Master's Thesis:

ARE THE DIGITAL NATIVES MYTH OR REALITY?

- And what are their impacts on motivation?

MSc. International Business Economics

Centre for International Business

Aalborg University

Jonas Eduardsen

May 2011

AALBORG UNIVERSITY

TITLE PAGE

10th Semester Master's thesis

MSc. International Business Economics

Aalborg University

Supervisor: Reimer Ivang

Submission: 8/6-2011

Characters (with spaces): 248.811 (~104 pages)

Jonas Strømfeldt Eduardsen

Aalborg University

ABSTRACT

Purpose: The purpose of this thesis is divided into three parts. First, this thesis takes a critical view of the idea of a distinct generation of digital natives by investigate whether the digital natives are myth or reality. If the digital natives are real, the aim of this thesis is to investigate how to motivate them. Finally, the aim of this thesis is to examine whether the digital natives are motivated differently than digital immigrants.

Methodology: Adopting a phenomenological approach, this thesis use semi-structured interviews and an online survey the study examined whether the digital natives are myth or reality. Furthermore it was investigated how to motivate the digital natives and whether these are motivated differently than digital immigrants.

Findings: The findings suggest that, contrary to the presumptions in the digital native literature, only a minority of the 18-29 year olds demonstrate digital native characteristics. Furthermore, the findings suggest that digital natives have a higher level of preference for enjoyment, followed by compensation, outward, and finally challenge. Finally, the findings suggest that the differences between the digital natives and immigrants in terms of motivation are not as sweeping as often argued. The empirical evidence suggests that there are few small statistical differences, but these differences are few and modest at best.

Research limitation/implications: The research design limit the conclusions as it is difficult to determine whether differences between the respondents can be attributed to 'age effects', 'cohort effects', or 'period effects'. Furthermore, the samples used in this thesis are not representative of whole population why the generalizablility of the thesis findings is limited.

Practical implications: The findings have important implications for management as the findings suggest that the digital native discussion present a stereotypical image of young people arguing that all young people are digital natives. These stereotypes may obscure individual differences and prevent managers from getting to know their young employees as individuals and accurately manage those.

Originality/value: The thesis contributes to the digital native discussion by adopting a critical view of the idea of a distinct generation of digital natives. Furthermore, the thesis contributes to the discussion by addressing the questions of how to motivate the digital natives and whether they are motivated differently than digital immigrants.

ACKNOWLEDGEMENTS

This thesis has been a long, and sometimes frustrating, process and would not have been possible without the support of many people.

First and foremost I want to thank my enthusiastic supervisor Reimer Ivang. His untiring effort, commitment, encouragement, guidance, and support helped me greatly in the understanding and writing of this thesis. If it were not for him, this thesis would not have been possible.

I am also greatly appreciative of the employees/students at University College of Northern Denmark, Jysk Telemarketing, and Aalborg University who took part in my interviews and survey, which provided me with the data needed for completing this thesis. I am also thankful to John Stellan & Henriette Eduardsen for granting me permission to conduct my interviews and survey within Jysk Telemarketing and University College Northern Denmark.

I would also like to show my appreciation to my girlfriend, Mette Friis Andersen, for listening, to many of my thoughts and for her support and encouragement throughout the process of writing this thesis.

Lastly, I offer my regards to all those who supported me in any respect during the completion of the thesis.

Table of Content

APPENDIXES

LIST OF FIGURES

LIST OF TABLES

1 INTRODUCTION

> *"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change"* (Charles Darwin)

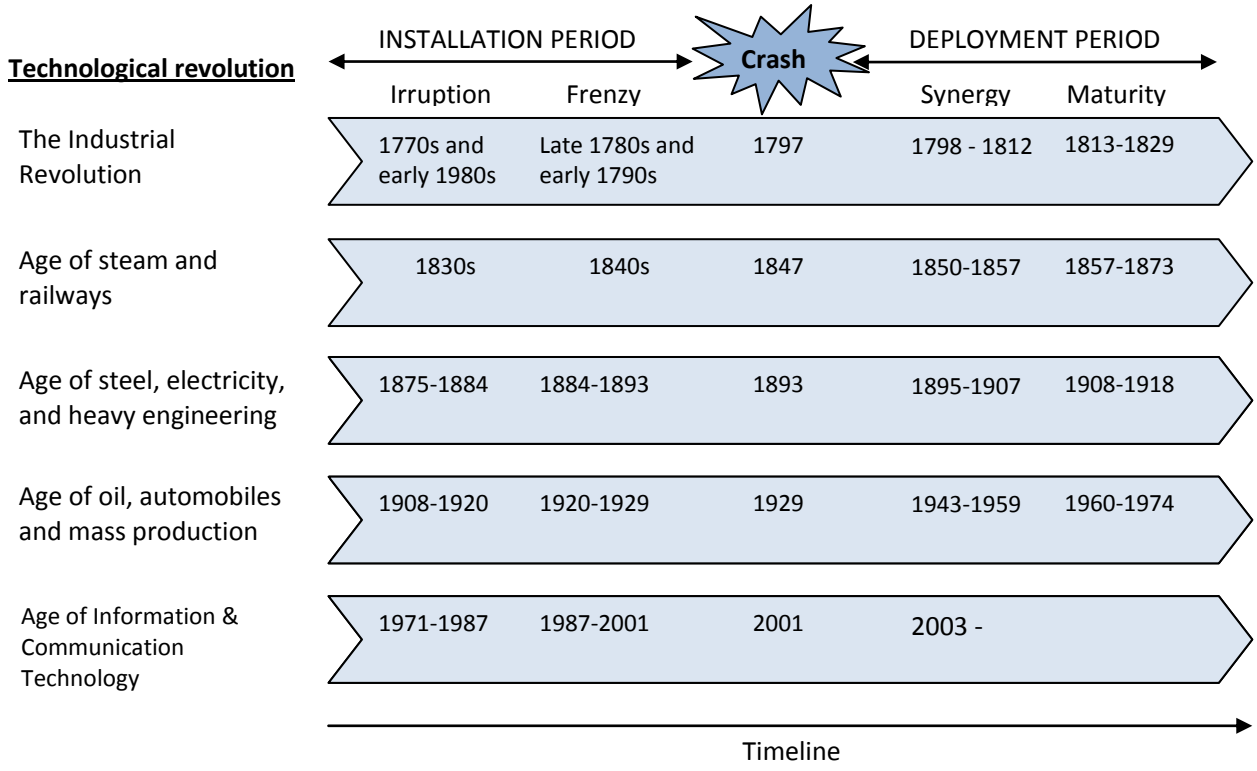
Darwin argued that the motive force for change in organisms was the struggle for survival in which they developed biological variations that were more or less adapted to their environment. The more adapted organisms survived and their numbers increased, while the less adapted perished (Stacey, 2010). Darwin's theory of evolution applies to the evolution of all open, complex systems, including organizations. To organizations this means, they have to adapt to changes in their environment if they are to survive. The winner of tomorrow it is not the biggest or the strongest organizations, but the organizations that are most responsive and adaptable to changes.

