3) 586–612.

- Alvesson, M. & Jonsson, A. 2016. The Bumpy Road to Exercising Leadership: Fragmentations in Meaning and Practice. *Leadership*. First published [online] on 19.4.2016, 1–18.
Cited 9.11.2016.
<http://lea.sagepub.com/content/early/2016/04/19/1742715016644671>
- Alvesson, M. & Kärreman, D. 2016. Intellectual Failure and Ideological Success in Organization Studies. The Case of Transformational Leadership. *Journal of Management Inquiry* 25(2), 139–152.
- Amundsen, S. & Martinsen, O. L. 2014. Empowering Leadership: Construct Clarification, Conceptualization, and Validation of a New Scale. *Leadership Quarterly* 25(3), 487–511.
- Amundsen, S. & Martinsen, O. L. 2015. Linking Empowering Leadership to Job Satisfaction, Work Effort, and Creativity: The Role of Self-Leadership and Psychological Empowerment. *Journal of Leadership & Organizational Studies* 22(3), 304–323.
- Anderson, J. S. & Prussia, G. E. 1997. The Self-Leadership Questionnaire: Preliminary Assessment of Construct Validity. *Journal of Leadership & Organizational Studies* 4(2), 119–143.
- Anderson, M. H. & Sun, P. Y. T. 2017. Reviewing Leadership Styles: Overlaps and the Need for a New ‘Full-Range’ Theory. *International Journal of Management Reviews* 19(1), 76–96.
- Andrade, A. D. 2009. Interpretive Research Aiming at Theory Building: Adopting and Adapting the Case Study Design. *The Qualitative Report* 14(1), 42–60.
- Andressen, P., Konradt, U. & Neck, C. P. 2012. The Relation Between Self-Leadership and Transformational Leadership: Competing Models and the Moderating Role of Virtuality. *Journal of Leadership & Organizational Studies*, 19(1), 66–82.
- Antonakis, J. & House, R. J. 2014. Instrumental Leadership: Measurement and Extension of Transformational – Transactional Leadership Theory. *The Leadership Quarterly* 25(4), 746–771.
- Bailey, S. F., Barber, L. K. & Justice, L. M. 2016. Is Self-Leadership Just Self-Regulation? Exploring Construct Validity with HEXACO and Self-Regulatory Traits. *Current Psychology*. First published [online] on 5.9.2016, 1–13.
Cited 9.11.2016.
<http://link.springer.com/article/10.1007%2Fs12144-016-9498-z>
- Barley, S. R. & Kunda, G. 1992. Design and Devotion. Surges of Rational and Normative Ideologies of Control in Managerial Discourse. *Administrative Science Quarterly* 37(3), 363–399.
- Bass, B. M. 1999. Two Decades of Research and Development in Transformational Leadership. *European Journal of Work and Organizational Psychology* 8(1), 9–32.
- Bass, B. M. 2000. The Future of Leadership in Learning Organizations. *Journal of Leadership & Organizational Studies* 7(3), 18–40.

