Successful Adult Learning Principles

in Non-Academic Articles, Organizations, and Academic
Theory

by

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Abstract

Non-academic articles on websites propose adult learning principles without including evidence of academic theory as a validation. As organizations rely on these principles to design adult learning, it is important that organizations are aware of validated principles to make adult learning successful. This study reviews what prominent principles of adult learning can be validated by theory. This is done by focusing on adult learning principles from non-academic articles on websites, organizational insights, and academic theory. This study aims to improve organizations' ability to secure adult learning. Findings from the study have shown that all principles can be validated by Knowles' (1970) theory of adult learning, being the dominant author in the field of adult learning. The research has shown that there are certain principles of adult learning that are found in non-academic articles and not in organizations, and the other way around. The study clarifies eleven principles of adult learning found in non-academic articles, organizations, and academia that help make adult learning successful.

Keywords: Adult Learning Principles, Adult Learning Theory, Malcolm Knowles, Organizational Learning, Qualitative Review, HR, Learning and Development.

Acknowledgement

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1 | Introduction

1.1 Introduction

For an extended period, learning was thought to take place primarily during the first ten to fifteen years of someone's life (Bélanger, 2011). In recent decades, society has challenged individuals to extend this period of learning and stimulate people to engage with learning throughout their entire lives. With the emergence of rapidly evolving knowledge and ongoing changes in the workplace, each member of society is asked to engage in learning continuously, even after their youthful years (Bélanger, 2011). With traditional learning focusing on the formal setting of children's education and learning in a classroom setting, a new field of practice and an academic field has emerged: adult learning (Bélanger, 2011). *Adult learning* can be defined as *"a practice in which adults engage in systematic and sustained self-educating activities in order to gain new forms of knowledge, skills, attitudes, or values"* (Knowles, 2005, p.5). This study focuses on the field of adult learning and makes use of this definition throughout this research.

1.2 Theoretical Background

Within the field of adult learning, authors draw on the study of andragogy. Adult learning, the phenomenon this study focuses on, is a theory that focuses on the learning of adults, distinguishing it from the learning of children (Knowles, 1970). The growing body of knowledge in the adult learning field has yielded the importance of understanding the conditions and requirements that stimulate the growth of learning and development (Cercone, 2008). Numerous theorists have written about different perspectives and practices for adult learning that often originate from the general field of learning (Maslow, 1970; Rogers, 1970; Kolb, 1984; Knowles, 1989; Mezirow, 1991; Bélanger, 2011). These authors use different approaches for arguing what components are important for the learning of adults. Within the field of adult learning, Malcolm Knowles is one of the dominant authors in the field, as many other researchers use his theory to further research adult learning. Knowles has written numerous articles on various topics on adult learning since 1970, with its primary theory being the 'adult learning theory' (1980). This is important for understanding the field of adult learning as it indicates homogeneity and influences the practices of adult learning to derive

from one theory. Awareness of the dominance of one author is vital for assessing the validity of the theories in a field.

In recent years, knowledge of adult learning has sparked the field for both practice and academia (Bélanger, 2011). Adult learning and education provides learning opportunities for adults and aims to expand on these opportunities as a field of practice. As an academic discipline, adult learning aims to research the specific conditions that support or constrain the learning for adults (Bélanger, 2011). In the current field of adult learning, there is little focus on bridging these two disciplines together. Often, theorists are criticized for using only one particular approach while neglecting the other. This study aims to collate the two disciplines of theory and practice, which will be elaborated on in the next section.

1.3 Background of Study

This study originated with the interest of focusing on adult learning in an organizational context and how to make it more effective. Therefore, it started with researching what elements of adult learning appear when researching adult learning in organizations on the Internet. One assumption of this study is that organizations often use practical sources giving information on how to structure processes and organizational practices rather than searching for academic theories to advise on organizational components. Consultancy articles or websites on the Internet specialize in designing and advising organizations for how to design processes. Therefore, this study follows the logic that when designing or researching adult learning practices, HR professionals seek and refer to online articles to give them information on learning in organizations. When researching information on the Internet on adult learning in organizations, many websites present a set of principles for effective adult learning in organizations. These principles are explained as prepositions or prerequisites of adult learning. This study takes the definition of principles as *"A basic truth or theory: an idea that forms the basis of something"* (The Britannica Dictionary, n.d.). When taking this definition into account, it proposes that a principle is based on truth or theory. Therefore, it highlights the importance of having a theory on which the principle is based. When focusing on websites that give advice on principles for adult learning to follow, there is often no theoretical validation for how the author of the websites composed the list of principles.

Through writing about and advising on adult learning principles, the authors of these websites have the ambition to shape adult learning. Advising on these principles leads organizations to implement the principles, allowing them to shape their adult learning

practices. As these authors of the principles of adult learning on these websites impact and shape adult learning in organizations, it begs whether these authors can be seen as experts knowing what they are talking about. When organizations are following these principles, it is important that these principles rely on evidence for proposing them. In order to assess whether the principles written on the websites are reliable to use, this study holds the purpose of researching whether these principles can be validated by theory.

For adult learning principles, practitioners propose principles of adult learning without validating them with academic theory. Focusing on the non-academic articles on the websites gives an overview of adult learning principles in the field. As this study focuses on the context of organizations, understanding these principles in organizations is relevant for the context of the study. Having both angles on adult learning and validating what principles are supported by academic theory allows the study to create a clarified list of validated principles that help make adult learning successful. Therefore, the research focuses on adult learning principles from three different angles; non-academic articles, organizational insights, and academic theory.

1.4 Aim and Objective

The overall purpose of this study is to clarify which adult learning principles help make adult learning successful. When considering what makes adult learning successful, the study follows Knowles' (1970) theory on adult learning for interpretation. Throughout the rest of this study, when referring to Knowles (1970), it refers to all his work meaning 1970, 1980, 1984, 1989, 2005. Knowles (1970) is the dominant theorist in the field, validating his theory and using it as an interpretation is used as a guidance for this study.

In order to clarify adult learning principles, this study aims to compose a set of improved principles that are validated by academic theory and understand which principles are relevant in organizations. Knowing what principles are validated and relevant in organizations helps organizations design their adult learning practices. Ultimately, this will help to make adult learning in organizations more effective.

This study focuses on adult learning principles from three angles; non-academic articles, organizational insights, and academic theory. In order to reach the aim of creating a set of principles of adult learning for organizations, there are three objectives this study seeks to achieve. Firstly, for non-academic articles, the objective is to review adult learning principles from non-academic articles to create an overview of what principles can be found

when researching the topic on the Internet. Secondly, for the organizational insights, the objective is to use the principles retrieved from the non-academic articles to understand how organizations are experiencing these principles by using interviews. Researching the topic from an organizational context adds value to the study as it researches what principles are advised by websites and what principles the organizations are using. Understanding this will give more detail on the context of this study; organizations. Thirdly, for academic theory, the objective is to compare both principles of non-academic articles and organizational insights with theory to understand if the literature on adult learning supports or contradicts it. Reaching these three objectives will provide knowledge on adult learning principles from non-academic sources and how these principles are relevant in an organizational context, both validated by academic theory. This research aims to answer the questions of *"What are the current adult learning principles in non-academic articles?"* and *"What principles can be validated by academic theory and seen in organizations?"*.
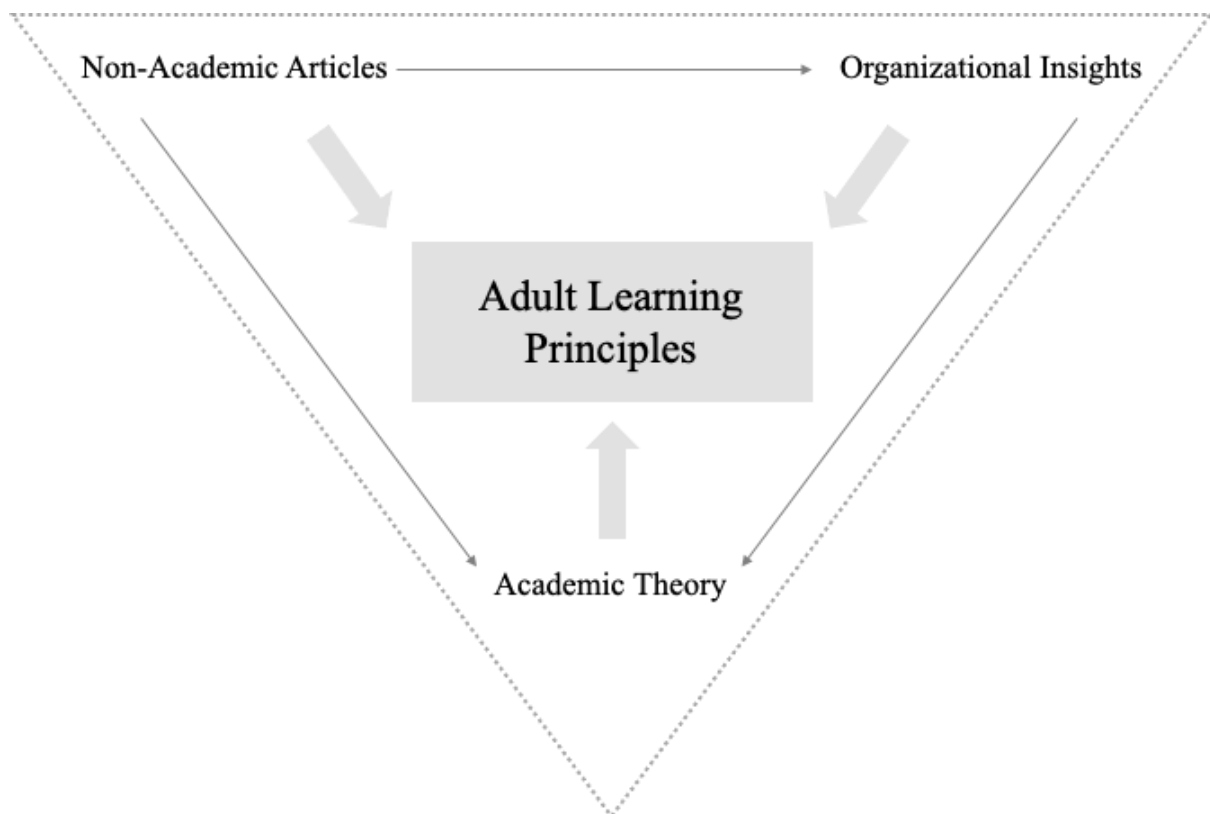
Figure 1. Showing the three angles of the study

1.5 Outline of Thesis

The first part of this research focuses on adult learning principles from non-academic articles. By accumulating data from 80 sources of non-academic articles, a dataset of formulated 'adult learning principles' is created. These principles are categorized and reviewed for both overlap and the number of times mentioned to create an overview of the field of principles from non-academic articles. Once the principles are represented using the dataset, the study reviews how these principles correspond with adult learning theory. Reviewing the principles with academic theory validates which principles correspond with theory and which ones do not. Validating them with theory substantiates a principle as a 'principle' based on the definition of *"A basic truth or theory: an idea that forms the basis of something"* (The Britannica Dictionary, n.d.). Validating each principle found in non-academic articles with theory will create a list of principles important for adult learning.

The second part of the research focuses on adult learning principles from an organizational context. The study explores if the principles from the first part of the study are used in organizations or not. By conducting interviews with eight professionals working with adult learning in organizations, the study receives insights about their experiences with adult learning practices, giving this study an indication of which principles are seen in organizations.

The third element of this study is represented by academic theory. Apart from focusing on adult learning using academic theory, the theory is also used to review the findings from the non-academic articles and the organizational insights.

These three parts clarify which adult learning principles help make adult learning successful.

2 | Research Overview of Adult Learning

2.1 Chapter Introduction

As this research focuses on adult learning, it is essential to get a research overview of what can be currently found in the literature. As mentioned before, Knowles' (1970) theory on adult learning is the most prominent in the field. However, Knowles (1970) was not the first author to develop adult learning, nor was he the first to talk about learning in general. This chapter starts with exploring the topic of andragogy by reviewing where the term originated from and what exactly Knowles' (1970) theory of adult learning entails. What can be seen is that essential authors in learning have laid the foundation from which the theory of Knowles (1970) has evolved. Exploring the key learning theories that Knowles (1970) has used to base his theory on helps verify his theory and our choice of using it as a base for this study. As this research uses Knowles' (1970) theory as a starting point, the findings must be substantiated and critiqued to assess the reliability of using the theory. Therefore, this chapter ends with a criticism of Knowles' (1970) theory, limiting this study. This study does not claim that this is the complete overview of learning theories on which Knowles' (1970) theory is based. There might be other theories relevant to his theories that are not discussed. This chapter attempts to discuss several theories relevant to Knowles to validate his theory with the possibility of many other authors and theories also being influential but not discussed. The selection of these theories is based on importance, using judgment and interpretations by the researchers.

Knowles' (1970) Theory of Adult Learning

5 assumptions of Adult Learners

Adult Learning Experience

Mezirow (1980) Transformative Change — Readiness to Learn

Orientation to Learn

Maslow (1970) Hierarchy of Needs Rogers (1970) — Motivation to Learn

Self-Concept

4 Principles of Andragogy

Self-directed

Dewey (1940) Contextualisation — Experience

Relevancy oriented

Problem-centered

Skinner's (1974) Thorndike's (1931) Stimulus-response Theory Kolb (1984) Learning Cycle

Wertheimer (1924) Gestalt Theory

Figure 2. Framework theories Knowles (1970) is drawing from for the theory of adult learning

2.2 Andragogy and Adult Learning Theory

Andragogy is a learning theory that focuses on the learning of adults and is based on the idea that there are significant differences in learning characteristics between children and adults (Knowles, 1970). Below, further details about andragogy will be displayed.

2.2.1 History of Andragogy

Alexander Kapp first used the term andragogy in 1833 (Henschke, 2016). In his book, he describes andragogy as the lifelong necessity to learn. Kapp (1833) argues that education, self-reflection, and educating an individual's character are the first values in human life (Henschke, 2016). From this, the recurring definition of explaining andragogy as defined by Kapp (1833) *"The education of inner, subjective personality; outer, objective competencies, and that learning happens not only through teachers, but also through self-reflection and life experience, which makes it more than teaching adults"* can be found (Henschke, 2016, p. 2). An extensive period elapsed before the term was used and published again. Thereafter,

Simpson (1964) proposed andragogy to serve as a title to caption the attempt to identify a body of knowledge relevant to the training of those concerned with adult education. He argued that the main components of andragogy could be parallel to the existing literature on child education. Simpson (1964), therefore, proposed that adult education attempts to adopt the field of child education. Knowles (1970) became acquainted with the term andragogy in 1966 when he infused it with his interpretation based on his extensive experience in adult education. Since the start of andragogy in 1833, Knowles has been the primary author dominating the field of andragogy. An important component in his proposition for andragogy was the differentiation between andragogy and pedagogy, referring to the difference between adults and the field of teaching. Knowles argued for some assumptions about adult learners (Henschke, 2016). Firstly, he argued that adults are self-directing, their experience is a learning resource, and their learning needs are focused on their social roles. These assumptions are essential for shaping the principles of adult learning. Furthermore, their time perspective is an immediate application, and their motivation is more internal than external. Lastly, adults want to know a reason that makes sense for them to why they need to learn. Soon after Knowles developed his theory for andragogy, other authors started to research specific contexts and case studies using his theory which contributed to the overall discussion of andragogy (Henschke, 2016). Knowles explored the term andragogy throughout his life as he led programs and worked as a university faculty member at the University of Massachusetts (Kurt, 2020). He focused on the processes of adult learning within the programs he taught but continued to focus on informal adult education. His theory is based on his observations and adult learning experience in his role as a professor and researcher (Kurt, 2020).