It has been argued that the introduction and development of digital technologies are in fact such a change. The arrival and rapid dissemination of digital technology has changed our society fundamentally and been integrated into every corner of our society and economy – including our work, leisure, education and personal lives. Organizations must understand how the digital technologies influence and impact their environment in order to adapt and ultimately survive.

1.1 ARE WE IN THE MIDDLE OF A DIGITAL REVOLUTION?

Whether or not we are in the middle of a revolution can be difficult to determine. People did not wake up in the seventeenth century one morning and shout that they were in the middle of the Industrial Revolution. It was only with hindsight that people realized that technologies developed extremely rapidly during a relatively short period of time and their widespread application in subsequent years led to radical changes in society and the economy. However, according to Jelassi & Enders (2008) and Perez (2002) the development of digital technology have gone through similar surges as previous technological revolutions did, such as steam, railways, and mass production. This is illustrated in Figure 1-1

Figure 1-1: Major technological revolutions during the past two centuries



Source: Jelassi & Enders (2008); Ivang (2007); Perez (2002)

Jelassi & Enders (2008) & Perez (2002) argue that the development of digitalization has changed dramatically during the past decade and this development has been quite similar to the stages described above. In 1971, Intel introduced their microprocessor, which can be seen as the birth of the digital age. The microprocessor made it possible to produce computers at a size and price, which later made it possible for organizations and households to own and use this new technology. Perez (2002) refers to this as the *irruption phase* (Perez, 2002). However, it was not until the late 1980's and the 1990's, that the computer

became a common household item. In July 1995, the Internet boom years began with the launch of Amazon.com, one of today's best-known online retailers. The subsequent years were characterized by great exuberance and belief in the seemingly unlimited potential of the Internet and digitalization (Jelassi & Enders, 2008). Perez (2002) refers to this as the *frenzy stage*. During this period, investors had artificially inflated market sizes for dotcom companies and overlooked a number of important issues that led to the subsequent end of the Internet boom years. In 2000, the dotcom bubble started to burst. Within 8 months the NASDAQ slid by 45 % (Jelassi & Enders, 2008). Perez (2002) refers to this as the *crash*. According to Perez (2002) and Jelassi & Enders (2008) the digital technology is currently in the synergy stage, where digital technology is penetrating into every corner of our society and economy – including our work, leisure, education and personal lives.

This indicates that we are likely to be in the middle of a revolution, and we are currently in the synergy phase where we are starting to see how the digital technology is being spread into every part of our economy and society.

It has been claimed that this integration, of digital technology into every part of our lives, is especially obvious among young people (Prensky, 2001). We are told that people, who were born into a world in which digital technologies were the norm and thus have never known a world without the internet or the World Wide Web, live their lives immersed in digital technology and cannot imagine a life without it (Bennett *et al*., 2008). Tapscott (2009) argues that:

> *"Young people have a natural affinity for technology that seems uncanny. They instinctively turn first to the Net to communicate, understand, learn, find, and do many things … but it is not just about how they use technology. They seem to behave and even to be different"* (Tapscott, 2009)

In contrast, we are told that people who were not born into a digital world but have, at some later point in time, been exposed to digital technology are, and always will be *digital immigrants*, compared to those who were born into the digital world (Prensky, 2001). In other words, older people are characterized as being at least one step behind and unable to reach the kinds of natural fluency that comes with having grown up with new digital technologies. Prensky (2001) describes this as follows:

> *"As Digital Immigrants learn – like all immigrants, some better than others – to adapt to their environment, they always retain, to some degree, their "accent," that is, their foot in the past"* (Prensky, 2001)

Thus it is argued that there is a difference between growing up in a digital world and having to adapt to digital technology later in life. Generational theorists claims that major influences in the environment, within which early human socialization occurs, impact the development of personality, values, beliefs, and expectations that, once formed, are stable into adulthood (Macky *et al.*, 2008). In other words, generational theorist claims that differences between generations occur because of major influences in the environment. Thus it is claimed, in the digital native debate, that as a result of their upbringing and experiences with technology, the digital natives have developed some common values, beliefs, and expectations, which differ from earlier generations. As a consequence we are told that the digital natives are now starting to enter the workplace with a completely different approach to their work that previous generations, bringing with them new and different work values, beliefs, attitudes, and needs (Tapscott, 2009; Smola & Sutton, 2002). Therefore it is claimed that digital natives are bringing a new set of motivators to the workplace, which are different from earlier generations (Tapscott, 2009).