- Bass, B. M., Avolio, B. J., Jung, D. I. & Berson, Y. 2003. Predicting Unit Performance by Assessing Transformational and Transactional Leadership. *Journal of Applied Psychology* 88(2), 207–218.
- Breevaart, K., Bakker, A. B., Demerouti, E. & Derks, D. 2016. Who Takes the Lead? A Multi-Source Diary Study on Leadership, Work Engagement, and Job Performance. *Journal of Organizational Behavior* 37(3), 309–325.
- Brown, R. T. & Fields, D. 2011. Leaders Engaged in Self-Leadership: Can Followers Tell the Difference? *Leadership* 7(3), 275–293.
- Carmeli, A., Ravit, M. & Weisberg J. 2006. Self-Leadership Skills and Innovative Behavior at Work. *International Journal of Manpower* 27(1), 75–90.
- Costas, J. & Kärreman, D. 2016. The Bored Self in Knowledge Work. *Human Relations* 69(1), 61–83.
- Dauber D., Fink, G. & Yolles, M. 2012. A Configuration Model of Organizational Culture. *Sage Open*. First published [online] on 22.3.2012, 1–16. Cited 28.6.2016. <http://sgo.sagepub.com/content/2/1/2158244012441482>
- Davenport, T. H., De Long, D. W. & Beers, M. C. 1998. Successful Knowledge Management Projects. *MIT Sloan Management Review* 39(2), 43–57.
- Drucker, P. F. 1999. Managing Oneself. *Harvard Business Review* 77(2), 64–74.
- Eikmeier, D. C. 2007. *A Logical Method for Center-of-Gravity Analysis*. *Military Review* 87(5), 62–66.
- Fichman, R. G. 2004. Going Beyond the Dominant Paradigm for Information Technology Innovation Research: Emerging Concepts and Methods. *Journal of the Association for Information Systems* 5(8), 314–355.
- Fisher, K. & Robbins, R. R. 2015. Embodied Leadership: Moving from Leader Competencies to Leaderful Practices. *Leadership* 11(3), 281–299.
- Furtner, M. R., Baldegger, U. & Rauthmann, J. F. 2013. Leading Yourself and Leading Others: Linking Self-Leadership to Transformational, Transactional, and Laissez-Faire Leadership. *European Journal of Work and Organizational Psychology* 22(4), 436–449.
- Furtner, M. R., Rauthmann, J. F., Sachse, P. 2015. Unique Self-Leadership: A Bifactor Model Approach. *Leadership* 11(1), 105–125.
- Garvin, D. A. 1993. Building a Learning Organization. *Harvard Business Review* 71(4), 78–91.
- Gilbert, S., Horsman, P. & Kelloway, E. K. 2016. The Motivation for Transformational Leadership Scale. An Examination of the Factor Structure and Initial Tests. *Leadership & Organization Development Journal* 37(2), 158–180.
- Ghosh, K. 2015. Developing Organizational Creativity and Innovation. Toward a Model of Self-Leadership, Employee Creativity, Creativity Climate and Workplace Innovative Orientation. *Management Research Review* 38(11), 1126–1148.

- Gold, A. H., Malhotra, A. & Segars, A. H. 2001. Knowledge Management: An Organizational Capabilities Perspective. *Journal of Management Information Systems* 18(1), 185–214.
- Hoch, J. E., Bommer, W. H., Dulebohn, J. H. & Wu, D. 2016. Do Ethical, Authentic, and Servant Leadership Explain Variance Above and Beyond Transformational Leadership? A Meta-Analysis. *Journal of Management*. First published [online] on 31.8.2016, 1–29. Cited 8.11.2016.
<http://jom.sagepub.com/content/early/2016/08/31/0149206316665461>
- Hong, J. & Ståhle, P. 2005. The Coevolution of Knowledge and Competence Management. *International Journal of Management Concepts and Philosophy* 1(2), 129–145.
- Houghton, J. D., Carnes, A., Ellison, C. N. 2014. A Cross-Cultural Examination of Self-Leadership: Testing for Measurement Invariance Across Four Cultures. *Journal of Leadership & Organizational Studies* 21(4), 414–430.
- House, R., J. & Aditya R., N. 1997. The Social Scientific Study of Leadership: Quo Vadis? *Journal of Management* 23(3), 409–473.
- Huhtala, H. & Laakso, A. 2006. Kirjallisuuskatsaus johtamisen rakenneanalyttiseen paradigmaan. *Hallinnon tutkimus* 25(4), 4–18.
- Håland, E. & Tjora, A. 2006. Between Asset and Process: Developing Competence by Implementing a Learning Management System. *Human Relations* 59(7), 993–1016.
- Koenig, M. E. D. 2005. KM Moves Beyond the Organization: The Opportunity for Librarians. *Information Services & Use* 25(2), 87–93.
- Konradt, U. 2014. Toward a Theory of Dispersed Leadership in Teams: Model, Findings, and Directions for Future Research. *Leadership* 10(3), 289–307.
- Lindberg, O. & Rantatalo, O. 2015. Competence in Professional Practice: A Practice Theory Analysis of Police and Doctors. *Human Relations* 68(4), 561–582.
- Lovelace, K. J., Manz, C. C. & Alves, J. C. 2007. Work Stress and Leadership Development: The Role of Self-Leadership, Shared Leadership, Physical Fitness and Flow in Managing Demands and Increasing Job Control. *Human Resource Management Review* 17(4), 374–387.
- Lucke, G. A. & Furtner, M. R. 2015. Soldiers Lead Themselves to More Success: A Self-Leadership Intervention Study. *Military Psychology* 27(5), 311–324.
- Manz, C. C. 1986. Self-Leadership: Toward an Expanded Theory of Self-Influence Processes in Organizations. *Academy of Management Review* 11(3), 585–600.
- Manz, C. C. 1991. Leading Employees to Be Self-Managing and Beyond: Toward the Establishment of Self-Leadership in Organizations. *Journal of Management Systems* 3(3), 15–24.
- Manz, C. C. 2015. Taking the Self-Leadership High Road: Smooth Surface or Potholes Ahead? *Academy of Management Perspectives* 29(1), 132–151.