2.2.2 Knowles' (1970) Theory on Adult Learning

Focusing more specifically on Knowles' (1970) theory, the theory on adult learning consists of five assumptions of adult learners and four principles of andragogy. The five assumptions and principles structure what components are important for adult learning. The following section describes the theory by explaining the assumptions and principles that Knowles (1970) proposes. Different authors show that many theories draw on Knowles (1970) when explaining these assumptions. The more recent authors are used as a reference for explaining and validating the assumptions and principles rather than the entire theory on its own being argued for by Knowles.

The first assumption of adult learners refers to the adult's independent self-concept and their ability to direct their learning (Knowles, 1970). Knowles (1970) argues that adult learners are autonomous, independent, and self-reliant. Therefore, there is a strong need for adults to self-direct their learning goals.

The second assumption focuses on the notion that adults already have learning and life experience. As said by one author: *"An adult accumulates a growing reservoir of experiences which is a rich resource for learning"* (Merriam & Caffarella, 1999, p. 272). This citation is based on the need to attach relevancy to the learning. Adult learners can build on previous knowledge and experience by relating the new information to past experiences. Adults must be recognized for the value of these experiences. Fidishun (2000) describes: *"Adults want to use what they know and want to be acknowledged for having that knowledge."* This assumption is based on Kolb (1984), who argues that learning is a continuous process based on experience: *"Learning is a process whereby knowledge is created through the transformation of experience"* (Kolb, 1984, p. 38). It will be elaborated further in the next section on what learning theories Knowles (1970) draws on to create his theory.

The third assumption is based on the readiness of an adult to learn. Merriam (2001) argues that the readiness of learning for adults is closely related to changing social roles. An essential component in the readiness for an adult to learn is the learning to be goal-oriented. Adults know what they want to learn and want to design their learning according to attaining their personal goals. Therefore, this assumption highlights the importance of the learning being relevancy- and goal-oriented.

The fourth assumption is that *"There is a change in time perspective as people mature - from future application of knowledge to immediacy of application. Thus, an adult is more problem-centered than subject-centered in learning"* (Merriam & Caffarella, 1999, p. 272). Lieb (1991) argues that adults are practical and need to focus on what is of value to them. The adult needs to understand how the learning will immediately benefit them, highlighting the importance of orientation learning.

The fifth assumption focuses on the motivation of the learner. It argues that adults are motivated to learn by internal factors rather than external ones (Heshenke, 2016). Factors from which adults are motivated include promises of increased job satisfaction, quality of life, and self-esteem. Lieb (1991) adds that adults respond positively when the learning environment is comfortable and safe. Furthermore, he argues that self-reflection is essential for learners to reflect on their performance and progress in the learning process.

When focusing on the principles of andragogy that Knowles (1970) proposes, the first principle argues that adults need to be involved in the planning and evaluation of their instruction. Second, experience provides the basis for adults' learning activities. Third, adults are most interested in learning subjects showing immediate relevance and impact on their job and personal lives. Fourth, adult learning is problem-centered rather than content-oriented (Knowles, 1970). These principles are elaborated on further throughout the study when discussed with findings from this research. In the study, research is done on the principles proposed by non-academic articles and HR professionals to compare whether these are in line and can be validated by Knowles' (1970) theory.

2.3 Learning Theories Relevant to Knowles' Theory

In the theory of learning, different scholars and theorists have argued for different perspectives on learning. From the literature field of learning, three major theories have emerged, which can be linked to Knowles (1970) as some of his arguments are drawing on these theories (Bélanger, 2011). These three theories include behaviorism, cognitivism, and constructivism. For each paragraph, the theory is discussed with closing remarks linking it to Knowles's (1970) theory and highlighting its relevance.

2.3.1 Behaviorist Theory of Learning

The first theory to consider for Knowles' (1970) theory is the theory of behaviorism. This theory focuses on the behavior and context in which the individual operates, focusing less on the individual's mental state (Bélanger, 2011). The theory mainly emerges from Skinner's (1974) argumentation that an individual's learning context starts with their behavior and how that behavior plays out for future learning. The consequences determine the likelihood of it being reinforced. This theory is paired with Thorndike's (1931) stimulus-response theory and explains how these behavioral patterns emerge. The behavior that correlates to either a positive or negative consequence, such as a reward or punishment, creates the stimulus for that particular behavior to be reinforced or not. Therefore, the behaviorism theory argues that external conditions explain learning rather than internal stimulants. External social and material reinforcements drive learning (Bélanger, 2011). Therefore, mistakes within learning should be avoided and are not regarded as an experience but as a source of problems (Bélanger, 2011). This theory is relevant to Knowles' (1970) theory as it connects to the

importance of experience and how context and behavior shape the learner's experience. As explained earlier, the learner's experience provides the basis for the learning activities (Knowles, 1970).

2.3.2 Cognitivist Learning Theory

The cognitivist theory (Clark, 2018) focuses on the gestalt theory by M. Wertheimer (1924), which interprets learning as an internal cognitive process. Compared to the behaviorist approach, which focuses on the external conditions of an individual, this theory highlights how the internal process of individuals rules learning. In the gestalt theory, the learner is viewed at the center of the internal process, as the individual thinks about the elements required to solve a problem. These elements are then linked together to grasp the situation. In grasping the situation, an essential component is the occurrence of a sudden insight of connecting the relations and finding a solution (Clark, 2018). The learning process proceeds through steps of trial and error followed by insights. The process allows the learner to reproduce the solution with less uncertainty and develop the newly learned principle. For learning in this theory, cognitivism goes beyond external behavior and tries to understand what happens inside the learner's brain. The information processing in this cognitive process is formed by memory, knowledge, and representation. Learning is explained by internal processes being confronted with external conditions (Clark, 2018). Whereas the behaviorist approach only considers external factors, the cognitivist approach considers how the external influences shape the cognitive process. As Bélanger (2011) explains, *"If people's beliefs or judgments about their own capabilities play a key role in any learning process, such perceived self-efficacy is reciprocally influenced by an individual's life story and by his or her current life and work context"* (p. 25).

Furthermore, within the cognitivist theory, mistakes are reviewed as a source of learning. Cognitive conflict and problem situations are forces that drive learning (Bélanger, 2011). This theory is critical to discuss as Knowles (1970) highlights the importance of a readiness to learn. This readiness to learn is created by the internal cognitivist process of the learner. Therefore, the cognitivist process of adult learners shapes the readiness to learn and the ability to see the relevance of their learning. The cognitive ability to link the learning together with the relevancy of the situation helps to give meaning to the learning. The internal process of being confronted with external conditions shapes the ability to see its relevance.

2.3.3 Constructivist Learning Theory

The constructivist theory focuses on learning in the sense that learners should actively engage in constructing their knowledge. Merriam & Caffarella (1999) quote, *"Basically, a constructivist stance maintains that learning is a process of constructing meaning; it is how people make sense of their experience"* (p. 261). Within the constructivist approach, learning is about the cognitive process in which an individual is confronted by the input of a new environment or new knowledge. Through this new input, the individual modifies their knowledge or learning scheme and constructs new meanings. Within the construction of knowledge, cognitive conflict plays an important role (Merriam & Caffarella, 1999). Dewey (1940) argued for the importance of contextualization in constructivism. He explained that knowledge must first be constructed in a significant context to mobilize and transfer knowledge to other life contexts. Learning is explained by internal processes but emphasized by social mediation (Bélanger, 2011). Social confrontations, conflicts, and interactions stimulate the construction of knowledge and therefore learning. Knowledge should be regarded as contextualized to be transferred into learning (Bélanger, 2011). When considering how this has shaped Knowles' (1970) theory, the importance of learning being self-directed is one of the key components of the theory. The self-directedness and self-concept are discussed in the cognitivist theory, as well as it argues that learning should actively engage in constructing the process and knowledge themselves (Knowles, 1970). It also shapes the importance of learning being relevancy-oriented, as, in order to transfer knowledge to other life contexts, knowledge must be constructed in a significant context. Therefore, problem-centered learning takes a significant context that helps transfer the knowledge gained with the learning from and to it.

2.4 Adult Learning Theories Relevant to Knowles' (1970) Theory

Even though Knowles' (1970) theory is the most dominant in the field, other theories also explain adult learning. Being aware of other theories in adult learning is vital for understanding what has shaped Knowles' (1970) theory and acknowledging differences and critiques of his theory. Being aware of critiques on the theory helps this study remain critical and assess its reliability. For each paragraph, the theory is discussed, with closing remarks linking it to Knowles' (1970) theory and highlighting its relevance.

2.4.1 Humanist Theory

The first learning theory important for understanding adult learning is the humanist theory. The humanist theory is based on two notions from the theorists Maslow (1970) and Rogers (1970). Maslow (1970) proposed the theory that human motivation is centered around a hierarchy of needs. He regards learning as a process in which individuals attempt to fulfill their potential (Maslow, 1970). Learning is a form of self-actualization and is sourced from the hierarchy of needs. Rogers (1970) focuses on learning from a therapeutic perspective highlighting the importance of building a relationship. For learning, Rogers proposes that the fundamental question is not how to teach but how to build a relationship with the learner (Bélanger, 2011). This relationship can be used to actualize their personal growth. The humanist theory takes a stance against the behaviorist school of thought as they argue that the development of the individual is the finality of education. Therefore, the teacher is a facilitator in actualizing the learner's potential. The learner is always the main driver of the process. The teacher only acts as an indirect stimulant, but the primary motivation needs to come from an intrinsic need to learn. Within the humanist approach, the learning process is interpreted through a more comprehensive frame taking into account the cognitive and affective aspects when considering the person's feelings and intellect. This school of thought is based on the optimistic view that people have an inner capacity for growth, change, and personal development. The learning experience is significant when it has meaning for the individual, and they are getting something out of it (Bélanger, 2011). Knowles (1970) argues for the importance of motivation by referring to Maslow's (1970) hierarchy of needs to explain how motivation for the learner is based on an internal process. As Maslow (1970) is one of the founding authors of the theory of motivation, drawing on this author makes it a reliable aspect of Knowles' (1970) theory.

2.4.2 Experiential Theory

The second theory for adult learning is experiential learning. This theory refers to a learner-centered approach whereby a learner's past experiences provide a meaningful reference for further learning (Bélanger, 2011). Learning is regarded as a process in which knowledge is created through the transformation of one's experience. Therefore, learning becomes significant when related to a real personal experience of an individual (Bélanger, 2011). An important component in experiential learning is reflective practice. In this, learning is based on experience and prior knowledge. Learning starts with reflecting on an action or

condition in the experiential learning process. Experience is the initial force that drives learning. However, not all experiences lead to learning. To transform the experience into knowledge and a learning process, the individual needs to take a reflexive attitude towards their actions and experiences. This experiential learning theory draws from Kolb's (1984) cyclical model to better understand how individuals learn from their experiences. Kolb (1984) describes learning as *"The process whereby knowledge is created through the transformation of experience,"* with knowledge resulting from *"The combination of grasping and transforming experience"* (p. 41). In Kolb's (1984) model, there is a learning cycle between concrete experience, reflective observations, formation of abstract concepts, and active experimentation. In his experiential learning theory, experience plays a key role in the learning life course (Bélanger, 2011). It takes a learner-centered approach in which learning is an inductive process, and reflection is what drives the potential for an experience to turn into learning. As Knowles (1970) explained, experience is one of the fundamental principles of andragogy. The learner making mistakes and using their experience provides the basis for the learning.

2.4.3 Transformative Theory

For the transformative learning theory, Mezirow (1980) introduced the idea of focusing on transformative change when analyzing and interpreting adult learning processes. He described, *"The issue is not only to acquire new knowledge, but to develop new glasses to look differently at reality and existing knowledge"* (Mezirow, 1991, p. 6). In transformative theory, the learning process may remain adaptive by adding new knowledge and skills or lead to a transformation in which individuals regard reality (Bélanger, 2011). In that case, learning is not only concerned with adding more things but also with seeing them differently. In this sense, the theory differentiates between an assimilation process and a transformative process. In the assimilation process, new experiences are shaped to conform to existing knowledge and structures. In the transformative processes, new knowledge is added, but the structure is being changed. The interpretation of experiences and knowledge guides the transformation process for transformative learning. There is a critical reflection of assumptions through which an individual reflects ways of seeing oneself and one's relationships and habits in this process. There is strong freedom in interpreting previous beliefs that can distort reality. Social and cultural constraints are sources of learning as they could potentially question an individual's frame of reference and stimulate the transformative process. This transformative

process is crucial for adult learning. It is not always about acquiring new knowledge but also about developing new lenses to look differently at existing knowledge and perceived realities (Bélanger, 2011). Knowles (1970) talks about the orientation to learning and how the time perspectives change from one application of knowledge to another. He argues that the orientation towards learning shifts to problem-centeredness and therefore impacts how the problem is perceived. The orientation to learn is shifted throughout the learning process as the learner is experiencing a transformation of reality by adding more knowledge and skills (Knowles, 1970).

2.5 Criticism of Knowles' Theory

Many authors and professors criticized Knowles for a lack of context and too heavy of a focus on practical knowledge rather than theoretical knowledge. Regarding the first criticism of a lack of context, authors such as Merriam and Caffarella (1999) and Smith (2002) argue that Knowles' theory of andragogy does not consider the context of learning. The authors refer to and highlight the importance of each learner being unique. Characteristics related to culture, life experience, and gender are not actively included in Knowles' (1970) research. The authors argue that these components might be more important for learning than the individual being an adult. Pratt (1993) argued, *"While andragogy may have contributed to our understanding of adults as learners, it has done little to expand or clarify our understanding of the process of learning, 'nor has it achieved the status of a theory of adults learning"* (p.21). Smith (2002) proposes that Knowles' theory is a beginning of an attempt to try and build a theory of adult learning as it has *"Anchored the characteristics of adult learners"* (p.3). However, Knowles (1970) draws from two opposing traditions; humanism and behaviorism.