More extremely, Tapscott (2009) claims, that digital immersion has, quite literally, caused digital natives brains to be wired differently (Tapscott, 2009). This is supported by neuroscience, which has shown significant difference in brain functions among generations. This difference is also referred to as "brain gap" (Hershatter & Epstein, 2010). For example, it is claimed that digital natives are more effective in some arenas, like multitasking, responding to visual stimulation, and filtering information, but less adept in terms of face-to-face interaction and deciphering non-verbal cues (Hershatter & Epstein, 2010). While these pathways can be developed later in life, and there are clearly many extraordinarily proficient developers and users of the latest technologies in every generation, a marked neurological difference is claimed to exist between *embracing* it and *embodying* it. A brain that developed prior to the emergence of digital technology must adapt to new technologies in order to use them effectively. On the other hand, digital natives who have been hard wired by digital technology and for whom it is integral to their academic, social, and personal lives, don't think about adaptation at all. Technology for them is a sixth sense, as a way of knowing and interacting with the world (Hershatter & Epstein, 2010).

This indicates that we are likely to be in the middle of a revolution where we are starting to see how the digital technology is being spread into every part of our economy and society. Furthermore we are told that

the introduction and development of digital technology has influenced the individuals and created a gap between people who were born in a digital world and people who were exposed to digital technology later in their lives.

1.2 IS THERE A NEW GENERATION OF DIGITAL NATIVES EMERGING?

As a consequence we are told, that along with the introduction and development of digital technology, there is a whole new generation emerging of young people born after the time when digital technologies began to be embedded in social life sometime in the 1980s (Tapscott, 2009; Palfrey & Gasser, 2008) Abraham & Behrendt (2010) argues that:

> *"We're currently experiencing a time of change, a change in that a whole generation is evolving ... It's a generation that can't imagine a world that is not digital"* (Abraham & Behrendt, 2010)

In recent years, a vigorous debate, about how a new generation of young people is coming of age, has taken place (E.g. Tapscott, 2009; Li & Bernoff, 2008; Palfrey & Gasser, 2008). There are a number of competing terms that claim to identify this new generation of young people, including: Net Generation (Tapscott, 1997), Digital Natives (Prensky, 2001), Generation Y, and Millennials (Howe & Strauss, 2000). All of these competing terms are used to describe a new generation who were born into a world in which digital technologies were the norm. It is claimed these young people are more likely to engage in activities such as: online games, watch videos online, get info about a job, send instant messages, use social networking sites, download music, read blogs, create blogs, and visit virtual worlds (Prensky, 2001). A 21-year-old (in 2008) has, on average, sent 250,000 e-mails, instant messages, and SMS text messages, used a mobile phone for 10,000 hours, played video games for 5,000 hours, and spent 3,500 hours social networking online (Erricsson Business Review, 2008). According to a recent survey from AVG (2011), young kids learn tech skills before life skills. The survey reports that small children today are more likely to navigate with a mouse, play a computer game, and increasingly operate a smartphone, than swim, tie their shoelaces, ride a bike, or make their own breakfast. These people represent the first generation to have grown up digital.

However, the debate about digital natives is still relatively new. Therefore it has been argued that there still is a big need for further research and empirical evidence about the nature of digital natives. Lyons,

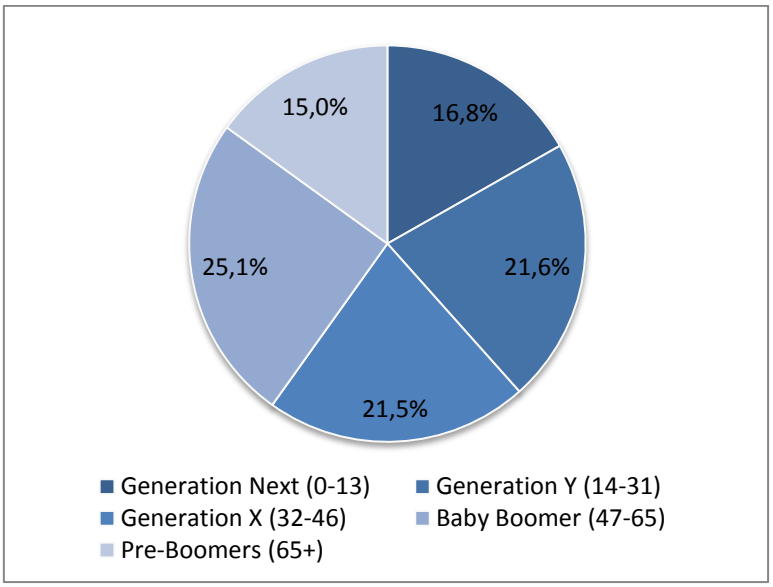
Duxbury, and Higgins (2007) suggested that *"there has been relatively little academic work either to confirm or refute popular generational stereotypes"* (Parry & Tyson, 2011). Giancola (2006) went one step further and claimed that the digital natives are *"more myth than reality"*. Bennett, Maton & Kervin (2008) argues, in their review of the digital native literature, that the digital natives have been subjected to little critical scrutiny, are under theorized, and lack a sound empirical basis, why there is pressing need for theoretically informed research (Bennet *et al.,* 2008). Bennet, Maton & Kervin (2008) describes this as follows:

> *"Our analysis of the digital native literature demonstrates a clear mismatch between the confidence with which claims are made and the evidence for such claims. So, why have these claims gained such currency? Put another way, why have these arguments repeatedly been reproduced as if they were supported by empirical evidence?"* (Bennet *et al.*, 2008)

The discussion above indicates that there is a pressing need for critical scrutiny and empirical evidence in the digital native literature. In recent years, the digital native debate has been a hot topic, but the question is: *do the digital natives actually exist?* This illustrates the importance of further research into the digital natives.