- Manz, C. C., Houghton, J. D., Neck, C. P., Fugate, M. & Pearce, C. 2016. Whistle While You Work: Toward a Model of Emotional Self-Leadership. *Journal of Leadership & Organizational Studies* 23(4), 374–386.
- Manz, C. C. & Sims, H. P. Jr. 1987. Leading Workers to Lead Themselves: The External Leadership of Self-Managing Work Teams. *Administrative Science Quarterly* 32(1), 106–129.
- Manz, C. C. & Sims, H. P. Jr. 1991. Superleadership: Beyond the Myth of Heroic Leadership. *Organizational Dynamics* 19(4), 18–35.
- Manz, C. C., Skaggs, B. C., Pearce, C. L. & Wassenaar C. L. 2015. Serving One Another: Are Shared and Self-Leadership the Keys to Service Sustainability? *Journal of Organizational Behavior* 36(4), 607–612.
- Medina, R. & Medina, A. 2015. The Competence Loop: Competence Management in Knowledge-Intensive, Project-Intensive Organizations. *International Journal of Managing Projects in Business* 8(2), 279–299.
- Miles, R. E., Snow, C. C., Meyer, A. D. & Coleman, H. J. Jr. 1978. Organizational Strategy, Structure, and Process. *Academy of Management Review* 3(3), 546–562.
- Moghaddam, J. Y., Akhavan, P. & Mehralian, G. 2015. Intellectual Capital, Ethical Climate and Organisational Performance: An Interaction Analysis. *International Journal of Learning and Intellectual Capital* 12(3), 232–250.
- Neck, C. P. & Houghton, J. D. 2006. Two Decades of Self-Leadership Theory and Research: Past Developments and Future Possibilities. *Journal of Managerial Psychology* 21(4), 270–295.
- Neck, C. P. & Milliman, J. F. 1994. Thought Self-Leadership. Finding Spiritual Fulfilment in Organizational Life. *Journal of Managerial Psychology* 9(6), 9–16.
- Neck C. P., Mitchell, T. L., Manz C. C., Cooper, K. H. & Thompson, E. C. 2000. Fit to Lead: Is Fitness the Key to Effective Executive Leadership? *Journal of Managerial Psychology*, 15(8), 833–840.
- Nissinen, V. 2007. Kasvu pedagogiseen johtamiseen. *Tiede ja Ase. Suomen Sotatieteellisen Seuran vuosijulkaisu* 65, 335–344.
- Nonaka, I. & Toyama, R. 2003. The Knowledge-Creating Theory Revisited: Knowledge Creation as a Synthesizing Process. *Knowledge Management Research & Practice* 1(1), 2–10.
- Nuopponen, A. 2010. Tunteet analyysissa – Hoitotieteiden käsitteanalyysi tarkastelussa. *VAKKI Symposium XXX: Kieli ja tunteet* 37, 245–256.
Cited 9.11.2016.
http://www.vakki.net/publications/2010/VAKKI2010_Nuopponen.pdf
- Penttinen, M. 2014. Opiskelijavalinnat – työtä tulevaisuudelle. *Tiede ja Ase. Suomen Sotatieteellisen Seuran vuosijulkaisu* 72, 179–196.