Concerning the argument for a solid practical rather than theoretical approach, Merriam and Caffarella (1999) criticize that andragogy assumptions are principles of practice rather than theory. The assumptions primarily describe what the adult learner might be like from a practical approach. Merriam stated, *"Knowles himself came to concur that andragogy is less a theory of adult learning than 'a model of assumptions about learning or a conceptual framework that serves as a basis for an emergent theory"* (p.5). Merriam's critique is important for this study as this research aims to review principles of adult learning from both non-academic articles and academic theory. The critique accurately questions whether there is

a difference between adult learning principles from non-academic articles and academic theory.

Furthermore, Knowles' theory is criticized for ignoring *"Issues of power and social justice, in society and in the educational process; the need for critical reflection as a necessary component of an adult learning process; the crucial place of dialogue and discussion as means for learning; and a recognition of multiple ways of knowing and learning"* (Schapiro, 2003, p. 152). Schapiro (2003), and Merriam and Caffarella (1999) suggest that Knowles' theory of andragogy and adult learning attempts to understand the difference between adult and childhood learning but cannot be viewed as a complete theory on adult learning. This study builds on the criticism that Knowles' theory might be too generic to be relevant in every situation. The reasoning for why this study also focuses on principles of adult learning in organizations as criticism has shown that there might be differences in these principles that are relevant in different contexts.

The critical reflection of Knowles' Theory (1970) will be used in the discussion to make an interpretation of the findings of the study and take it into a broader context of the adult learning field.

3 | Methodology

3.1 Chapter Introduction

This chapter focuses on describing and arguing the research approach this study takes and, at the same time, explaining the methodological decisions made to serve this study's purpose. It starts with briefly describing the research approach this study takes while defining the research design, data collection, and data analysis. The methodology is structured from a broader to a more detailed description of the steps taken during the research. After the research method is explained, the chapter assesses and criticizes the study in terms of reliability, subjectivity, ethical considerations, quality criteria, and limitations. This way, the methodology explains its design while criticizing and assessing the overall plausibility of this study.

3.2 Research Approach

This study looks at adult learning principles from three different angles; principles gathered from non-academic articles, principles gathered from organizational insights, and academic theory of adult learning principles. The research uses two types of data collection methods to collect the principles. The first data collection consists of gathering non-academic principles. The non-academic principles are compiled through a review of non-academic articles. The second data collection consists of obtaining organizational insights regarding the collected adult learning principles, as well as inviting participants to display other principles they regard essential for adult learning. This data collection is done through qualitative interviews. The principles encountered in these data collections are researched in academic theory to see if they are valid and originate from academia. The study takes an abductive approach by going back and forth between the findings from the different data collections and comparing them with theory within the subject. It can be said that the study takes a triangulation method by exploring the topic of adult learning principles from three different angles. The choice of the research method is made for its ability to explore adult learning principles from a theoretical and a practical approach. The approach will eventually help reach the purpose of this study in clarifying a list of adult learning principles that make adult learning successful.
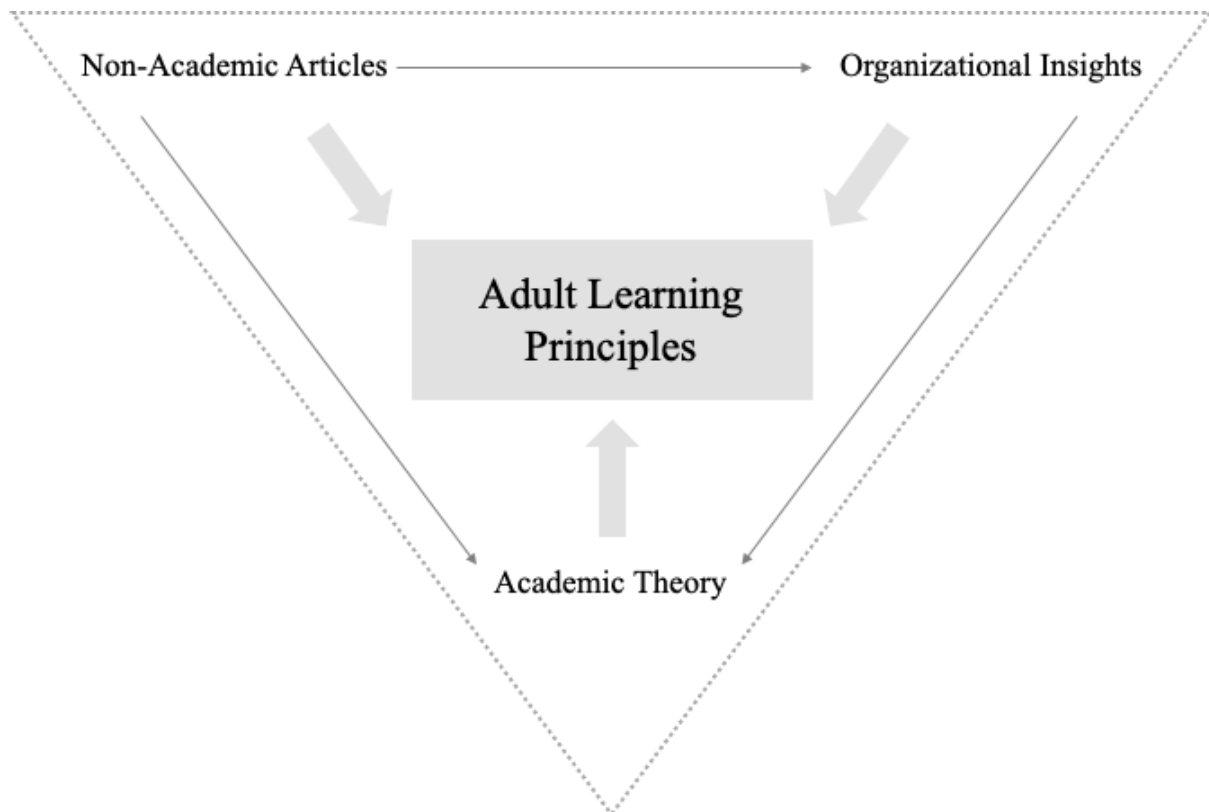
Figure 3 (same as figure 1). Showing the three angles of the research

3.3 Research Design

The study utilizes a triangulation method by using two qualitative methods and comparing the findings to theory. Therefore, the topic of adult learning principles will be researched from three different viewpoints, making it a triangulation method. As this study goes back and forth between the principles of non-academic articles, organizational insights, and academic theory, the study uses an abductive research design (Bryman & Bell, 2015).

The first viewpoint consists of non-academic articles. For this component, a review of non-academic articles on adult learning principles is done by focusing on 80 online articles. The data from the articles are compiled together to create an overview of what principles can be found in the field of non-academic articles. An interpretive list is created by analyzing the data showing the prominent principles in the field, based on the criteria most frequently mentioned.

The second viewpoint consists of organizational insights. Qualitative interviews are conducted with HR professionals working with adult learning. The interviews are based on

the list of principles from the non-academic articles, but participants are encouraged to add or remove principles from this list.

The third viewpoint is academic theory. For this component, academically reviewed articles are used to validate the findings from the non-academic articles and organizational insights. A particular focus is laid upon finding recent authors to ensure up-to-date knowledge. However, it was found that the more recent theories stem from older research, often going back to Knowles' (1970) theories of adult learning. After thorough consideration, the authors of this study decided that the theories found, regardless of the original year conducted, were still relevant in today's time since they are so generic.

3.4 Data Collection

As this study consists of adult learning principles collected from non-academic articles and organizational insights, the two different data collections will be described separately below.

3.4.1 Data Collection of Non-Academic Articles

Since this study aims to collect principles from non-academic articles, it was valid to use a non-academic search engine when researching the principles. As Google is a very accessible search engine, HR professionals have easy access to it. Therefore, the search engine Google was chosen because of its accessibility to our sample group. When researching the topic of adult learning, the reoccurring information displayed was adult learning principles. From that finding, it was decided to use the search term *adult learning principles* to gather further information about the phenomena.

The search term resulted in many outcomes regarding adult learning principles. It was decided to ignore videos and ads to partially limit the search, resulting in around nine sources on each Google page. The sources ranged from articles from consultancy firms, management websites, and learning centers.

The principles were noted until saturated, which occurred on page ten of the search. The sources and the principles were collected in an excel sheet to have an accessible overview. Before searching, it was made sure that the search took place on a computer that had not before researched the subject *adult learning*. Google gives results based on relevance for the individual user, and by using a computer that had not researched the subject before, the risk of getting inaccurate results was reduced. Neither was the search refreshed to reduce

the risk of getting the same sources twice. However, there is always a risk of this occurring when using a search engine such as Google, and therefore, the sources were cross-checked once the excel was finished to make sure that the same source only appeared once.

Once the overview was done, the search was validated using alternative formulation of the wordings to see if the result would remain the same. Search words such as *characteristics of adult learning* and *principles for grown-up learning* were used and provided the same result as the first search term used: *adult learning principles*. Once the principles were saturated and validated with alternative wordings, the refining of the result began. The principles were connected under different categories that aligned with each other, which resulted in 20 categories. Each principle that appeared more than once was placed in a category. However, principles with different wordings but the same meaning were placed in the same category. The categories created were as follows: *Life experience, relevancy-oriented, self-directed, random* (uncategorized*), practical, learning style, goal-oriented, respected, problem-centered, readiness to learn, motivation, ownership, want to learn, active, feedback, mentorship, safety, repetition, task-oriented,* and *reflection*. The category *random* consisted of findings from the sources that only appeared once and did not connect to the other categories. For example, principles like *"Adults are babies with big bodies"* and *"Adult attention spans are often about 15–20 minutes"* were put in this category.

Table 1. Shows the categorization of the principles.

Life experience	Readiness to learn
Relevancy-oriented	Motivation
Self-directed	Ownership
Random (uncategorized)	Want to learn
Practical	Active
Learning style	Feedback
Goal-oriented	Mentorship
Respected	Safety

Problem-centered	Repetition
Readiness to learn	Task-oriented
Motivation	Reflection

3.4.2 Data Collection of Organizational Insights

Interviews with eight HR professionals working with adult learning were conducted to get organizational insights regarding what principles are used in organizations when working with adult learning. The participants consisted of six women and two men, all of whom had a minimum of two years of experience working with adult learning. Three of the participants had more than twenty years of experience. The participants were of different ages, ranging from their 20s to 60s. The participants also had different nationalities and were working in different countries. Seven of the participants worked in Europe, and one worked in Asia.

The data was collected using non-probability sampling, meaning that the organizations were not random. The participants were found and selected using a combination of typical-case sampling and snowball sampling. Typical-case sampling refers to identifying the most typical instances and choosing participants in this area (Esterby-Smith, 2021). In other words, choosing organizations or participants that are most fitted as a representative of the population. Snowball sampling refers to participants recruiting or recommending other participants that fit the sample (Esterby-Smith, 2021). These strategies could be combined as convenience sampling, meaning that the sample is selected because of its accessibility (Esterby-Smith, 2021). This study uses a combination of these sample strategies. About half of the participants recommended each other, and the other half were chosen because they were seen as typical cases.

The organizations that the participants represent have not played a significant part in the data collection. The participants were asked to answer the questions provided (see appendix 10.1) with experiences from their whole working life, not only in their current organization. Nevertheless, some data could be influenced by the sector or branch that the participant is working within. The participants have in common that they are all working with adult learning in organizations as HR professionals. However, the organizations range from different branches, and some are, for example, working with tech, some with finance, and some with management. The participants are also working in both the private- and public

sector, with different organizational sizes. The conscious decision was made not to emphasize which type of organization or sector the participants were working in because of the interview design. Since the participants were encouraged to use experiences from their whole working life and not only their current one, we believe that the result is generalizable and adaptable to many different organizational contexts. This makes their current organization or industry they are working in less relevant.

By using qualitative interviews, the study obtains in-depth experiences of specific contexts that make it possible to understand the topic from the participant's perspective (Esterby-Smith, 2021; Bryman & Bell, 2015). The interviews begin with exploring the adult learning practices that the participant has experienced. The interview then focuses on the adult learning practices identified through the non-academic articles. The interview ends with the participant evaluating the importance and effectiveness of each principle and describing which ones are used in the organization and which ones are not. The interview ends with an open question asking the participant to add anything he or she sees as meaningful. Using a structured rather than an unstructured interview ensures that the participants provide comparable answers (Esterby-Smith, 2021). However, ending with an open question ensures that the participants can add valuable knowledge to the phenomena that the researchers have not yet thought of (Esterby-Smith, 2021).

3.4.3 Summary of Data Collection

The study examines adult learning principles in non-academic articles and then validates them with academic theory. Once that is done, the study examines adult learning principles in practice by conducting qualitative interviews with HR professionals. These interviews serve as the organizational insights about adult learning and adult learning principles for the study. Within these interviews, the principles retrieved from the non-academic articles are discussed, as well as additional topics related to adult learning principles. The interviews explore adult learning principles used in the organization and the participants' experiences using these. The interviews help understand which adult learning principles from the theory are used in organizations and which ones are not. After the interviews, newly mentioned principles are researched to see if they are validated by theory or not, just as the principles found in non-academic articles. Using these two approaches helps to see which adult learning principles are prominent in non-academic articles and which are used in organizations by professionals. By then validating the principles with academic theory makes it possible to see

the topic of adult learning principles from three different viewpoints; non-academic, organizational insights, and academic theory. These findings will allow this study to reach its purpose of interpreting what principles help make adult learning successful.

3.4.2 Collection of Academic Theory

From the findings of the non-academic articles and the interviews, the aim was to validate whether the principles found had academic evidence or not. Each principle was researched using an academic search engine to evaluate its validity. The search engine used was Scopus. The subject areas used in Scopus were 'Social Sciences' and 'Business, Management and Accounting' as this study is written from a managerial approach. The subject areas were used to limit the search and receive relevant results. Search words were related to each of the findings; for example, when researching the category life experience, search words such as *life experience AND adult learning* were used. The findings from the academic theory will further be displayed in 4.2.1–4.2.9 and 6.1–6.2.

The relevancy of the material found was filtered by mainly two things. Firstly, the number of citations, as it was easier to find relevant articles by using this inclusion criterion. Secondly, the overall relevancy and context of the articles in connection to the purpose of this study. Some consideration was taken regarding the year of the article, as it first seemed relevant to aim for more recent research. However, as previously mentioned, it was discovered that this requirement was irrelevant, and most articles, regardless of year, referred back to the same sources and can still be considered relevant today. Naturally, articles on adult learning that did not directly or indirectly address the principles were excluded.