According to the digital native literature the exact age of this generation differs. According to Tapscott (2009) the digital natives are born between 1977 and 1997 (Tapscott, 2002). Smola & Sutton (2002) argues that digital natives are born between 1979 and 1994. According to Johnson & Johnson (2010) the digital natives are born between 1981 and 1995 (Johnson & Johnson, 2010). As illustrated, scholars and authors, who are discussing generations, do not necessarily agree about the exact years that mark the cut-off points between these generational groups (Parry & Tyson, 2011). The problem with deciding a cut-off point is that there are no hard stops or road signs indicating when one generation ends and another begins (Zemke *et al.*, 2000). However, for the purpose of this thesis, *digital natives* refer to people born roughly between 1980 and 1997 (between 14 and 31 years old).

Figure 1-2: Demographic breakdown of the Danish population by generation



Source: Statistics Denmark (2010)

The demographic breakdown of the Danish population by generation is illustrated in Figure 1-2. According to the demographic breakdown, the biggest generation in the Danish society is the Baby Boomers, who represent 25.1% of the total population. The Digital natives are the second largest generation, and are only surpassed by the Baby Boomers. The Digital Natives represent 21.6% of the total population

This indicates that the digital natives represent the next big generation after the *baby boomers* illustrating the importance of understanding this generation. These digital natives are now entering the organizations, and as a consequence they are currently a hot topic for organizations.

1.3 THE DIGITAL NATIVES HITS CORPORATE DENMARK

As argued above, the digital natives have been a hot topic in organizations and popular press, as more and more digital natives are starting to enter the organizations. In these years, these so-called digital natives are starting to enter corporate Denmark, where management is still dominated by the older digital immigrants. As a consequence it has been argued that their approach to management and their leadership have a tendency to highlight digital immigrant values and norms (Arsenault, 2004). Thus organizations have been told that their current leadership style is not relevant to digital natives. This is because the digital natives

are bringing different values, norms, and behaviors along with them, why they have different expectations to work and leadership (Arsenault, 2004).

According to Barzilai-Nahon & Mason (2010) the digital immigrant managers seem to have a somewhat negative perception about digital natives:

> *"They [digital natives] are also perceived as having values and behavioral characteristics that differ from prior generations. In many cases these behaviors are viewed as inefficient, ineffective, or even unethical by those already in the workforce. These perceptions, whether true or not, stimulate tensions between new employees from the net generation just entering the workforce with other generations."* (Barzilai-Nahon & Mason, 2010)

This kind of generational myopia[1], where an entire generation is branded with such description misses the tremendous value young people can contribute to the organizations (Johnson & Johnson, 2010). If the digital natives are to be successfully integrated into the organizations, the digital immigrant managers need to embrace them and the resources and knowledge that the digital natives bring with them.

So do the digital natives exist? And if so, what are their impact on corporate Denmark and management, where leadership and management is claimed to highlight digital immigrant values? It has been argued that the digital natives may cause tensions, or even conflict, due to the differences between digital natives and digital immigrants. If organizations fail to address the generational differences, this may lead to potential interpersonal conflicts, higher turnover, misunderstanding, miscommunication, lower employee productivity, poor employee well being, and reduced organizational citizenship behavior (Robbins, 2004; Smola & Sutton, 2002; Kupperschmidt, 2000). If the differences, however, are addressed properly, the digital natives can increase the level of creativity and innovation within the organizations as well as improve decision making by providing different perspective on problems (Robbins, 2004)

Being a manager is a unique challenge that carries distinct performance responsibilities including: *planning, organizing, leading,* and *controlling* (Schermerhorn *et al.*, 2008). However, an effective manager is one whose organizational unit, group, or team consistently achieves its goals while members remain capable, committed, and enthusiastic (Schermerhorn *et al.*, 2008). Thus managers need to focus on both: (1) task performance, and (2) job satisfaction. One way to ensure both task performance and job satisfaction is

[1] Myopia means *"a lack of foresight or discernment: a narrow view of something"* (Johnson & Johnson, 2010)

through motivation (Robbins, 2005). Thus it is argued that one of the important tasks for a manager is to ensure that the employees are performing at their highest level.

This indicates that, in order to integrate the digital natives successfully into the workforce, it is necessary for the managers to understand and recognize the digital natives, and develop leadership styles that are more relevant to this generation. Organizations that fail to do so, may find it difficult to integrate the digital natives into the organizations and utilize their full potential. It is especially important for organizations to understand how to address generational differences in terms of motivation, as this is one of the most important tasks for a manager.

1.4 THE DIGITAL NATIVES ARE MOTIVATED DIFFERENTLY

One of the most important tasks for managers is motivation of their employees. The importance of motivation is emphasized by Ryan & Deci (1985):

> *"For organizations to thrive, indeed in many cases even to survive, members of the organization must be motivated to perform well. Few things are more important or more troubling for managers than their efforts to promote organizational effectiveness than the motivation of their subordinates"* (Ryan & Deci 1985)

Although motivation is a necessary contributor for job performance and satisfaction, it is not the only one (McShaw & Von Glinow, 2004). However, if the manager is to improve the work of the organization, attention must be given to the level of motivation of its members (Schermerhorn *et al.*, 2008). People who are motivated exert a greater effort to perform than those who are not motivated (Robbins, 2004). Thus motivation is closely related to commitment, efficiency and productivity which all affect the profits of the organization.

There has been a continuing debate about the extent to which the digital natives are motivated by similar values and processes as those from earlier generations, and the question might be whether digital natives subscribe to similar motivational techniques and theories as those who were born in an earlier generation (Landy & Conte, 2010). In the digital native literature is claimed that the digital natives are motivated differently when compared to earlier generations. Tapscott (2009) argues that:

> "*As a manager you notice that they [digital natives] have new motivators and don't have the same concept of a career as previous generations ... whereas previous generations value loyalty, seniority, security, and authority, the Net Gen's norms reflect a desire for freedom, fun, collaboration ... employees are going to have to understand the key Net Gen norms ...*" (Tapscott, 2009)

This is supported by McShane & Von Glinow (2004), who emphasizes the problem of companies not adapting quickly enough. They describe this as follows:

> *"...employee needs are changing. Younger generations of employees are bringing different expectations to the workplace than their baby boomer counterparts. Many companies aren't changing quickly enough to address this new reality"* (McShane & Von Glinow, 2004)

Thus we are told that the digital natives have diverse values, which influence what they want, what they need, and what organizations should or should not do to fulfill those needs (McShane & Von Glinow, 2004) Although there has been a great deal of speculation and opinion regarding the motivation of the digital natives, and the extent to which they are motivated by similar values and processes as those from earlier generations, there has been relatively little formal research (Landy & Conte, 2010). Thus it is argued that we need more information about the digital natives in terms of motivation in order to understand if they are motivated by similar values and processes, or if they are motivated differently than earlier generations.