- Phillips, N. & Lawrence, T. B. 2012. The Turn to Work in Organization and Management Theory: Some Implications for Strategic Organization. *Strategic Organization* 10(3), 223–230.
- Prahalad, C. K. & Hamel, G. 1990. The Core Competence of the Corporation. *Harvard Business Review* 68(3), 79–91.
- Puusa, A. 2008. Käsiteanalyysi tutkimusmenetelmänä. *Premissi* 3(4), [online], 36–42. Cited 2.1.2016.
https://www.academia.edu/3310906/K%C3%A4siteanalyysi_tutkimusmenetelm%C3%A4n%C3%A4/
- Quinteiro, P. M., Passos, A. & Cural, L. 2016. Thought Self-Leadership and Effectiveness in Self-Management Teams. *Leadership* 12(1), 110–126.
- Reichard R. J., Walker D. O., Putter, S. E., Middleton, E., & Johnson S. K. 2017. Believing Is Becoming. The Role of Leader Developmental Efficacy in Leader Self-Development. *Journal of Leadership & Organizational Studies* 24(2), 137–156.
- Sandberg, J. 2000. Understanding Human Competence at Work: An Interpretative Approach. *Academy of Management Journal* 43(1), 9–25.
- Seeck, H. & Kuokkanen, A. 2007. Ihmissuhdekoulukunta – synty, sisältö ja perintö. *Työelämän tutkimus – Arbetslivsforskning* 5(2), 118–137.
- Seeck, H., Laakso, A. 2010. Adoption of Managerial Ideologies in Finnish Academic Management Education 1960–2007. *Management & Organizational History* 5(1), 37–64.
- Sewell, G., F. 2009. Emotional Intelligence and the Army Leadership Requirements Model. *Military Review* 89(6), 93–98.
- Snowden, D. 2002. Complex Acts of Knowing: Paradox and Descriptive Self-Awareness. *Journal of Knowledge Management* 6(2), 100–111.
- Steinbauer, R., Renn, R. W., Taylor, R. R. & Njoroge, P. K. 2014. Ethical Leadership and Followers' Moral Judgment: The Role of Followers' Perceived Accountability and Self-Leadership. *Journal of Business Ethics* 120(3), 381–392.
- Stewart, G. L., Carson, K. P. & Cardy, R. L. 1996. The Joint Effects of Conscientiousness and Self-Leadership Training on Self-Directed Behavior in a Service Setting. *Personnel Psychology* 49(1), 143–164.
- Stewart, G. L., Courtright, S. H. & Manz, C. C. 2011. Self-Leadership: A Multilevel Review. *Journal of Management* 37(1), 185–222.
- Stokes, S. L. Jr. 1994. Moving Toward Self-Direction. An Action Plan for Self-Managed Teams. *Information Systems Management* 11(1), 40–46.

- Takala, T. & Lämsä, A.-M. 2001. Tulkitseva käsitetutkimus organisaatio- ja johtamistutkimuksen tutkimusmetodologisena vaihtoehtona. *Liiketalouden aikakauskirja* 3(1), [online], 371–390.
Cited 3.1.2016.
<http://docplayer.fi/16344275-Tulkitseva-kasitetutkimus-organisaatio-ja-johtamistutkimuksen-tutkimusmetodologisena-vaihtoehtona.html>
- Tsai, A. 2016. The Effects of Innovation by Inter-Organizational Knowledge Management. *Information Development* 32(5), 1402–1416.
- Tuomi, I. 2002. The Future of Knowledge Management. *Lifelong Learning in Europe* 7(2), 69–79. Published on Tuomi's homepage, [online], 1–15.
Cited 2.1.2016.
<http://www.meaningprocessing.com/personalPages/tuomi/articles/FutureOfKnowledgeManagement.pdf>
- Tuominen, J. 2012. Päällikkö on pääkouluttaja? *Tiede ja Ase. Suomen Sotatieteellisen Seuran vuosijulkaisu* 70, [online], 73–91. Cited 6.1.2017.
<http://www.ojs.tsv.fi/index.php/ta/article/view/7990>
- Unsworth, K. L. & Mason, C. M. 2012. Help Yourself: The Mechanisms Through Which a Self-Leadership Intervention Influences Strain. *Journal of Occupational Health Psychology* 17(2), 235–245.
- Unsworth, K. L. & Mason, C. M. 2016. Self-Concordance Strategies as a Necessary Condition for Self-Management. *Journal of Occupational and Organizational Psychology*, 89(4), 711–733.
- Wong, L., Bliese, P. & McGurk, D. 2003. Military Leadership: A Context Specific Review. *The Leadership Quarterly* 14(6), 657–692.