3.5 Data Analysis

The data analysis of this study can be split into two components as it follows the two different data collections. First, data analysis was done on the collected principles from the non-academic articles. The two researchers of this study categorized these principles independently to see if they make the same interpretation of the categories. Doing the categorization independently and then comparing it to each other strengthens the chance of a correct interpretation of the categories (Esterby-Smith, 2021). Even though others might interpret the result differently, it is more reliable that two researchers look at the result

independently and have the same interpretation of the categorizations than if they would have done it together or if only one had done it.

The categorization gives an overview of the number of principles per category, explaining the number of times a principle is mentioned and the degree of dominance for that principle. After the categorization, the categories are analyzed according to their presence in the non-academic articles. By comparing and contrasting which principles are found in the academic theory and which ones are not, conclusions can be drawn for which principles are substantiated by theory and which are not.

For the second component of this research method, the data collected from the interviews are analyzed using a qualitative method. The transcripts from the interviews are reviewed using content analysis for classifying and determining patterns in the findings (Esterby-Smith, 2021).

These recurring patterns are used as one component of the data analysis. However, another essential component in this research is to look at the first part of our research, the collected non-academic principles. A vital characteristic of this study is to analyze how the information from the non-academic articles is experienced in organizations. Therefore, apart from looking at the data collected from the interviews, the findings are compared and contrasted with the findings from the non-academic articles and academic theory. The analysis will use an exploratory method connected to the study's abductive approach (Esterby-Smith, 2021). With this method, the two datasets of the non-academic review and the interviews can be analyzed, indicating the main characteristics and conclusions validated by theory. These conclusions help the study achieve its research aim for adult learning principles for non-academic articles, organizational insights, and theory.

3.6 Reliability, Subjectivity and Ethical Considerations

Certain precautions have been made to increase the reliability of this study. When focusing on reliability, the accuracy of the measures of this study is enhanced by utilizing a triangulation method of using multiple methods for qualitative data (Leung, 2015). Using these different kinds of data from non-academic articles, organizational insights, and academic theory substantiates the findings and conclusions to create a list of principles successful for adult learning. If this research would only focus on one type of data collection, the results would not be as reliable as they are right now through the contrasting and input

from three different data sources. These three different sources help to magnify how the principles can be interpreted as successful. As this study is based on the interpretation of findings, there is a certain level of subjectivity involved in the analysis. As with most studies that focus on the experiences of individuals, the researchers use their own judgment to find patterns and themes in the data. Using multiple angles to focus on adult learning, as well as both researchers doing the analysis in an independent manner helps to limit the subjectivity of this study. When focusing on how the methodology is appropriate for answering the research question, qualitative data from the non-academic articles shed light on what professionals are likely to find when searching for adult learning online. Therefore, that data helps to answer the research question, "*What are the most prominent adult learning principles in non-academic articles?".* The question *"What principles can be validated by academic research and are used in organizations?"* will be answered using academic theory to validate the principles found in answering the first question and using interviews to gain organizational insights into the topic. Answering these two research questions helps this study to achieve its aim.

Furthermore, for ensuring reliability, the measure's consistency and results are ensured by multiple features during data collection and analysis (Leung, 2015). For example, in the data collection of the non-academic articles, a laptop that had never searched adult learning principles before was used to ensure that the search was not influenced or biased in any sense. For the data analysis, the two researchers did the categorization independently. By making the categorization independently and discussing the principles categorized differently, objectivity in this part of the data collection was ensured. For the data analysis of the organizational insights for the interviews, the content analysis was again done independently. Having two researchers perform a content analysis on the same data and prove the same results heightens the study's replicability (Leung, 2015).

When focusing on ethical considerations in this study, there is no use of sensitive or personal data. Each participant was asked for their voluntary participation, and the anonymity of their insights was guaranteed. No personal information or names are included within the data collection that could tie the results to a participant or organization. Having two independent researchers doing the analysis helps to limit researcher bias and makes the study more objective.

3.7 Quality Criteria and Limitations

When focusing on the quality criteria for this study, credibility, transferability, dependability, and confirmability can be assessed (Bryman & Bell, 2015). When assessing the credibility of the data, it can be argued that all the participants have extensive experience with adult learning as they have all been in the field for several years. There is no personal gain or interest involved for the participants to give a particular answer. They are all independent of this research, and all data will be anonymized, allowing the participants to speak their minds freely. Regarding the correct interpretation of the data, including two researchers instead of one researcher in this process limits the misinterpretation and reflection of the participants' insights (Bryman & Bell, 2015). With the triangulation method, using multiple data collection methods ensures the results are not only based on one source, making them more credible (Bryman & Bell, 2015).

For transferability, the principles found in adult learning can be applied or transferred into any adult learning situation. Regarding the insights from organizations, the research evaluates various organizations and is not explicitly focused on one sector. From the number of interviews, there are a variety of sectors included. Therefore, these insights are not specific to a particular situation or case study, making the insights transferable to other environments (Bryman & Bell, 2015).

For dependability, the data analysis shows what the majority of the participants are experiencing and whether these findings are consistent throughout the entire data set or not. This consistency is discussed in the analysis to assess the consistency and repeatability of the study. As this research is not solely focusing on one event or situation or has importance for time, the results are repeatable for future studies (Bryman & Bell, 2015). As all steps of this research are carefully explained and considered before conducting the study, other researchers could repeat the same study.

Confirmability of this study is ensured by the possibility of repeating the study and having a high reliability level. By showing the findings from the different data collections, other researchers can interpret the findings and confirm or invalidate the study (Bryman & Bell, 2015).

The limitations of this study are primarily focused on a limited number of participants, a generalized sample group, and indirect interpretations from theorists. Focusing on the first limitation of a limited number of participants, including more participants, could give the study a more enriched data set of insights and experiences. These extra insights

could give new findings that are not experienced by the number of participants the study has today. For the generalized sample group, the study uses participants from various sectors and not a specific one. If this research only focused on one sector, the results could have been applicable and relevant for that specified sector but not for others. The current study generalizes more in the findings, making it applicable for many sectors but might lack specifics per sector. For the final limitation, including interpretations from the theorists directly rather than using their academic articles to interpret possible patterns could further validate the findings. These limitations derive from time constraints and limited access to resources.

4 | Principles of Adult Learning in Non-Academic Articles

4.1 Chapter Introduction

As this research focuses on adult learning principles found in non-academic articles, the chapter will start by showing a quantitative overview of the findings. Thereafter, an analysis is done of the selected principles, using academic theory from the adult learning field to assess whether the principles can be validated. Lastly, a list of all the prominent principles that can be validated by theory is created, answering the first research question: *"What prominent principles of adult learning can be validated by academic theory?"*

4.1.1 Research Considerations

For this study, some research considerations have been taken. One crucial notion for the data collection of the non-academic articles was that 'principles' were included in the study when the source included the term 'principle.' Noteworthy to say, not all of these findings meet the requirements of a principle. Some could be described as topics or prerequisites for adult learning to happen. Nevertheless, as the findings occurred using the search word *adult learning principles*, and the non-academic sources described them as principles for adult learning, the conscious decision was made to display them as findings for adult learning principles. Chapter seven, the discussion, will elaborate on whether these findings should be displayed as principles or something else.

      The principles are categorized according to the general theme found in the principles. For example, a principle described: "*An adult learner is a person with a sense of self, bringing all previous life experiences, both personal and professional, to bear on new learning. Past experiences affect what the learner learns and are the foundation for current learning*" is categorized to the theme of life experience. As this thesis examines the most prominent adult learning principles in non-academic articles to those used in organizations, it was decided to limit the theory search to principles that occurred at least 20 times. The number 20 was based on the researchers' assessment of which principles were prominent or not. The principles that occurred on less than 20 occasions were often formulated differently than the ones above 20 occasions and did not indicate the same importance to them.

4.2 Result of Review for the Non-Academic Principles of Adult Learning

The search for non-academic principles of adult learning found on Google resulted in 506 adult learning principles. After categorizing the findings, the following table was made, ranging from principles occurring the most to principles occurring the least. As previously mentioned, it was decided to only research principles occurring more than 20 times, resulting in nine principles of adult learning that are analyzed with academic theory.

Table 2. Categorization of adult learning principles and the number of occurrences.

Principles Theme	Number of Occurrences
Life experience	70
Relevancy-oriented	62
Self-directed	59
Random (uncategorized)	56
Practical	49
Learning style	36
Goal-oriented	29
Respected	24
Problem-centered	20
Readiness to learn	20
Motivation	17
Ownership	14
Want to learn	11
Active	10

Feedback	8
Mentorship	7
Safety	7
Repetition	3
Task-oriented	2
Reflection	2

4.2.1 Principle One: Importance of Life Experience

The most prominent principle was *life experience*, which occurred 70 times in the data collection of non-academic articles. For example, one source displayed it as:

"Adults have accumulated a foundation of life experiences and knowledge that may include work-related activities, family responsibilities, and previous education."

It could also be seen in the other sources that they defined it as similar, ranging from expressions such as '*Adults bring life experiences and knowledge to learning experiences'* to simple words like *'experience*.'

In theory, life experience is described as a central component in the learning process of the learner's experience (Knowles, 1970). The experience is regarded as the interaction between the individual and his or her environment. Therefore, the quality and amount of the individual's learning is influenced by the quality and amount of interaction between the learner and the environment. These two components, the interaction, and environment determine their power and ultimately shape the individual's learning experience (Knowles, 1970).

For adult learning, the experience has even more influence on learning. An adult has a greater depth and variation in the quality of previous life experience than younger people who are learning (O'Brien, 2004). Past educational or work experiences may impact the learner's ideas regarding education and their preferences for it. When these former experiences are actively embraced and acknowledged in the current learning process, they can have meaningful assistance.

As every adult ages, the individual has gained experiences from their learning process in their youthful years as well as after that time (Knowles, 1970). From those years, adults have accumulated a more comprehensive range of experiences than children simply because they have been living longer. When comparing the meaning behind experiences for adults and children, there is a difference. For a child, an experience is something that happened, an external event that occurred but is not yet an integral part of him or her. Children are likely to identify themselves regarding who their family is or what school they attend. Therefore, identity is derived from external sources. However, with adults, the set of unique experiences they accumulated over the years represents them. When asking an adult who he or she is, it is likely to be in terms of their occupation, travels, and achievements. Because an adult defines him or herself partly by these experiences, they have even more value to it. When these experiences are not acknowledged or minimized in the current learning process, the person feels that these experiences are reduced in value. This often leads to the adult feeling devalued (Knowles, 1970).

Knowles (1970) describes three consequences for the importance of life experience in the learning process. First, adults have more to contribute to the learning of others due to the previous wisdom of their experiences. Second, adults have a richer foundation of experience to relate to new experiences. Third, adults have obtained a larger number of fixed habits and patterns and therefore tend to be less open-minded.

4.2.2 Principle Two: Importance of the Learning Being Relevancy-Oriented

The second most prominent principle was *relevancy-oriented,* which occurred on 62 occasions. One source described this principle as:

"Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life."

However, simply the sentence *'Adults are relevancy oriented'* was mentioned 11 times in different sources. A majority of those sources did not provide any further explanation of the meaning or impact of the principle. In theory, relevancy-oriented is described as that learning needs to be relevant for the individual (Knowles, 1970). In general, learning is described as a process of need-meeting and goal-striving for the learner. For adults, they must see the relevance of why they need to learn something (Knowles, 1970). Adults are not inclined to

learn something in which they cannot see the point in relation to their own situation. When the individual is motivated to engage in learning, he or she will invest time and energy in making use of available resources. The individual is engaged in learning when he or she feels a need to learn and recognizes a personal goal that their learning will help to achieve. When the learner understands the relevance of the learning to achieve their needs or goals, the individual's motivation will heighten (Knowles, 1970). Lieb (1991) describes adults as individuals that want to see a reason for learning something. Learning should be applicable to work or home, and they need to be able to connect it to their own life situation.

4.2.3 Principle Three: Adults are Self-Directed

The third principle was *self-directed*, which occurred 59 times in the sources. Self-directed was described by one source as:

"Adult learners are self-directed and want to be actively involved in the learning process."

However, it was also described in 17 sources as the following:

"Adults are autonomous and self-directed" or *"Adults are internally motivated and self-directed."*

The self-directed principle was the principle that was the easiest one to cluster since almost all of the sources mentioning this principle used similar wording. However, the sources also added words that broadened the meaning of the principle. In theory, self-direction is described as the learner playing an active part in the learning experience and driving the direction of the learning himself (Knowles, 1970). This could be connected to autonomy and motivation, thus, making it a broad principle that can be interpreted in many ways.

Further, self-directed learners can be understood as learners that independently decide what to learn and how to do it, regardless of entering competencies and contextual contingencies (Candy, 1991; Garrison, 1997). The learners are aware of their constraints in their efforts to learn, including the influence of habits of perception, thought, and behavior they attempt to learn (Mezirow, 1981). When comparing adult learning to youth learning, children have complete dependency as they must be cared for by an adult (Knowles, 1970). For adults, the self-concept is encouraged and reinforced as the individual ages. An adult

makes his or her own decisions and faces its consequences this way managing their own life. Therefore, within the learning, adults also require this high perception of the self-concept to self-direct their learning process. Not even for their own feeling of self-direction, but they also require others to acknowledge this ownership. Therefore, adults require high levels of ownership for their own self-concept as well as this self-direction respected by others (Knowles, 1970).

Long (1989) identified three dimensions of self-directed learning: sociological, pedagogical, and psychological. Sociological can be described as independent task management, while pedagogical can be described as the application in the educational context, and psychological as the cognitive part (Long, 1989). Adult learners have different ways of knowing and have alternative perspectives for understanding their situation. Hence they experience different learning needs, different educational strategies and methods, and different techniques of research and evaluation (Mezirow, 1981).

Self-directed learning originated from independent and informal adult learning contexts (Though, 1971). However, Brookfield (1985, 1986) argues that self-directed learning combines external activities and internal reflective dimensions. Rogers (1969), on the other hand, believes that the internal part of self-direction is mostly about taking responsibility for the internal cognitive and motivational aspects of learning. Without the cognitive or psychological dimension, it is not a matter of self-directed learning; rather, it is self-directed teaching (Long, 1989).

Not to say that every adult is self-directed by themselves, sometimes adults need help to become self-directed, which the teacher then needs to assist with (Cercone, 2008). However, the self-directed principle is a principle that says that the learner will be inclined to learn if the learning is self-directed. Therefore, it is something important to address while designing a learning environment for adults (Knowles, 1970). Teachers could, for example, actively involve the learner in the learning process by guiding and facilitating the process rather than working with fixed frames. A way to do this would be to allow the learner to choose different learning methods (for example, role-playing, project work, case studies) and provide flexibility in time and design of assignments (Lieb, 1991). Overall, the importance of self-direction is giving the learner freedom to make their own decisions regarding their learning.