Furthermore the importance of understanding the new generation, and how they are motivated, is emphasized by Landy & Conte (2010):

> "*The question of values and motivation of members of younger generations is an important one for many reasons. The most obvious of these is demographic reality. With the passage of time, members of a new generation will predictably continue to increase in representation in the workforce. Thus, it is important to understand their motivational scheme"* (Landy & Conte, 2010: 397)

This indicates that if managers are to motivate In order for managers to motivate digital natives, managers need to understand what makes the *digital natives* tick and how to *motivate* them to bring out their full potential (Robbins, 2004).

1.5 PROBLEM FORMULATION

As discussed above, we are told that, along with the introduction and development of digital technology, a new generation of digital natives has emerged. It is claimed that this generation is different in terms of personality, values, beliefs, and expectations. Furthermore they are now entering workplaces throughout the country, why they are bringing a different set of values and expectations to the workplace. Currently, the workforce is dominated by digital immigrants why the leadership style in many organizations reflects and highlights the values of the digital immigrants. Additionally we are told that the digital natives are motivated differently than earlier generations, and that managers need to understand the digital natives and what makes them tick, if they want to manage the digital natives effectively and bring out their full potential. However, the digital native literature demonstrates a clear mismatch between the confidence with which claims are made and the evidence for such claims, why there is a pressing need for critical scrutiny and theoretically informed research. Furthermore, although there have been a great deal of discussion and opinion regarding the motivation of digital natives, there has been relatively little formal research in this area as well.

As a consequence this thesis takes a critical view of the idea of a distinct generation of digital natives in order to develop and promote a realistic understanding of the digital natives. Furthermore this thesis explores the extent to which age-related differences in work motivation exist. Thus the purpose of this thesis is to investigate if the digital natives are a myth or reality. Furthermore the purpose is to investigate how the digital natives are motivated in their work and if any differences exist between how digital natives and digital immigrants are motivated. Based on these findings the practical and theoretical implications will be discussed in order to understand how the findings influence management.

Based on the discussion above, the following research questions, which will form the starting point of this thesis, has been developed:

Research question 1:	**Are the digital natives a myth or reality?**
Research question 2:	**If the digital natives exist, how are they motivated in their work?**
Research question 3:	**Are the digital natives motivated differently than digital immigrants in their work?**
Research question 4:	**What are the practical implications for managers and organizations?**

1.6 DEFINITIONS

Digital native: someone who is techno-savvy and to whom digital technology is an integral part of their lives and uses this digital technology to create and share new content online.

Digital immigrant: An individual who grew up without digital technology and adopted it later why they always retain, to some degree, their foot in the past (Prensky, 2001)

Generation: an identifiable group that shares birth year and significant life events at critical developmental stages and who share a common culture in which individuals share values and norms and as a consequence share meanings and common ways of viewing events and objects which manifest itself in a set of embodied practices.

Work motivation: work motivation is a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behavior and to determine its form, direction, intensity, and duration (Pinder, 1998)

2 METHODOLOGY

It is the purpose of this chapter to explicitly present the methodological considerations and paradigmatic position of this study and present the basic assumptions and logic underlying it. A starting point here is taken in defining a paradigm and its content, based on which main elements underpinning this study are explained. Hereafter the research design will be presented, where the reason for the choice and use of the selected research process will be justified. Finally the methods and techniques for collecting the data used for this research will be discussed.

2.1 PARADIGM

It is generally agreed that the different world views, that researchers hold, both consciously and unconsciously, imply different foundations for knowledge about the social world. In other words, social science research is generally value-laddened and the choice of methods, data and forms of reporting is influenced by these values and assumptions (Kuada, 2008). Therefore it is important to engage in these philosophical discussions and explicitly present the root assumptions of this thesis.

The modern use of the term *paradigm* is connected to Thomas Kuhn (1970), who use paradigm to describe the structure of scientific revolution and different waves of research in a given scientific field. A paradigm is defined as:

> "*a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied, how research should be done, [and] how results should be interpreted*" (Bryman & Bell, 2007)

Thus, in essence, a paradigm consist of a set of common understandings of what phenomenon is being studied, the kinds of questions that are useful to ask about the phenomenon, how researchers should structure their approach to answering their research questions, and how the results should be interpreted. Thus a paradigm is a priori framework for understanding and investigating a phenomenon. The paradigm will therefore have a huge influence on the result, why one needs to be consciously aware of the paradigmatic assumptions (Andersen, 1990).

One of the conventional distinctions drawn in social science research is between the objective and subjective paradigm (Bryman & Bell, 2007; Arbnor & Bjerke, 1997; Burrell & Morgan, 1979). Building on this understanding, most scholars of philosophy of science define paradigms in terms of four sets of assumptions – i.e. ontological, epistemological, methodological assumptions and assumptions about human nature (Kuada, 2008; Burrell & Morgan, 1979).