Finnish Norms and Official Documents

- Erkkilä, E. 2014. *Opinto-opas 2014. Jatkotutkinto-osasto*. Helsinki: Maanpuolustuskorkeakoulu.
- Maanpuolustuskorkeakoulu 2009. Puolustusvoimien esimies- ja vuorovaikutusvalmennus. Järvenpää: Täydennyskoulutus- ja kehittämiskeskus.
- Puolustusministeriö 2016. *Suomen puolustuksen teknologisen ja teollisen perustan turvaaminen. Valtioneuvoston periaatepäätös*. [online].
Cited 1.2.2017.
http://www.defmin.fi/files/3402/PUTE_strategia_fi_010416.pdf
- Puolustusvoimat 2015. *The Finnish Defence Forces' Research Agenda 2015*. [online].
Cited 2.11.2015.
http://puolustusvoimat.fi/documents/1951253/2670014/RESEARCH_Researchagenda_2015_281015_painoversio_small.pdf/383d2500-6d43-42e6-9a1f-6c22aa7260d6

- Puolustusvoimien tutkimuslaitos 2016. *Loppuraportti Maavoimien toimintakykytutkimuksen toimintakykyvaatimuksista jalkaväikyksiköille sekä tykistölle*.
Classified: restricted.
Cited 4.5.2016.
AL846/21.4.2016/The FDF's internal-portal.
- Pääesikunta 1995. *Sotilasjohtaja. Osa I. Johtamisen perusteita (Luonnos)*. 2nd edition (reprinted). Pääesikunnan koulutusosasto, Valtion Painatuskeskus: Helsinki. First published in 1990.
- Pääesikunta 1990. *Sotilasjohtaja. Osa II. Joukkoyksikön johtaminen (Luonnos)*. Pääesikunnan koulutusosasto, Valtion Painatuskeskus: Helsinki.
- Pääesikunta 2004. *Puolustusvoimien palkatun henkilöstön osaamisen kehittäminen 2004–2017*.
Cited 16.4.2015.
R387/5.1/D/III/26.1.2004/The FDF's internal-portal.
- Pääesikunta 2009a. *Varusmiesten johtaja ja kouluttajakoulutus*.
Cited 4.5.2016.
HF1539/7.12.2009/ The FDF's internal-portal.
- Pääesikunta 2009b. *Operatiivisen suunnittelun perusteet (FINGOP)*. Classified: restricted.
Helsinki: Pääesikunta
- Pääesikunta 2012a. *Johtajan käsikirja (JOKÄ)*. Helsinki: Pääesikunta.
- Pääesikunta 2012b. *Puolustusvoimien teknologiastrategia 2012*. [online].
Cited 29.1.2017.
<http://puolustusvoimat.fi/documents/1948673/2267766/PEVIESTOS-Puolustusvoimien-teknologiastrategia-2012.pdf/4a4eea82-fc77-4ae3-aed7-f81ee532a2e1>
- Pääesikunta 2013. *Suorituskyvyn käsitelmä*.
Cited 21.10.2016.
HJ108/21.11.2013/The FDF's internal-portal.
- Pääesikunta 2014a. *Puolustusvoimien normijärjestelmä ja normiohjaus*.
Cited 13.1.2017.
HK350/30.10.2014/The FDF's internal-portal.
- Pääesikunta 2014b. *Puolustusvoimien toiminnanohjaus*. Invalidated on 1.1.2016.
Cited 30.1.2017.
HK192/21.3.2014/The FDF's internal-portal.
- Pääesikunta 2014c. *Puolustusvoimien toimintakäsikirja 2015*.
Cited 30.1.2017.
HK493/1.10.2014/The FDF's internal-portal.
- Pääesikunta 2015a. *Kenttäohjesääntö 1. Henkilöstö ja koulutus*. Classified: restricted.
Cited 8.1.2016.
HL387/22.7.2015/The FDF's internal-portal.