4.2.4 Principle Four: Importance of the Learning Being Practical

As the fourth principle was *practical,* it occurred 49 times in the sources. As well as being described as '*adults are practical,*' one alternative description mentioned was:

"Adult learners are practical - they need direct, concrete experiences in which they apply the learning in real work."

Hence, the principle contains that the learning should be not only practical but also relevant to the individual's work.

In theory, the principle is described as adults being practical and wanting to apply their learning to their day-to-day lives (Knowles, 1970). Since they have a lifetime of experiences to draw from, they can learn from techniques that differ from children's. For example, adult learners can incorporate their previous knowledge and experience in group discussions, case methods, critical incident processes, simulation exercises, role-playing, skill-practice exercises, field projects, action projects, laboratory methods, consultative supervisions, demonstrations, seminars, work conferences, counseling, group therapy, and community development (Knowles, 1970). It is essential to realize the difference between child- or youth education, with a more considerable emphasis on lectures, assigned readings, and presentations, i.e., more traditional learning. As adults are more practical and have more experience to draw from, the learning and learning experience must be designed to make it possible for the learner to plan and rehearse the learnings in their daily life (Knowles, 1970; Lieb 1991). To ensure that the learner stays motivated, the teacher can emphasize how the learning will be meaningful in the learners' life and give practical examples of the information studied (Cercone, 2008).

4.2.5 Principle Five: Being Aware of Learning Styles

The fifth principle was *learning style,* mentioned 36 times in the sources. The principle was the most difficult one to categorize since the wording of the principle differed in almost every source. The key takeaway from this principle was that adults have different learning styles that need to be considered. One way of explaining the principle was as follows:

"Adult learners learn best in informal settings where they can interact socially."

Whereas another source instead emphasized the difference in learning styles:

"Adults exhibit a variety of learning styles, and there is no one "right" way of learning. They learn in different ways at different times and for varying reasons".

In educational fields, different learning styles are regarded as the uniqueness of how learners receive and process information through their senses (Orey, 2010). According to Felder (1996), *"learning styles are characteristic strengths and preferences in the way [learners] take in and process information"* (p.1). There are many different learning styles, with visual, aural, reading/writing, and kinesthetic/tactile learning being examples. Most individuals learn through all learning styles but have certain strengths and weaknesses in a specific style.

The first learning style is the visual learning style. Within this style, individuals process information most effectively when the information is seen. Visuals can include charts, circles, graphs, hierarchies, and many other depictions that are used that could have been presented in words. Individuals who are strengthened in the visual learning style have a vivid imagination and use pictures to guide their thoughts.

The second learning style is the aural learning style, in which learners process information when spoken or heard. Individuals respond to lectures and discussions as they are strengthened in listening. At the same time, these learners also enjoy talking; however, when recalling information, they 'hear' the way someone has spoken the information.

The third style focuses on the effectiveness of processing information when presented in a written language format. When recalling information, learners remember the information from the learner's mind's eye. In this style, important components of the information are highlighted to put special emphasis on remembering that part of the information.

The last learning style is the kinesthetic or tactile style which uses physical means to process information. Kinesthetic refers to the body movement, and tactile refers to the sense of touch. When individuals prefer this learning style, they are weakened in other styles, such as listening or speaking, as these individuals quickly lose interest. The learner needs to have a strong connection with the real situation by connecting it to experiences, practices, examples, and simulations (Orey, 2010).

4.2.6 Principle Six: Adults are Goal-Oriented

The sixth principle *goal-oriented* occurred 29 times. The principle was one of the least elaborative ones, and 18 of the total 29 sources only displayed it as *'adults are goal-oriented'*. However, one source was a bit more elaborative in its descriptions:

"Orientation to learning. As an adult, rather than the learning being relevant later as it is for school children, learning shifts to being goal oriented".

The goal-oriented principle focuses on goal-striving within the learning context (Sitzmann, 2011). It is closely related to self-direction of learning in the sense that the learners themselves desire to reach a level of achievement (Karolyn, 2005; Zimmerman, 1986; Winne, 1995). Frese and Zapf (1994) argued that goals are action-driven, and by having a goal for the learning, the learner is actively changing his or her orientation to fit the goal. This could, for example, mean that the learner decides on relevance between competing goals, develops a prognosis for future events, makes plans, executes plans, monitors progress, and reviews feedback according to the goal.

There is both an internal and external dimension of goal-oriented learning, although the internal dimension plays the most significant part. The internal part is the learner's motivation to engage in learning so that the individual themselves feels like they are reaching a personal goal and are learning something that they want and need to learn (Sitzmann, 2011). However, the external part is more related to the learner's success in achieving the goal. For example, even though the internal dimension is the most prominent one, the external dimension takes place in receiving feedback that allocates efficiency of action. By receiving external feedback and becoming aware of one's mistakes or opportunities to develop, the learner develops his or her learning by reflection (Ivancic & Hesketh, 2000; Keith & Frese, 2005). The foundation of goal-oriented learning is that the learner systematically adapts their actions during training to achieve their learning goals (Sitzmann, 2011). However, these learning goals are primarily internal and decided by the learner. Therefore, adult learners must have self-motivation for what they are learning (Sitzmann, 2011). As explained, this principle is closely connected to other principles, for example, *self-directed learning*, *relevancy-oriented*, and *ownership*. However, the foundation of the goal-oriented principle is that the adult learner is striving toward some personal and beneficial goal.

4.2.7 Principle Seven: Importance of Respect

The principle *respected* occurred 24 times and was most often described as:

"Adult learners like to be respected."

Two other sources described the principle a bit more elaborative:

"Adult learners have a wide range of experiences, knowledge, self-direction, interests, and competencies. Learning activities should accommodate and respect this diversity."

As well as:

"Adult learners like to be respected. They bring considerable life experiences to their clinical placements. They like to be treated as equals, to voice their own opinions, and to have a role in directing their own learning".

Therefore, the principle *respect* emphasizes the importance of adults feeling respected in the learning environment. However, it also ties to other principles, such as *life experience* and *self-direction*.

The theory of respect connected to adult learning moves in a similar direction, closely connecting other principles. Adults in learning tend to avoid, resent, and resist situations in which they are treated like children (Knowles, 1970). When being told what to do and not to do, punished, judged, and talked down to, it limits their feeling of autonomy. Adults require a high level of autonomy, especially in their learning environment. For this reason, adults need to be treated with respect, make their own decisions, and be acknowledged as unique human beings. There is a high importance of respecting the self-concept within learning for adults. This self-concept requires them to be autonomous, especially as adults carry their previous educational experiences with them and might use them in their future learning expectations. Suppose this experience was negative, and they are placed back into a role of being very dependent on the teacher requiring a high level of obedience. In that case, it can ensure high levels of resistance. At the same time, adults are often surprised by high levels of respect for their autonomy as they are very used to and expected to experience their youth learning atmosphere. However, adults tend to value this respect once they get used to their new

learning process. In terms of how respect is regarded, it takes the form of being listened to, cared for as an individual, and treated as a unique human being in a personal manner (Knowles, 1970). Lieb (1991) reported that respect should always be shown in the learning process, no matter the learner's age. He argues that adults respond positively to learning environments that are comfortable and safe. Having a respectful environment helps ensure safety in the learning environment (Lieb 1991).

4.2.8 Principle Eight: Importance of Learning Being Problem-Centered

The eighth principle, *problem-centered*, appeared 20 times in the sources. This principle has numerous explanations to it, one being:

"Adults favor a pragmatic approach and must be able to apply learning to solve a specific problem."

Another one explained it as:

"Adults want their learning to be problem-oriented, personalized, and accepting of their need for self-direction and personal responsibility."

As displayed, this principle is connected to other principles as well. For example, the second citation connects to the principle of *self-direction*. What seems to be a pattern is that the principles that do not appear as often in the sources are instead connected to or mentioned together with other principles. In the beginning, principles such as *life experience* were mainly mentioned on their own. Although different explanations for the principle could occur, it was not clustered with others.

In theory, the importance of learning being problem-centered is described the same way as in the non-academic articles. Adults are problem-centered in their orientation to learning. This means that they would rather learn to solve problems than learn subjects (Merriam & Caffarella, 1999). The problems should originate from the learner's experiences or happenings in their daily life (Knowles, 1970). Therefore, the learning should be designed to fit the learner's problem, not just any problem. A way to do this would be not to have a fixed set of objectives to reach but rather to let the learner have a say in the direction of the learning. Thereafter, the learning should be a combination of problems that are needed for the

learning and problems that the learner takes into the setting (Knowles, 1970). Cerecone (2008) gives examples of how to make the learning problem-centered. For example, the teacher can encourage students to apply their life and work experiences to learning, include problem-solving in groups, and incorporate real-life activities or events in the teaching.

4.2.9 Principle Nine: Importance of Readiness to Learn

The last principle occurring 20 times was *readiness to learn*. Most sources described this principle just as the title, *readiness to learn*. This was the case in 13 out of the 20 sources. However, one source described it further:

"As a child matures, they reach a certain threshold of learning readiness (such as reading or basic math facts), but adults have already been through this development and need to rely on past experience or life changes to develop a renewed readiness: Renewing your readiness to learn as an adult often happens by way of a situational trigger. Perhaps you lose your job or want to switch careers, for example. Or perhaps your next promotion hinges on mastering a skill."

The principle emphasizes the importance of being ready to learn for it to happen. The theory further explains it as factors of life that determine if the learner is ready to learn or not. It can be compared to children having to learn how to crawl before learning how to walk; it is a matter of being ready and prepared to take the next development step (Knowles, 1970; Merriam & Caffarella, 1999). Unlike children, where the readiness to learn is mainly determined by psychological and mental maturation, adults' readiness to learn is determined primarily by social structures and roles (Merriam, 2001). Robert J Havigurt (in Knowles, 1970) divides adults into three phases: early adulthood, middle age, and later maturity. For all the phases, different roles are present during different times in adulthood. The roles are worker, mate, parent, homemaker, son or daughter or aging parents, citizen, friend, organization member, religious affiliate, and user of leisure time. Depending on which role you are in and in which phase you are learning, the readiness differs. The adult learner also experiences the roles differently depending on the phase one is in. The requirements for performing each role change hence the development and readiness to learn change. One way to put it is that adults learn the things necessary for them to advance from one phase of development to the next (Knowles, 1970). Social influence takes its part not only in the

established roles but also in the motivation to learn. If a developmental task arises in the learner's life and the learner successfully completes the task, the learner is granted happiness and a likelihood of success with later tasks. However, if the learner fails, it leads to unhappiness, disapproval of society, and difficulty with later tasks. Although, each developmental task produces a readiness to learn, which may increase the learner's possibilities to learn (Knowles, 1970).

4.3 Interpretation of Principles of Non-Academic Articles in relation to Academic Theory

The analysis of principles of non-academic articles gives an overarching interpretation of what principles could be validated and which ones could not. An overall interpretation of how the principles are found in non-academic articles in relation to the academic theory sheds light on the criticism found for Knowles' (1970) theory on adult learning and the debate between practical articles and academic theory. Validating and discussing the principles helps to achieve the first aim of creating a list of validated principles of adult learning, adding to the clarification of what validated principles are important for successful adult learning. A validation of principles substantiates the argument that the principles are important as there is theoretical evidence.

Collecting the data resulted in 20 categories of principles, of which nine were further researched by adult learning theory as they were assessed as prominent principles in the field. What can be seen is that the theory is mainly originating from Malcolm Knowles, who, as previously mentioned, can be seen as the dominant author in the adult learning field. Not many authors besides Knowles were found when researching the subject, implying that the field primarily consists of his findings.

4.4 Principles of Adult Learning Not Included in This Study

When focusing on the list of principles, some principles have not been concluded in our research. First of all, this is due to the lack of frequency mentioned principles being a reason for not giving substantial reasons to research them. Second of all, due to certain principles being closely aligned with principles mentioned more frequently, it was chosen to focus on

the more prominent principle. For example, the principle *task-oriented*, which is highly aligned with the principle *problem-centered*, was mentioned only two times. Whereas the principle *problem-centered* was mentioned 20 times, therefore being more significant and prominent in the dataset. Another example is the principles of *want to learn* and *readiness to learn*. *Want to learn* was mentioned eleven times, and *readiness to learn* was mentioned twenty times. Based on these differences in frequency, the researchers of this study decided to focus on the principles that were mentioned more often. The alignment between the two principles was based on doing theoretical research for both, resulting in an aligned theory or argument. The study did not include the other non-included principles, such as *repetition*, *mentorship*, and *ownership*, since they were mentioned significantly less than the selected principles. Another example of this is the principle of *safety*, mentioned seven times, often mentioned with a direct or indirect connection to *respect*, mentioned 24 times. The decision to limit the academic theory search to principles occurring more than 20 times was also made for this thesis's length and time frame. Although this chapter only reviews principles that occurred more than 20 times, other principles such as *feedback* and *motivation* were mentioned during the interviews, which are discussed in chapter five.

The principles not selected and researched included the category *random*. The relatively large number of principles categorized as random made the categorization of the principles complex, and many of the principles in that category had few similarities with adult learning. Principles like *"Adults are babies with big bodies"* with no further explanation or anything to back the statement up were not uncommon and lowered the level of seriousness, even for a non-academic article. Although, it was clear that either the principles originated from Knowles, with reference to his principles and with slight moderations of his principles, or the principles were random with little relevance for adult learning. None of the principles in the random category were mentioned twice. However, the sources where these principles were found, were most often a combination of two to three principles originating from Knowles and two to three random principles. Only three sources consisted of solely random principles. At the end of the search, from page eight and onwards, the random principles occurred more often than at the beginning of the search. Therefore, it can be analyzed that the result from the first pages mainly consists of principles from Malcolm Knowles, and it is only at the end of the search that other statements occurred.

4.5 List of Validated Principles of Adult learning from Non-Academic Articles

The following list is compiled based on the author's ability to interpret the most prominent adult learning principles from the non-academic articles. This research does not claim that this is a definite list of all the adult learning principles in the field; instead, it displays the most prominent ones from the selected method and data collection. The formulation of these principles is based on the most recurring wording used from the data. The order of principles listed does not indicate the importance or value of the principles.

1. Adult learning should acknowledge the learner's *life experience*: adults come with a wide range of previous experiences, knowledge, interests, and abilities.
2. Adult learning should be *relevancy-oriented*: adults need to see the relevance of the learning to their life situations.
3. Adult learning should be *self-directed*: adults have a strong need to embrace their self-concept.
4. Adult learning should be *practica*l: adults need direct and concrete experiences to apply to their learning.
5. Adult learning should identify preferred *learning styles*: personal preferences for learning styles should be reflected throughout the learning process.
6. Adult learning should be *goal-oriented*: adults need to work towards a goal.
7. Adult learners need to be *respected*: adults want to be treated equally, with their opinions, values, and beliefs respected.
8. Adult learning should be *problem-centered*: adults need their learning to revolve around problems since they are problem-solvers.
9. Adult learning is dependent on *readiness to learn*: as adults reach different social roles, it influences their readiness to learn.