Ontology refers to *"assumptions which concern the very essence of the phenomena under investigation"* (Burrell & Morgan, 1979). In other words, ontology is used to describe the nature of what the researcher seeks to know something about. *Epistemology* refers to *"assumptions about the ground of knowledge, about how one might begin to understand the world and communicate this as knowledge to fellow human*

beings" (Burrell & Morgan, 1979). Thus epistemology describes the nature of knowledge and the means of knowing. *Human nature* refers to *"the relationship between human beings, and their environment"* (Burrell & Morgan, 1979). This concept is concerning if the human behavior is deterministic or voluntary – if human beings have a free will of their own or if human behavior is determined by the environment. *Methodology* refers to "the way in which one attempts to investigate and obtain knowledge about the social world" (Burrell & Morgan, 1979). Thus methodology is the strategy or plan of action guiding the entire research, which describes reasons underlying the choice of scientific methods in the research process.

Burrell & Morgan (1979) compare the two polar perspectives in terms of their ontology, epistemology, human nature, and methodology. The differences are illustrates in Figure 2-1:

Figure 2-1: The Objectivist-Subjectivist approach

	The Objectivist Approach	The Subjectivist Approach
Ontology	Realism	Nominalism
Epistemology	Positivism	Anti-positivism
Human Nature	Determinism	Voluntarism
Methodology	Nomothetic	Idiographic

Source: Burrell & Morgan (1979)

In the following I will continue with discussing the paradigmatic position of this research based on the distinction between the objectivist and subjectivist approach.

2.2 THE PARADIGMATIC POSITION OF THIS RESEARCH

In order to determine the paradigmatic position of this research, the concepts derived from the conceptual discussion about business research above will be discussed. The purpose of this paragraph is to make these assumptions explicit to the reader, so the reader is in a better position to understand and evaluate the decisions made during this thesis.

The phenomenon, which is investigated within this thesis, is motivation and the degree to which motivation differs between the digital native generation and earlier generations. Pinder (1998) argues that motivation

is an invisible, internal concept, or what may be called a hypothetical construct[2]. Thus, motivation is a concept that we cannot actually see or measure directly. This illustrates the importance of using a paradigm that that acknowledges the importance of seeing through the eyes of the people being studied. In other words, it is important to position the research within a paradigm that recognizes human beings as central to the understanding of the phenomenon under investigation.

Therefore it has been decided to position this thesis within a phenomenological research tradition. This position the research within the subjective paradigm also referred to as the *interpretive paradigm*.
Interpretivism subscribes to *understanding* a given social world from the points of view of people being studied and the intentions underlying their behavior (Kuada, 2010). According to Giorgi (1975), phenomenology is the study of the structure, and the variations of structure, of the consciousness to which anything, event, or person appears (Kvale, 2008). Phenomenology is interested in elucidating both that which appears and the manner in which it appears. It studies the subjects' perspectives on their world, attempts to describe in detail the content and structure of the subjects' consciousness, to grasp the qualitative diversity of their experiences and to explicate their essential meanings (Kvale, 2008). Phenomenology attempts to describe the given as precisely and completely as possible. In other words, the purpose of phenomenology is to describe rather than to explain or analyze.

Ontology: Phenomenology rejects the belief that objects in the external world exist independently and that the information about objects is reliable. To arrive at certainty, anything outside immediate experience must be ignored, and in this way the external world is reduced to the contents of personal consciousness. Reality is this treated as pure "phenomena" and the only absolute data from where to begin. The *nominalist* position revolves around the assumption that the social world is external to individual cognition is made up of nothing more than names, concepts, and labels which are used to structure reality (Burrell & Morgan, 1979). Thus, the nominalist position does not admit to there being any 'real' structure to the world which these concepts are used to describe. This is in contrast to the *realist* position which postulates that the social world is a real work made up of hard, tangible and relatively immutable structures.

In relation to the present thesis, this ontological assumption about reality implies that I understand motivation as a social interaction between people. In other words, this ontological assumption means that

[2]A hypothetical construct is a concept representing an assumed physical process that is, as yet, unobservable directly (Pinder, 1998)

the subject matter. Thus, when investigating motivation, it is important that I have a focus on 'seeing' through the eyes of the people being studied.

Epistemology: The thesis is positioned within the *anti-positivist* position. For the anti-positivist, the social world is essentially relativistic and can therefore only be understood from the point of view of the individuals, who are directly involved in the phenomena under investigation (Burrell & Morgan, 1979). Therefore it is only possible to understand by occupying the frame of reference of the participant in action. One has to understand from the inside rather than the outside (Burrell & Morgan, 1979). Researchers within this tradition share a view that the subject matter of the social sciences.
In relation to the present thesis this means that if I want to investigate the generational differences in motivation, I must understand motivation from the point of view of the individuals, who are directly involved with the phenomenon. One way used to understand from the point of view of the individuals is qualitative interviews, which will be discussed a little later in this chapter.

Human nature: The thesis is positioned within the *voluntarism* which is characterized by 'free-will' which is the center of the stage – that is, human beings are completely autonomous and free-willed. Therefore it is argued that, instead of being a product of their environment, human beings are the creator of his or her environment. In other words, human beings are perceived as reflective rather than reflexive, intentional rather than automatic, and rational. This allows for the possibility of intentional behavior, planning, goal acceptance, and, most importantly, choice.
In relation to this thesis, this assumption about human nature implies that people are viewed as active information gatherers rather than passive respondents to internal or external stimuli. Instead, human beings are perceived as being capable of gathering and analyzing information, and making decisions based on that information. This means that motivation is about initiating and regulating the work-related behavior of the employees. This is done through initiating or regulatory events (e.g. the promise of a reward, the imposition of a deadline, the opportunity for choice, success versus failure feedback). It is argued that people seek information about the extent to which the self and others are responsible (or, more accurately, perceived as responsible) for positive and negative events. The person looks for evidence of intention in the action of others and considers those intentions in choosing a personal course of action (Landy & Conte, 2010: 364). Thus, in order to understand the effect of initiating or regulatory events, it is crucial to understand how these events are experienced or interpreted by the recipient. In other words, human beings evaluations of the action of others are central to explaining motivated behavior.