- Pääesikunta 2015b. *Puolustusvoimien henkilöstöstrategia*. [printed version]. Helsinki: Pääesikunta. The electronic version published in 2014.
- Pääesikunta 2015c. *Puolustusvoimien johtaminen ja ohjaus*. Cited 10.12.2015. HL477/29.10.2015/The FDF's internal-portal.
- Pääesikunta 2015d. *Puolustusvoimien koulutustoimialan johtaminen*. Cited 10.12.2015. HL160/24.2.2015/The FDF's internal-portal.
- Pääesikunta 2016a. *Johtaminen ja ohjaus - Puolustusvoimien toiminta*. Cited 30.1.2017. AM21007/ 15.11.2016/The FDF's internal-portal.
- Pääesikunta 2016b. *Johtamisen, rakenteiden ja toiminnan -tutkimuksen (JRT) ensimmäisen vaiheen tutkimusraportti*. Classified: restricted. Cited 30.1.2017. AM20452/8.11.2016/The FDF's internal-portal.
- Pääesikunta 2016c. *Puolustusvoimien digitalisaatiokonsepti*. Cited 30.1.2017. AM19514/27.12.2016/The FDF's internal-portal.
- Pääesikunta 2016d. *Sotilaan toimintakyvyn kehittämissuunnitelma-pilotointi saapumiserällä 2/16*. Cited 30.1.2017. AM8843/18.5.2016/The FDF's internal-portal.
- Siilasto, N. 2015. *Maanpuolustuskorkeakoulu. Opinto-opas 2015, Sotatieteiden maisterin tutkinto, Upseerien koulutusohjelma SM6, Lentoupseerien koulutusohjelma SMOHJ15, Viranomaisyhteistyön koulutusohjelma SMVIR15*. Helsinki: Maanpuolustuskorkeakoulu.

Others

- Cambridge University Press 2016*. Cited 20.3.2016 <http://dictionary.cambridge.org/>
- Merriam-Webster Incorporated 2016*. Cited 20.3.2016. <http://www.merriam-webster.com/dictionary/>
- Oxford University Press 2016*. Cited 20.3.2016. <http://www.oxforddictionaries.com/>
- Publication Forum 2017*. Cited 4.5.2017. <http://www.julkaisufoorumi.fi/>

Socrates 469–399 BCE/2017. Goodreads Inc 2017.

Cited 2.5.2017

<http://www.goodreads.com/quotes/452128-to-know-thyself-is-the-beginning-of-wisdom>

Unpublished Sources

Maanpuolustuskorkeakoulu 2016. *Sotilasjohtaja 2016. (luonnos)*. Helsinki: Maanpuolustuskorkeakoulu.

Virkkunen, J. 2003. Näkemyksiä, ideoita ja palautetta puolustusvoimien osaamisen johtamisen kehittämishankkeen esiselvitysvaiheen raportin (15.5.2003) perusteella. In Mäkinen, J. (Ed.) *Osaamisen johtamisen kehittämishanke*. Documented e-mail message and appendix. (sent originally from jaakko.virkkunen@helsinki.fi on 23.5.2003). Received 8.4.2016.

APPENDIXIES

Appendix 1. Examples about Definitions of Concepts of Leadership and Management, Competence and Knowledge as well as Self-Management and Self- Leadership by British and American Dictionaries	113
Appendix 2. Evolution of Concepts of Action Competence and Deep Leadership	117

Examples about Definitions of Concepts of Leadership and Management, Competence and Knowledge as well as Self-Management and Self-Leadership by British and American Dictionaries

The examples are adopted from the following dictionaries:

- Cambridge University Press 2016 (Cited 20.3.2016)
- Oxford University Press 2016 (Cited 20.3.2016)
- Merriam-Webster Incorporated 2016 (Cited 20.3.2016).

The examples on the definitions of the concepts are featured in the form of tables as follows:

- The definitions of the concepts of leadership and management are in Table 1 on page 114.
- The definitions of the concepts of competence and knowledge are in Table 2 on page 115.
- The definitions of the concepts of self-management and self-leadership are in Table 3 on page 116.

Table 1

Some Examples about Definitions of Concepts of Leadership and Management

Cambridge	<p>Leadership</p> <ul style="list-style-type: none"> a) "the set of characteristics that make a good leader" b) "the position or fact of being the leader" c) "the person or people in charge of an organization" <p>Management</p> <ul style="list-style-type: none"> a) "the control and organization of something" b) "the group of people responsible for controlling and organizing a company"
Oxford	<p>Leadership</p> <ul style="list-style-type: none"> a) "The action of leading a group of people or an organization, or the ability to do this." b) "The state or position of being a leader: the party prospered under his or her leadership." c) "The leaders of an organization, country, etc." <p>Management</p> <ul style="list-style-type: none"> a) "The process of dealing with or controlling things or people." b) "The people managing a company or organization, regarded collectively." c) "The responsibility for and control of a company or organization."
Merriam-Webster	<p>Leadership*</p> <ul style="list-style-type: none"> a) "a position as a leader of a group, organization, etc." b) "the time when a person holds the position of leader" c) "the power or ability to lead other people" <p>Management*</p> <ul style="list-style-type: none"> a) "the act or skill of controlling and making decisions about a business, department, sports team, etc." b) "the people who make decisions about a business, department, sports team, etc." c) "the act or process of deciding how to use something" <p>*Definitions for English Language Learners</p>