4.5.1 Summary of Non-Academic Principles

Below is a summary of the selected principles found in non-academic articles that are also found in academic theory. Therefore, it can be said that the principles below are validated in the sense that they, even though they originate from non-academic sources, have a background in academia.

Table 3. Shows non-academic principles validated in academia.

Non-Academic Principles	Academic Validation
Life experience	X
Relevancy-oriented	X
Self-directed	X
Practical	X
Learning style	X
Goal-oriented	X
Respected	X
Problem-centered	X
Readiness to learn	X

5 | Principles of Adult Learning in an Organizational Context

5.1 Chapter Introduction

The following chapter displays the objective findings from the interviews with HR professionals who have a minimum of two years of experience working with adult learning in organizations. This chapter aims to pursue the purpose of this study to understand which principles organizations are using and which principles are not used in organizations. Subtopics represent recurring themes from the analysis, and quotes from the interviews are shown to exemplify the findings.

5.2 Perception and Definition of Adult Learning in Organizations

Starting with the overall understanding of adult learning in organizations, the participants had similar views of adult learning and its definition. All of the participants talked about adult learning from an organizational perspective, reflecting their definition of adult learning. An explanation provided by one of the participants was as follows:

"Adult learning is about finding strengths or skills where people have ambition in becoming better. It is about continuous learning and development".

All participants described adult learning in similar ways. They also distinguished between child and adult learning and emphasized the organizational context. From the findings, some critical components of adult learning were found. For example, four participants mentioned the importance of learning as a process. The participants described the process differently, as some described it as a three-part process; pre-learning, learning and applying. Others described it as a more fluent process consisting of learning, processing, applying, and reflecting. However, the emphasis was on continuous development and acceleration of skills.

5.3 Principles used in an Organizational Context

The participants distinguished between principles used in the organization and those not used in the organization. Most of the participants agreed that the nine selected principles from the non-academic articles were connected and valid to adult learning; however, the participants saw some of them as irrelevant for organizations to use.

The principles mentioned relevant to use in an organizational context were *life experience*, *relevancy oriented*, and *learning style*. These principles were frequently mentioned in the nine selected, although the participants viewed them slightly differently. What was agreed on by all participants was that the most important components of adult learning are that the learning connects to the learner's life experience and that the learning is relevancy-oriented. Suggesting that all adults have a wide range of experiences to draw from, and their learning and what they choose to take in from their learning are dependent on what they already know.

"Different backgrounds and experiences will determine how you interpret a situation and make sense of it, you know? You and I will not look at a situation the same way since we have different experiences in dealing with situations, and this is something to appreciate as it gives us opportunities to learn from each other".

Another participant described *life experience* as a trigger point to continue learning, as changes in your life motivate you to keep on learning. One participant mentioned that she sees better outcomes of the learning when the coming learning is linked to what the person already knows, as this increases the chances for learning.

The other key component was the importance of the learning being *relevancy-oriented*. Since adults have gone through mandatory learning as children, they need to see the relevance as to why they need to learn now since it will take place in a more voluntary context. Therefore, the learning needs to be relevant for the individual to happen. Thus, it also needs to be relevant to the organization if they are to spend a budget on it. Apart from the learning itself being relevant, most participants highlighted this principle because of its connection to motivation. If the learning is relevant, the person will feel more motivated to endure the training and engage in it, providing a better outcome. If the person sees the relevancy of the learning in a beneficial way to his or her life, it will provide an intrinsic motivation to continue learning. However, as mentioned by one participant, it is not always

that the relevance for the individual and the organization aligns; then, the organization needs to work with other ways to motivate the learner:

"You could, for example, work a lot with coaching and mentoring to get people to understand the need for training. You have to show the organizational benefits of the training and really get people to see the individual relevance as well".

The third key component was *learning style*, where the participants emphasized the importance of adapting the learning to the individual's preferred learning style. One participant mentioned:

"More awareness needs to be created that there are different learning styles for people and the learning should be designed according to the individual."

The participant further describes her experiences in giving training, in which some people learn best by reading and getting all the background information before grasping a problem. Others learn best by being practical from the start. This participant could also see a generational difference, where the older generation preferred the first alternative and the younger generation the second. Another participant emphasized a similar note but saw differences regarding the field of the organization. From her experience, organizations with highly educated employees require more theoretical knowledge before grasping a problem, not for the problem itself but for validating the knowledge they were about to learn. The majority of the participants agreed that it is essential to address the learning with consideration of individual learning styles. However, how to do this differs depending on how closely you work with the people you are providing training for and how well you know their needs. It was described that larger organizations tend to have more resources to put on formal training. Therefore, HR's job is to find an external consultant or firm that can provide the training rather than working with it in-house. Thus, the responsibility to address different learning styles moves from HR to the one providing the training, whereas the challenge for HR is to work closely with the firm providing the training to describe the different needs and desired outcomes.

5.4 Principles Not Used in an Organizational Context

When discussing the principles with the participants, the participants argued for principles that could be relevant in a personal learning context but not in an organizational context. The participants continuously emphasized that although they agreed that the selected nine principles connect to adult learning, they did not think that all of them belonged in an organizational context. Instead, they suggested that some of them are only relevant on a personal level when the individual is choosing to engage in learning by themselves. Seven out of eight participants made this distinction, arguing that some of the principles are not relevant for organizations to consider because the learning is not voluntary. Since the learning derives from the organizational need, there is no relevance in considering principles such as *readiness to learn* or *self-directedness*. The training often needs to happen regardless of the individual's feelings or readiness. However, even though these principles were mentioned as not used by most participants, one participant explained *readiness to learn* as follows:

"Learning always starts with being ready to learn. When employees are not ready to embrace their learning environment, it will not happen."

Whereas another participant made the distinction:

"Readiness to learn cannot be forced on someone. As training is sometimes obligated, the readiness to learn is not relevant in organizations. There are other principles that are more important for organizations to focus on."

This argument holds the same for the principle of *self-directedness*. Participants explained that when the learning is voluntary, then being self-directed is essential. However, as in the organizational setting, learning is not always done voluntarily, and, therefore, the *self-directedness* principle is not a critical learning driver.

One participant shared his concern for the principle of *respect*, as he did not see the relevance of the principle. He argued that the principle was unclear and might be more relevant in a personal learning environment.

"I do see the difference compared to children's learning; however, I just do not see its relevance from an organizational perspective. Why would it make a difference, or why would it be a vital component of learning in organizations?"

The overall finding from the participants was that some principles were not considered relevant in the organizational context and, therefore, not used. Participants could imagine that these could have a more significant influence on the individual learning environment outside organizations. However, *readiness to learn*, *self-directedness*, and *respect* were principles the participants did not deem relevant. *Readiness to learn* and *self-directedness* originate from the individual self, which according to the participants, is not applicable in an organizational context with obligated training. *Respect* was mentioned as something that you expect in a professional setting but not something that the participants see as crucial for successful adult learning.

5.5 Interpretation of Principles of Adult Learning in an Organizational Context

During the interviews, six participants talked about some principles being more critical than others. As mentioned by one participant, these principles could be regarded as core principles. The principles regarded as core principles were *relevancy-oriented*, *life experience*, and *problem-centered*, and these could be regarded as the fundamental or significant principles for adult learning. Furthermore, some principles were not regarded as essential for learning, but they helped facilitate the learning to be efficient. These principles were regarded as environmental principles. Environmental principles were *practical*, *goal-oriented*, *feedback, intrinsic motivation* and *learning style*. The findings can be displayed as follows:
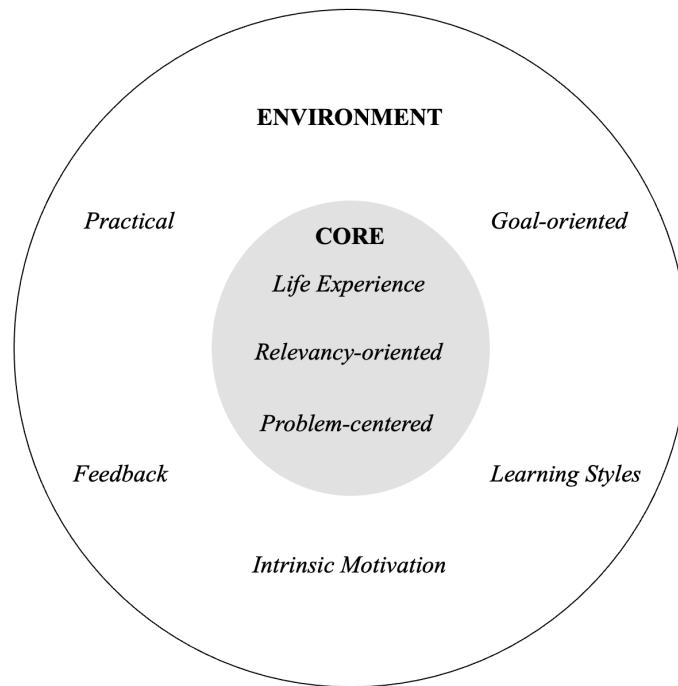
Figure 4. Illustrating how the findings can be interpreted in a broader framework.

The principles are divided into core principles that form the essential principles marking the foundation of adult learning and principles that form the environment that stimulates and gives the learning direction.

The core component concerning learning being *relevancy-oriented* proved to be most important for organizations. Findings explained that when the learning is relevancy oriented, it helps to reason why an employee needs to follow a training and highlights the importance of the learning for the organization. Often, participants explained that the *learning being practical* was part of the *relevancy-oriented* principle as it helped the employee understand why there was a practical need for the learning. The *practical* principle was further elaborated on as a necessity to ensure that the learning was successful and applicable in the learners working life. Therefore, the *practical* principle helps to facilitate the learning environment as it helps to measure whether the learning was a success. The same goes for the *goal-oriented* principle that applies to the environment of adult learning. The goal-oriented learning is seen in organizations as a short-term indication for why the learning is done. When comparing *relevancy* to *goal-oriented*, *relevancy oriented* focuses on the importance of the learning for the organization.

In contrast, the *goal-oriented* principle focuses on the individual employee and what the personal goal can be for the learning. As the organization serves the resources available

for the employee, how it is relevant for the organization is more important than how it is applicable and can be a goal for the employee. Therefore, the goal-oriented principle is more of a stimulating factor connected to the relevance of the learning that helps to facilitate the overall learning. When an employee clearly understands the need for the learning and how it will help the employee to reach their personal goal, it helps to embrace the learning rather than hinder it.

The second core component is *life experience*. Life experience is one of the key features that distinguish adult learning from traditional learning as it takes the employee's life experiences into account. This life experience impacts how effective the learning for that person will be and determines the importance of the other principles in the environment. Actively engaging with the life experience of an employee and embracing how this might impact their learning only helps to intensify the learning. Therefore, this principle is a core component of adult learning.

The third core principle is learning being *problem-centered.* This principle is connected to the *relevancy-oriented* principle but focuses on the pragmatic learning approach in organizations. As organizations often focus on seeing quick results of their learning and understanding how it positively impacts the organization, participants explained that learning is often done pragmatically. Learning should be centered around how working ways can be more efficient and how problems in the organizations can be fixed. Even though the learning is often not formulated in the sense of solving 'problems' as employees could take it personally that their work is resulting in a problem, it still originates with the need to solve a problem. Therefore, *problem-centered* is where the learning originates from but is often formulated in connection to *feedback*. Giving feedback to employees on areas that could be improved is how the participants often communicate that there is a need for learning. When saying that there is a problem, participants explained that employees often feel attacked, making the learning experience harmful. Therefore, using feedback to translate the need for learning stemming from the problem-centered principle helps facilitate a supportive learning environment. Once the need for learning has been established, arising from the *problem-centered* principles translated through *feedback,* the learning environment can be designed according to the necessary *learning style*. A personalized learning style positively impacts the success of the learning as participants explained that when individual learning styles are considered, employees are more willing to embrace the learning. Therefore, the core principles of *relevancy-oriented*, *life experience*, and p*roblem-centered* lay the

foundation for the other principles, while the principles in the environment help facilitate the learning environment for the employee.

As seen in figure four, three principles have been removed from being used in organizations neither in the core nor environment. These are the principles of *self-directedness*, *respect,* and *readiness to learn,* as participants mentioned them as not used.

5.6 List of Principles of Adult Learning used in Organizations

The following list is compiled based on the author's ability to interpret which principles organizations use. This research does not claim that this is a definite list of all the adult learning principles used or seen as relevant for organizations; instead, it displays the ones mentioned as most important during the interviews. The formulation of these principles is based on the most recurring wording used from the data. The order of principles listed does not indicate the importance or value of the principles.

1. Adult learning should acknowledge the learner's *life experience*: adults come with a wide range of previous experiences, knowledge, interests, and abilities.
2. Adult learning should be *relevancy-oriented*: adults need to see the relevance of the learning to their life situations.
3. Adult learning should be *practica*l: adults need direct and concrete experiences to apply to their learning.
4. Adult learning should identify preferred *learning styles*: personal preferences for learning styles should be reflected throughout the learning process.
5. Adult learning should be *goal-oriented*: adults need to work towards a goal.
6. Adult learning should be *problem-centered*: adults need their learning to revolve around problems since they are problem-solvers.
7. Adult learning should include *feedback*: feedback helps the learner understand whether their learning program facilitates or inhibits their learning as an individual.
8. Adult learning is driven by *intrinsic motivation*: self-esteem, recognition, and better quality of life are intrinsic motivators for adults that help to stimulate learning.

5.6.1 Summary of Principles from Organizational Insights

Below is a summary of principles mentioned as used and important in organizations next to the previously mentioned principles from non-academic articles and academic theory.

Table 4. Showing the different principles.

Non-Academic Principles	Academic Validation	Organizational Insights
Life experience	X	Life experience
Relevancy-oriented	X	Relevancy-oriented
Self-directed	X	-
Practical	X	Practical
Learning style	X	Learning style
Goal-oriented	X	Goal-oriented
Respected	X	-
Problem-centered	X	Problem-centered
Readiness to learn	X	-
		Feedback
		Intrinsic motivation

6 | Principles of Adult Learning in Academic Theory

Two principles mentioned during the interviews, *feedback* and *intrinsic motivation*, were not researched in chapter four. They did not occur more than 20 times in the non-academic articles and, therefore, did not meet the inclusion criteria for the first data collection. As this research takes an abductive approach by going back and forth between the findings and theories, these two principles will be researched in the following chapter to see if they appear in academia as adult learning principles. By doing this, the study can determine if the

principles mentioned in the interviews also have academic validation and perhaps should be considered as equally essential for adult learning as the previously supported nine principles.