Methodology: The thesis is positioned within the *ideographic* position in the attempt to investigate and obtain knowledge about generational differences in motivation. The ideographic approach to social science is based on the view that one can only understand the social world by obtaining first-hand knowledge of the subject under investigation. Therefore the scientist must interact with the individuals, who are directly involved within the phenomena under investigation.

In relation to this thesis, these assumptions about how to investigate and obtain knowledge about the social world has important implications for my research, especially how I collect my data. When investigating generations and motivation my primary data sources are qualitative semi-structured interviews, which allow me to 'see' through the eyes of the interviewees. Additionally, I have used an online self-completion questionnaire in order to get some data that allows me to compare the different generations in terms motivation. The online-questionnaire is also used to triangulate the findings. The data collection methods will be discussed more in detail in paragraph 2.6.

2.3 RESEARCH DESIGN

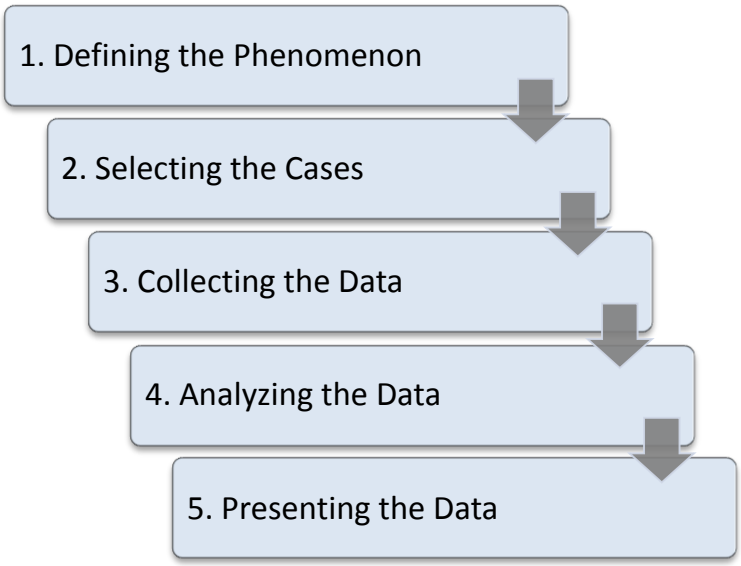
After discussing the methodological position of the thesis I will continue by discussing the *research design,* which has been selected for this thesis. A research design provides the framework for the collection and analysis of data (Bryman & Bell, 2007). In other words, a research design represents the structure that guides the execution of a research method and the analysis of the subsequent data. A research design should provide a plan that specifies *how* the research is going to be executed in such a way that it answers the research questions (Blanche *et al.*, 2008). Thus, the research design provides the strategic framework that guides the research activities to ensure that sound conclusions are reached.

The research design, which has been chosen for the purpose of this thesis, is the *comparative design,* also referred to as a *multiple-case study*. The comparative research design entails the study using more or less identical methods of two or more contrasting cases (Bryman & Bell, 2007). Thus, the comparative research design is largely undertaken for the purpose of comparing the cases that are included. As a consequence, by using the comparative research design, I am able to compare and contrast the findings derived from different cases and therefore allow me to identify what is unique and what is common across two different cases. In relation to this thesis this means that a comparative research design allows me to compare and contrast the digital natives and digital immigrants in order to understand if any generational differences exist in work motivation. This frequently promotes theoretical reflection about contrasting findings (Bryman & Bell, 2007).

The case study is a type of qualitative research design that is often descriptive in nature, and has been deemed highly suitable for studies, whereby the researcher aims at investigating specific issues in depth and detail and hereby creating an in-depth understanding of the phenomenon under investigation. The basic idea is that one case, or small number of cases, will be studied in detail, using whatever methods seem appropriate (Dubois & Gadde, 2002). The case study opens up for interpretive sense making, in that it allows the researcher to seek meaning rather than causal explanations.

2.4 THE QUALITATIVE RESEARCH PROCESS

In the following I will introduce and discuss the research process which I have adopted in this thesis. Eneroth (1994) provides some guidelines about how to do qualitative research which is illustrated in his *Conceptual-Inductive Model* below. According to Eneroth (1994) qualitative research can be divided into five steps.



Source: Eneroth (1994)

The first step is to define the phenomenon that I intend to study. The first phase implies that you either limit the study to a particular type of phenomenon or to certain elements of the phenomenon. This first phase imply that you name, superficial identifies, and defines the phenomenon one wishes to investigate (Eneroth, 1994). In the introduction to this thesis and in the definition of the problem, I have defined the context in which the phenomenon of *work motivation* will be explored. More precisely the thesis is about

how the digital native generation is motivated and if they are motivated differently than earlier generations.

The second step in the model is to select the empirical foundation, which are going to form the basis of this thesis. In order to build a comprehensive concept of the phenomenon, it is in the next phase of the study necessary to be confronted with the phenomenon in such a way that as many aspects as possible appears (Eneroth, 1994). Since it is obviously not possible to examine all "examples" of the phenomenon it is necessary to make a choice about what should make up the empirical basis. This choice should not be statistically but instead the choice must be strategic. This means that a number of cases are "handpicked" in such a way that it maximizes the possibility that you will encounter many different (and preferably opposing) sides of the phenomenon in question (Eneroth, 1994).

The third step of the model is to collect the empirical data. It is necessary to collect as many data as possible. Thus it is not about testing (measuring) the extent to which a given quality is present among the investigated phenomena, but rather to discover as many qualities as possible. In other words, the purpose is to collect a maximum of different data (Eneroth, 1994). In order to collect a maximum of different data it is necessary to collect the data in an unstructured manner. In other words, it is necessary to select one, or more data collection methods which allow me to be exposed to as big an unsorted amount of data as possible.

The fourth step of the model is to analyze the data. After collecting the data I have a big amount of data which needs to be analyzed. It is required to adopt a particular view on the data, or in other words, adopt a theoretical perspective on the data. According to Eneroth (1994) you consciously select a method for how to perceive the data, or at least try to clarify what sort of data you focus on. In other words, a theoretical perspective directs your consciousness and attention to certain aspects of the phenomenon (Eneroth, 1994).