Table 2

Some Examples about Definitions of Concepts of Competence and Knowledge

Cambridge	Competence a) "the ability to do something well"
	Knowledge b) "understanding of or information about a subject that you get by experience or study, either known by one person or by people generally" c) "the state of knowing about or being familiar with something"
Oxford	Competence a) "The ability to do something successfully or efficiently." b) "The legal authority of a court or other body to deal with a particular matter." Knowledge a) "Facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject." b) "The sum of what is known." c) "Information held on a computer system." d) "Awareness or familiarity gained by experience of a fact or situation."
Merriam-Webster	Competence* a) "the ability to do something well: the quality or state of being competent" Knowledge* a) "information, understanding, or skill that you get from experience or education" b) "awareness of something: the state of being aware of something" *Definitions for English Language Learners

Table 3

Some Examples about Definitions of Self-Management and Self-Leadership

Cambridge	<p>Self-Management is not directly defined</p> <p>a) NB "Candidates should have good self-management and communication skills."</p> <p>Self-Managed</p> <p>b) "making your own decisions about how to organize your work, rather than being led or controlled by a manager" NB "At the manufacturing company self-managed teams replace hierarchy."</p> <p>Self-leadership is unidentified</p>
Oxford	<p>Self-Management</p> <p>a) "Management of or by oneself; the taking of responsibility for one's own behaviour and well-being."</p> <p>b) "The distribution of political control to individual regions of a state, especially as a form of socialism practised by its own members."</p> <p>Self-leadership is unidentified</p>
Merriam-Webster	<p>Self-Management is not directly defined</p> <p>Self-*</p> <p>a) "yourself or itself"</p> <p>b) "of yourself or itself"</p> <p>c) "by, to, with, for, or toward yourself or itself"</p> <p>Management*</p> <p>a) "the act or skill of controlling and making decisions about a business, department, sports team, etc."</p> <p>b) "the people who make decisions about a business, department, sports team, etc."</p> <p>c) "the act or process of deciding how to use something"</p> <p>Self-leadership is unidentified</p> <p>* Definitions for English Language Learners</p>

Evolution of Concepts of Action Competence and Deep Leadership

Action Competence in 1998

Action competence is a system of four interacting elements, which are physical, mental, social and ethically-moral. Action competence is an individual's feature drawing on social interaction. (Toiskallio 1998, 177–178.)

Deep Leadership in 2000

Leadership behavior is defined by three main dimensions: deep leadership, controlling and corrective leadership as well as passive leadership. Deep leadership contains four sub-dimensions, including building trust and confidence, inspirational motivation, intellectual stimulation and individualized consideration. (Nissinen 2000, 100.)

Action Competence in 2009

Action competence is a holistic entity that comprises physical, social mental and ethical dimensions. Physicality represents his or her existence and sociality is based on surrounding society, culture as well as language. These two dimensions form the basis of an embodied agency. Mentality is related to one's cognitions and is part of an embodied agency. The ethical dimensions can be seen as a cohesive force of action competence, closely connected with his or her identity. (Toiskallio 2009b, 49–50.)

Deep Leadership in 2009

Leadership behavior is defined by three main dimensions: deep leadership, controlling and corrective leadership as well as passive leadership. Deep leadership contains four sub-dimensions, including confidence, inspiration, learning and appreciation. Pedagogical leadership is closely associated with leadership behavior. (Maanpuolustuskorkeakoulu 2009, Session 1.)

**Action Competence and
Deep Leadership in 2012**

Action competence and the Deep Leadership Model (DLM) are examined in connection to each other. Action competence is an entity of physical, mental, social and ethical parts. The core is an identity - *soldiership*, which links these dimensions. Action competence represents lifelong interaction processes of upbringing, experiences and environment. Leadership behavior comprises three main dimensions: deep leadership, controlling and corrective leadership, as well as passive leadership. Deep leadership contains four sub-dimensions, including confidence, inspiration, learning, and appreciation. Pedagogical leadership is closely associated with leadership behavior. (Pääesikunta 2012a, 20, 55, 58, 67–68.)