6.1 Importance of Feedback and Reflection of Learning

In the theory of andragogy, learning contains a vital component of self-evaluation in which the adult is supported by the teacher for finding evidence for themselves about the progress they are making in their learning process (Knowles, 1970). Reflecting on where they are in the process of reaching their learning goals helps to put perspective and motivation to continue with the learning. The evaluation helps the learner understand whether their learning program facilitates or inhibits their learning as an individual. The evaluation may help make changes on time and make it more effective. Therefore, the evaluation and reflection in learning gives the learner perspective of attaining learning goals and understanding what learning method is most effective for the situation (Knowles, 1970).

6.2 Importance of Intrinsic Motivation

Motivation is essential for initiating and maintaining learning attempts and achieving cognitive goals. Garrison (1997) distinguishes between two types of motivation: *entering motivation*, meaning deciding whether or not to engage, and *task motivation*, meaning the effort required to persist with a task.

Lieb (1991) argues that motivation can originate from different sources, for example, social relationships, external expectations, social welfare, personal advancement, escape/stimulation, and cognitive interest. Social relationships in adult learning refer to meeting new people and filling a demand for friendships and partnerships. External expectations refer to following someone's directions to meet the expectations or requirements of this person. Often, this person is in a position with formal authority, and therefore the participant longs for the person's approval. Social welfare refers to the motivation to do something for the good of society. Personal advancement refers to wanting to develop individually, meaning that you feel motivated because you want to achieve something for yourself. Personal advancement could include learning to gain a higher employment status, securing professional advancement, or staying ahead of the competition. Escape/stimulation refers to relieving boredom and providing a respite from the regularity of home or work. The

last factor mentioned is cognitive interest, meaning that you are motivated to learn for the sake of learning (Lieb, 1991). Knowles (1970) argues that adults respond best to internal motivation. Internal motivation consists of self-esteem, recognition, and better quality of life.

6.3 Summary of Principles found in Non-Academic Articles, Organizational Insights, and Academic Theory

Below is a summary of all the principles found in the different data collections and their academic validation.

Table 5. Showing all the different principles and their presence in academic theory.

Non-Academic Principles	Academic Validation	Organizational Insights	Academic Validation
Life experience	X	Life experience	X
Relevancy-oriented	X	Relevancy-oriented	X
Self-directed	X	-	X
Practical	X	Practical	X
Learning style	X	Learning style	X
Goal-oriented	X	Goal-oriented	X
Respected	X	-	X
Problem-centered	X	Problem-centered	X
Readiness to learn	X	-	X
		Feedback	X
		Intrinsic motivation	X

7 | Discussion

7.1 Chapter Introduction

The following chapter represents the discussions of the findings and interprets the findings into the broader context of this study. The chapter is structured in the sense that it discusses the three different elements of the study separately. The order of this study starts with focusing on the principles retrieved from non-academic articles, then moves to the organizational insights, and discusses how academic theory has played a role in this research and the field of adult learning. At the end of the chapter, a framework summarizes the findings together, creating a comprehensive list of validated principles of adult learning that make adult learning successful.

7.2 Principles of Adult Learning from Non-academic Articles

When focusing on the principles from non-academic articles, the selected nine principles could be validated by academic theory. The majority of the principles originated from the same theorist, Malcolm Knowles. Even though most sources do not include any theoretical citings with their principles, the way the principles are formulated is in line with the theory of Malcolm Knowles. As Malcolm Knowles is the primary theorist in the adult learning field, the interpretation can be made that it was expected for the majority of the sources to follow the principles based on Knowles' (1970) theory.

Another finding in researching adult learning principles is that the way the principles are formulated can vary between the different sources. As this study has focused on principles of adult learning and as it has taken all principles into account that were described by the source as 'principles,' one critique for the field of principles of adult learning from non-academic articles is that there is not one generalized understanding of how principles are formulated. When focusing on the data set that was gathered from the non-academic articles, it includes both longer sentences being formulated as principles as well as shorter subjects relevant to adult learning. One can question whether all these principles can be defined as principles or whether they are sometimes used interchangeably as characteristics or themes from adult learning. When reviewing how these are described in theory, there is a variety in how they are defined. A critique can be made that for all these websites and sources

presenting a set of principles, that there should be alignment in the actual definition of a principle. Therefore, this study aims to contribute to understanding how a principle is defined for adult learning principles. As mentioned before, a principle is regarded as *"A basic truth or theory: an idea that forms the basis of something"* (The Britannica Dictionary, n.d.).

When focusing on the meaning of these findings, one concluding remark is that even though the principles presented in these different sources do not include an immediate reference to the sources, the majority of them are based on theory. Nevertheless, there were many sources that included essential principles that were found important in our research, but also proposed other principles that were categorized as *random* and not validated by theory. Meaning that there is a variety in the meaningfulness of principles being proposed by one source with some principles being validated and others being very random and unvalidated. Taking this into a broader context, this holds the risk that some of these sources might propose some valuable principles that help make adult learning successful but are not necessarily an indication that all of these principles are important for successful adult learning. When HR professionals would read the non academic article that includes some validated principles, it holds the risk that he or she might assume that the other principles are also important. Yet, those *random* principles will not help to make adult learning more successful.

7.3 Principles of Adult Learning from Organizational Insights

An important finding for the principles in an organizational context is that some principles were experienced to be connected. The connection of principles is an essential finding as it shows how organizations are experiencing these principles differently from how they were initially proposed in non-academic articles and academic theory. Apart from understanding what principles organizations are using, the interpretation of the connection of principles in an organizational context highlights that principles are experienced in a different way; more connected than seen as separate entities. Interpreting this, it may impact how HR professionals design their adult learning practices. When in organizations two principles are more connected, these principles might be highlighted together in the same process of adult learning rather than in separate components.

When focusing on the key findings of the interviews, certain principles are more important than others, and principles help validate and give structure to adult learning in organizations. When focusing on the most relevant principles for organizations, the findings

indicate that *life experience* and *relevancy-oriented* are significant. As explained, *life experience* helps to shape how individuals embrace or process the learning, and *relevancy-oriented* helps to give direction and motivation for the individual and the organization as to why the learning is important. Participants have explained that highlighting these principles when designing adult learning practices gives structure to the process. This is an important finding for HR professionals to consider for prioritizing which principles to focus on due to e.g. limited availability of resources.

Having principles of adult learning does not only help to structure the organizational processes, but it also helps to validate the process in itself. Participants mentioned that they often notice that when they can back up their reasoning with theoretical sources, it helps to validate their choices and makes the employees more willing to embrace it. Knowledge-intensive companies in which employees have a strong focus on analytical thinking often require HR professionals to explain why there is a need for something theoretically. The HR professional explained that employees request theoretical evidence for why there is relevancy for an organizational process to develop. Having principles to substantiate the learning process in organizations increases the willingness of employees to cooperate.

Even though the selected principles are relevant for organizations in general, it also gives HR professionals the ability to understand which principles are most relevant for their organization or learning situation. Understanding which principles to highlight in the process of learning in organizations helps to increase the efficiency of the learning on both an organizational and an individual level. For example, when having older employees, embracing and highlighting the importance of the principle of *life experiences* is very important. Embracing life experience will make them feel respected and acknowledged, both found in the study's findings and described by Knowles (1970). For employees that are very resistant to the learning, highlighting the principle of *relevancy-oriented* can be helpful. Drawing away from the attention on the personal flaws one employee might have, focusing on the organization's relevancy for that employee to follow a specific training might be more effective. When focusing on how this is applicable on an organizational level, top management can use these principles to structure their reasoning for learning in the organization. Using these principles serves as guidance for how the process will be structured and how employees are expected to engage with this. Following these principles and having a structure to the process might formalize the learning, ensuring that all employees actively participate in the learning. Therefore, it highlights the relevance for organizations to use these

principles and why understanding which of these principles is essential, and how to utilize them in situations helps make adult learning successful.

Focusing on what principles are not seen in organizations, *self-directedness* stood out as a principle explained by participants as being relevant in a personal learning setting, but irrelevant in an organizational one. A personal learning setting being a non-organizational context in which the individual is learning on an individual basis not related to an organization. As *self-directedness* focuses on the willingness of an individual to direct and be autonomous in their learning, participants explain that in organizations, employees do not always have the autonomy to self-direct their learning. Sometimes, the organization or HR department suggests and directs employees to take a coaching or training session. Employees can initiate training or request HR directors to permit a particular training; however, they are always dependent on the organization to grant them the resources to start learning. As explained and exemplified by the participants, sometimes employees do not recognize the need for learning as they are confident that they do not require additional skills or training. However, when HR professionals do see the need for the learning of a particular employee, that employee is not in the position to decline the request for the training. As the company's interest always comes first, and if it is of interest to the company that the employee takes the training, the employee does not have a choice but to do it. Making a personal interpretation of this, this study questions the difference between principles being irrelevant for companies or simply not being used. As the academic theory has shown that the principle of self-directedness is important for adult learning, one might wonder whether organizations should simply mark that principle as being irrelevant. Even though this research does not dive into this topic specifically, and questions this based on own interpretation rather than having substantial support, it is an important discussion for what academic theory is indicating versus what organizations are following. Rather than disregarding the principle of *self-directedness* due to it being irrelevant as argued that the learning is not always voluntary, organization can also be criticized for why the learning is not always voluntary. If organizations are following theory to base their organizational processes on, as it is believed to be evidence for making something work or successful, why are they just taking parts of the theory rather than the theory as a whole. Are organizations in the position to simply assess principles being irrelevant for their situation? Assessing the irrelevance of principles might come from a lack of suitability or lack of willingness to further develop the process of adult learning.

Nevertheless, when focusing on whether learning should be voluntary in organizations or not, in some cases, organizations simply do not have a choice but to comply with learning. In certain industries, such as the finance industry, there are regulations for employees to follow training if they want to continue their job. In this situation, the concept of *self-directedness* or *readiness to learn* has to be disregarded in order to continue with the job, as training is a requirement. Within these organizations, it does not necessarily matter what the level or value of the learning is as long as the training is completed. For different organizations, learning might have a different meaning; for some, it might mean flourishing creativity, improved processes, and personal development. For others, learning might have a more functional purpose as there are certain regulations and requirements a company needs to adhere to. This might be a reason why organizations disregard principles, as learning in the organization has a different purpose on its own. Therefore, it can be argued that even though it can be questioned whether organizations are disregarding principles based on the level of difficulty of incorporating, this cannot be generalized for all organizations, as there are exceptions of industries in which the organizations simply have no choice.

7.4 Principles of Adult Learning from Academic Theory

All of the selected principles of adult learning could be found in the theory proposed by Knowles (1970). The selected principles are the principles that were researched in this study, based on frequency of being mentioned. All selected principles found in both the non-academic articles and the organizational context were validated by theory from Knowles (1970), as his theory included elements of highlighting the importance of a component of, for example, *life experience* in adult learning. It was surprising that all of the selected principles were validated by Knowles' (1970) theory, as this was not something that we expected neither in the non-academic articles nor the organizational insights. As the non-academic articles do not include any evidence of academic theory, the assumption was made that some of these principles are not based on any academic theory at all. Furthermore, we expected to find at least one or two selected principles that had no academic validation. However, this was not the case. For the sake of the research, if it would have been the case that principles could not be validated by theory, it would entail that organizations have been following principles without any validation. This would mean that organizations have been blindly following principles that are not helpful for making adult learning successful. However, for the sake of

the adult learning field and for people who are selling and using these principles, it is relieving that the principles proposed in the non-academic articles do have academic validation and, therefore, should be used within adult learning.

As this study finds that most of the principles are based on one theorist, one might question how reliable and up-to-date this theory might still be in today's society. As this theory originates from 1970 onwards, possible changes in relevancy may have occurred, questioning whether it is outdated or not. However, it can be argued that since so many non-academic articles today correlate with the theory of Knowles (1970), as our findings have shown, the theory can be regarded as relevant. As described in chapter two, many learning theories lay the foundation for the adult learning theory and serve as evidence for ensuring the theory's reliability. Our findings indicate that Knowles' theory (1970) is still relevant in today's society as the principles are seen both in his theory as well as in organizations.

7.5 Differences Between Principles in Non-academic Articles and Organizations

Focusing on how the principles are found in non-academic articles and organizations, the findings have indicated a difference between the principles for the two angles. Figure five below illustrates a venn diagram showing what principles are found in non-academic articles but not in organizations, which is shown on the left circle presenting the principles of *readiness to learn*, *respect*, and *self-directedness*. The middle part illustrates the overlapping principles found in non-academic articles but also used in organizations. This part includes *practical*, *relevancy-oriented*, *life experience*, *problem-centered*, *goal-oriented,* and *learning styles*. The part of the circle on the right that does not overlap with the left circle showing *feedback* and *intrinsic motivation* regarded as the principles used in organizations but not prominent in the non-academic articles. All the principles shown in the figure are important for adult learning. Therefore, it shows that these principles are essential for making adult learning successful as they have proven to be used in non-academic articles and organizations and are a result of the dominant theory of adult learning by Knowles (1970).

Figure five combines both the aim of understanding which principles can be found in non-academic articles, shown in the circle of non-academic articles, and showing the principles that organizations are using, as seen in the right circle. All principles in both circles

together, are found to be important for adult learning. Overall, this figure illustrates the achievement of the purpose of this study, as it clarifies the principles of adult learning to make adult learning successful.
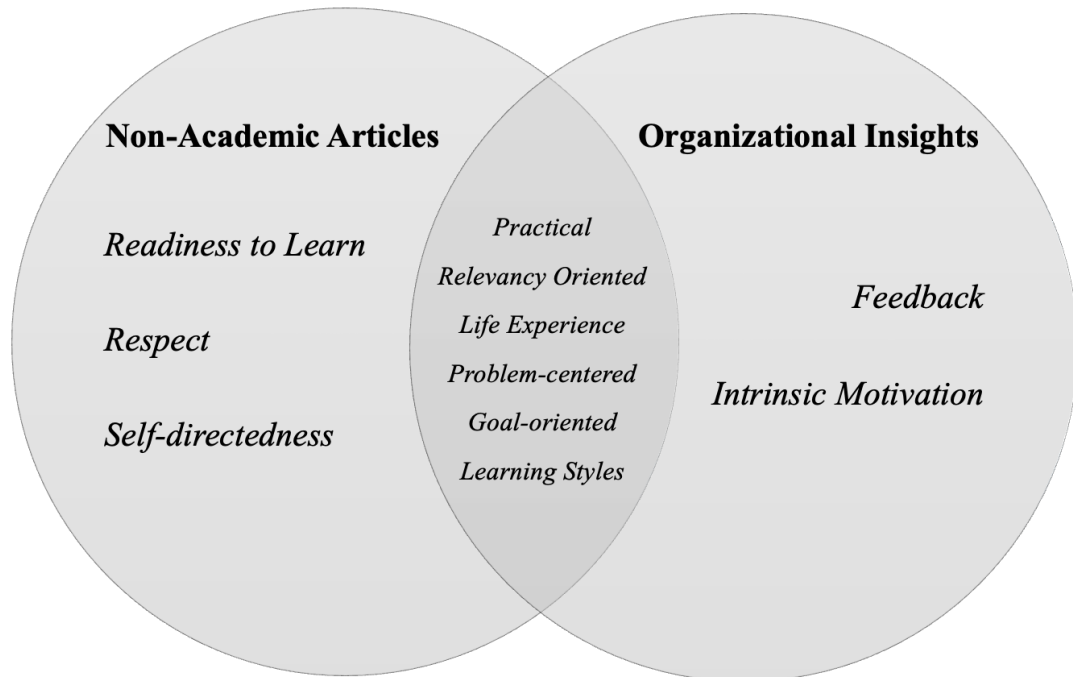

Non-Academic Articles

Readiness to Learn

Respect

Self-directedness

Practical

Relevancy Oriented

Life Experience

Problem-centered

Goal-oriented

Learning Styles

Organizational Insights

Feedback

Intrinsic Motivation

Figure 5. Venn diagram illustrating the principles found in non-academic articles and organizations.

7.6 Bridging the Three Approaches Together

As shown in figure five and as mentioned above, the result shows a difference between principles found in the non-academic articles and those found in organizations. Some of the principles from the non-academic articles were not used by organizations, and some principles mentioned by the organization were not prominent in the non-academic articles. When considering what might have been the reason for the differences in these principles, it can be questioned whether organizations are using the correct principles or not. As mentioned before, the authors of this study wonder if organizations choose to only incorporate a few of the principles due to a possible difficulty of incorporating them, or because organizations truly see them as irrelevant. It is also a broad question to grasp because if participants see them as irrelevant, is there research to back this claim? Some principles were explained as not used by organizations as they belonged in the individual context, as participants experienced

it. These principles derived from the individual's self, such as *self-directedness* and *readiness to learn*. We can agree that these principles originate from the individual's self, but we are not so sure if that means that they are irrelevant. Difficult to incorporate? Surely. Nevertheless, does that mean that organizations should disregard them as relevant to consider when implementing adult learning? Probably not. It would be interesting to see if adult learning outcomes would increase if there were more emphasis on these principles.

As all the selected principles mentioned can be found in theory, we can say that the selected principles are validated. However, one can question how reliable the principles are since they originated many years ago in a world that, to some extent, differs a lot from the one we are in today. Something that is not considered in Knowles' (1970) theory is the technological advancements that have occurred in the last 20 years. One could say that knowledge is more accessible to anyone today than it has ever been before. With this in mind, in an era where anyone can find out anything within a few seconds by Googling, adult learning is not as dependent on organizations to facilitate the training as it might have been before. If the individual wants to engage in learning, there are endless possibilities to do so. Individuals have more access to resources to engage with learning than in previous years when they were dependent on organizations to give them these resources.

One could criticize non-academic articles for tossing around principles with simple headlines that are, in fact, complicated to incorporate. The principle of *respect* was described as *"Adult learners like to be respected"*. This is a nice statement, but what does it really mean, and how do organizations work with it? We believe that this was the case with some of the principles mentioned as irrelevant by organizations. If the explanation of the principles had been from an organizational perspective, perhaps with specific examples of how it could be incorporated in the 21 century, then maybe the participants would have seen the greater value of it.

In the field, many pragmatists have allowed the shaping of adult learning by proposing these adult learning principles. However, we have seen that not all principles are validated by academic theory. This study has validated eleven recurring principles giving over 396 hits, whereas 56 *random* principles could not be validated by theory. The pragmatists proposing these *random* principles do not have the evidence or know what makes adult learning successful. Our findings have shown that just because principles are proposed on these websites, it does not mean that they are meaningful as they lack academic validation. These findings make it harmful for organizations to follow some of the principles that occur

when searching for adult learning principles, as some of the results do not help to benefit adult learning.

As mentioned before, six principles were prominent both in the non-academic articles, the organizational insights, and academic theory. After the organizational insights, two more principles were added, *feedback* and *intrinsic motivation*, while three principles were removed, *readiness to learn*, *respect*, and *self-directedness*. Looking at the findings altogether a final list of eleven adult learning principles that make adult learning successful can be created from the overall findings. This list includes the principles that the organizational insights viewed as irrelevant, as those principles are regarded as relevant in both non-academic articles and academic theory.

1. Adult learning should acknowledge the learner's *life experience*: adults come with a wide range of previous experiences, knowledge, interests, and abilities.
2. Adult learning should be *relevancy-oriented*: adults need to see the relevance of the learning to their life situations.
3. Adult learning should be *self-directed*: adults have a strong need to embrace their self-concept.
4. Adult learning should be *practical*: adults need direct and concrete experiences to apply to their learning.
5. Adult learning should identify preferred *learning styles*: personal preferences for learning styles should be reflected throughout the learning process.
6. Adult learning should be *goal-oriented*: adults need to work towards a goal.
7. Adult learners need to be respected: adults want to be treated equally, with their opinions, values, and beliefs respected.
8. Adult learning should be *problem-centered*: adults need their learning to revolve around problems since they are problem-solvers.
9. Adult learning is dependent on *readiness to learn*: as adults reach different social roles, it influences their readiness to learn.
10. Adult learning should include *feedback*: feedback helps the learner understand whether their learning program facilitates or inhibits their learning as an individual.
11. Adult learning is driven by *intrinsic motivation*: self-esteem, recognition, and better quality of life are intrinsic motivators for adults that help to stimulate learning.

8 | Conclusion

8.1 Fulfilling the Research Purpose

This research aimed to contribute to the effectiveness of adult learning in organizations by examining adult learning principles. As this research has reviewed non-academic principles with theories and organizational insights, it can be said that the purpose of this thesis has been reached. The first research question, *"What are the most prominent adult learning principles in non-academic articles?"* has been answered by reviewing adult learning principles in non-academic articles resulting in 20 principles found in the 506 sources. Out of the findings, nine were considered prominent as they appeared more than 20 times in different sources.

The second research question, *"What principles can be supported by organizational insights and academic theory?"* has been answered by analyzing the principles together with academic theory and through interviews with HR professionals. Going back and forth between the principles and validating these with theory, a list of principles of adult learning supported by organizational insights and academic theory has been created (see 5.6).

The result shows that the most prominent principles found in non-academic articles are validated by theory, as it was possible to find a theoretical background connected to the principle. They were not created just as a service for consultancy firms to offer; rather, they originated from established adult learning theories. However, what can be seen is that most of them originated from the same author, Malcolm Knowles, which is something to be aware of in this study. Knowles is known for being the dominant author in this field. However, although his research has been reviewed by numerous authors over the years, it originates from a time when learning and training looked differently than it does today. His research also originates from the broad topic of adult learning, having the individual perspective in mind. This study has taken the same topic and perspective into consideration but angled it to an organizational approach to see adult learning and adult learning principles used in organizations. What has been found is that there is a distinction between the individual- and organizational perspective, where practitioners disregard some theories of adult learning for being irrelevant and not used in an organizational context, primarily because of the organizational inability to apply the established principles. From the interview findings (see figure five), it was clear that some principles were not used in organizations, even though

they are prominent in non-academic articles and validated by academic theory. Therefore, one can question whether these principles are not being used because the organizations do not see the value in them or because they are too complicated to incorporate into the organizational structure. The principles that were mentioned as irrelevant and not used were principles where the employee drives the learning themselves, such as *self-directedness* and *readiness to learn*. The participants mentioned that the organization could not regard these factors when facilitating training, as the organizational needs go before the individual's needs or desires. However, the participants mentioned *intrinsic motivation* as important, but this was not prominent in the non-academic articles. Therefore, one can question how organizations manage to work with *intrinsic motivation* while disregarding other similar principles.

In conclusion, this study has established that the most prominent adult learning principles found in non-academic articles have validation in academic theory. Together with the organizational insights, we can conclude eleven principles that are prominent in all three approaches and therefore play an essential part in making adult learning successful.
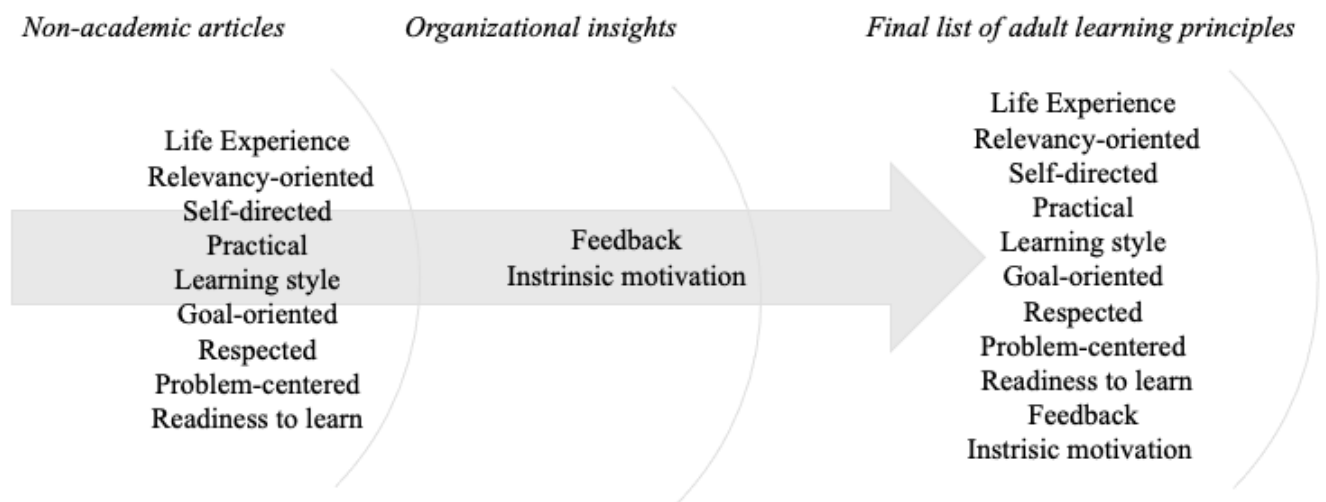
Figure 6. Illustrating the principles originated from the different data collections and the final list of principles.

8.2 Limitations of the Study

The study's limitations mainly consist of the number of participants available for the interviews. In the end, eight participants were interviewed about their adult learning experiences in organizations. If the selection of participants had been more extensive, the result might have looked different, and the results could have been more in-depth. Finding participants to interview was more challenging than expected, and the selection of participants partly originated from a snowball sampling, meaning that the participants recommended new participants to join. The snowball sampling resulted in participants with widely different backgrounds, experiences, and organizational contexts. They all had experience in adult learning and were active HR professionals within the field. However, their experiences differed, and it was easy to spot differences connected to which type of organization they were operating in. For example, one participant was from a highly regulated branch, meaning that the employees needed to go through a lot of obligated training to keep their job. This participant explained that her employees' need for voluntary training was very low since they did not want to engage in more training outside the obligated one. Therefore, her adult learning experiences were slightly different from the other participants. She neglected principles derived from the individual's free choice as this did not apply to her organizational context. The result was that principles such as *self-directedness*, *life experience*, and *readiness to learn* were regarded as irrelevant in her organizational setting and therefore not used. We could also see some differences in the continent where the participants worked. For example, one participant was active in Asia while the others were active in Europe, and this participant expressed more limitations regarding resources to spend on learning than the other participants. Whether this is an organizational difference or a geographical one is hard to say. However, it can be argued that the result would have been more conformed if the participants originated from the same country or continent and worked within the same sector or branch. Then perhaps it would be easier to generalize the provided result to a specific context instead of as it is now when the result is quite broad. It can also be argued that the sample size (eight participants) is too small to draw general conclusions. As the authors of this study, we do not believe that the reliability of the result would have been better if we had searched differently; instead, we believe that the chosen method of qualitative interviews is the best one to answer the research question. However, the sample could have been bigger, and we could have focused on a specific type of organization to get more precise results for that specific context.

The interview questions could have been more open to allowing participants to mention principles without guiding the answers. As the interviews were set up, there was a combination of open and closed questions. However, the selected nine principles from the non-academic articles were asked about, which could have limited the participants' ability to address their own principles. If there had been no guidance in the interview, we might have gotten a wider spread of answers, although the answers might be harder to analyze and connect.

Concerning the non-academic articles, we have tried to be transparent in how we searched for the articles and analyzed the result. There can be alternative ways of doing this; one would be to do a systematic review to get a broader frame of all the available articles. For the cause of this study, with the research questions and the purpose in mind, we still thought it was beneficial to search in the way we did as we believe that this is how HR professionals would do it.

8.3 Future Research Suggestions

As mentioned in the limitations, it would be interesting to see the results connected to a specific sector or branch. This study only focuses on which principles are seen in non-academic articles, used in organizations, and can be found in theory. All the principles mentioned have theoretical validation, as they can be found in adult learning literature. What has not been researched is why there is a difference between principles found in non-academic articles and principles used in organizations. Therefore, it would be interesting to see if the two principles used in organizations; *feedback*, and *intrinsic motivation*, should play a more prominent role in the non-academic articles. It would also be interesting to research more specifically why organizations are not using principles found in the non-academic articles, such as *self-directed*, *respect*, and *readiness to learn*. This study has only touched upon the subject and got the result that these principles are not used in organizations and are seen by some participants as irrelevant for organizations to consider. Therefore, it would be interesting to research this part further and see why these principles are not used. Is there a valid reason not to use these principles, or are the principles being disregarded for their difficulty to incorporate? Some participants said it was hard to incorporate these principles as they derive from the individual choice and that the individual does not have this choice in the organizational context. Regardless, it would be interesting to

see the reason why they are not used, and if it is because of difficulty, it would be interesting to see if the benefits of using these principles outgrow the disadvantages of not using them.

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10 | Appendix

10.1 Interview Guide

Introduction:
- How would you define adult learning?
- How do you see adult learning in your organization?
    - When did you actively start working with adult learning?
    - What would you say are the key components of adult learning?
        - How do you experience these in your company?

Core:
- Are you familiar with any adult learning principles?
- In our study, we have identified nine adult learning principles that are key in adult learning. How do you experience these in your organization?
Go by them one by one (short explanation of each if needed)
    - Life experience
    - Relevancy-oriented
    - Self-directed
    - Practical
    - Learning styles
    - Goal-oriented
    - Respect
    - Problem-centered
    - Readiness to learn

Wrapping up:
- Which principles would you say are most important/most evident in adult learning?
- What principles would you utilize in your organization?
- Which principles would you not utilize in your organization?
    - What is the reason for this?