The fifth and final step of the model is to present the data. After collecting and analyzing the data I now stand before a vast amount of data that needs to be described and presented. Now it is about bringing together these scattered but clear data into different qualities, which in turn together give an idea about the phenomenon under investigation (Eneroth, 1994). The conceptualization therefore consists of two steps. (1) The first step is to summarize the data into a number of qualities with certain aspects, which the data is a concrete expression of, and how these qualities can be attributed to the same type of concept. (2)

In the second step the qualities are organized into a concept about the phenomenon under investigation (Eneroth, 1994).

In the following I will, in line with Eneroth's (1994) guidelines, discuss in details how I have selected the cases, collected, analyzed, and presented the data.

2.5 SELECTING THE CASES

Now that the research design has been introduced, I will continue to discuss how I have selected the cases, which have been used in this thesis. The selection of cases is an important aspect of the case study design, because the selection of cases defines the set of entities from which the research sample is to be drawn (Eisenhardt, 1989).

The cases have been chosen for theoretical, not statistical, reasons (Eneroth, 1994). Theoretical sampling simply means that cases were selected because they were particularly suitable for illuminating and extending relationships and logic among constructs (Eisenhardt & Graebner, 2007). In other words, the cases were chosen because they were unusually revelatory, extreme exemplars or opportunities for unusual research access and therefore were likely to offer theoretical insight. A particularly important theoretical sampling approach is "polar types", in which a researcher samples extreme cases in order to more easily observe contrasting patterns in the data. Pettigrew (1988) argues that, given the limited number of cases which can usually be studied, it makes sense to choose cases such as extreme situation and polar types in which the phenomenon of interest is "transparently observable" (Eisenhard & Graener, 2007).

The first case is Jysk Telemarketing (JTM). JTM is a telemarketing company who was founded in 2001. JTM offers a variety of services including: (1) customer service, (2) Sales, (3) Market analysis, and (4) Lead creation. The reason for choosing JTM is not because of their services, but instead because of their composition of employees. What makes JTM especially interesting for the purpose of investigating how digital natives are motivated is because 95% of JTM's employees are between 18-31 years old. This is a very unusual composition of employees. However, this allows me to investigate a company, where the digital natives by far are the dominating generation in the workplace. Therefore it is argued that JTM is a perfect place to investigate how the digital natives are motivated, and more importantly to understand how companies can motivate them.

The second case is Technology & Business at University College of Northern Denmark (UCN). UCN was established in 2007 and is working with education, development, and innovation within three main areas: *healthcare, pedagogical,* and *technology & Business*. UCN have approximately 7000 students and nearly 700 employees. The reason for choosing UCN was that the majority of the employees in UCN are digital immigrants. This allows me to investigate how the digital natives are motivated, and as a consequence to contrast these findings to the findings from JTM. This, in turn, allows me investigate if the digital natives are motivated differently than earlier generations. Thus UCN can be characterized as a contrasting case also referred to as a 'polar case'. This allows me to more easily observe if the generations are motivated differently.

The third case is The Centre for International Business at Aalborg University. The Centre for International Business has been globally active within teaching, research and collaboration with business since 1984. The reason for choosing the Centre for International Business was that this provided me with access to many young people as the majority of the students are 18-29 year olds. Furthermore the staff at the Centre of International Business was also surveys, which provided me with a benchmark sample which were used to contrast to the findings from the digital natives.

2.6 DATA COLLECTION

After discussing the research design I will continue to discuss the methods and techniques used to create the empirical foundation of this thesis. In the following section I will describe the data sources used and, just as important, justify why they have been used

This thesis adopts a mixed methods research approach which is used as simple shorthand to stand for research that integrates quantitative and qualitative research within a single project (Bryman & Bell, 2007). In other words, mixed methods research refers to research, which combines research methods that cross the quantitative and qualitative research strategies. By adopting such a strategy it allowed me to capitalize upon the various strengths of quantitative and qualitative methods and the weaknesses offset somewhat (Bryman & Bell, 2007).

For the purpose of this thesis, semi-structured interviews and an online survey was used. The qualitative semi-structured interviews were used to facilitate the online survey. The in-depth knowledge acquired

through the qualitative interviews was used to inform the design of the survey questions for the self-completion questionnaire. Furthermore, the qualitative interviews were helpful as a source of hypotheses that were subsequently tested using the online self-completion questionnaire (Bryman & Bell, 2007). In the following, the purpose and reason for using these data collection methods are discussed more in depth.

2.6.1 SEMI-STRUCTURED INTERVIEW

For the purpose of this thesis, semi-structured interviews were used for collecting preliminary data. According to Kvale (2008), the qualitative research interview has a unique potential for obtaining access to and describing the lived everyday world (Kvale, 2008). Thus, the semi-structured interview techniques were chosen as a data collection method because the semi-structured interview technique allows me to understand issues and events from the point of view of the interviewee. Thereby I was able to understand what the interviewee views as important in explaining and understanding events, patters, and forms of behavior in terms of motivation (Bryman & Bell, 2007). At the same time, the semi-structured interview technique still allowed some degree of structure, which was needed when doing comparative studies, in order to ensure cross-case comparability (Bryman & Bell, 2007).

Furthermore, the semi-structured interview technique provided a focus of the interviews. Without this focus it is easy to become overwhelmed by the volume of data, and consequently end up describing nothing (Dubois & Gadde, 2002). In the semi-structured interview, the researcher has a list of questions on fairly specific topics to be covered, often referred to as an interview guide (Kvale, 2008). However, despite the structure, the interview process is still flexible. This is because I have the opportunity to depart significantly from the interview guide that was used. Therefore I was allowed to ask new questions that follow up interviewees' replies and vary the order of questions, and even the wording of the questions (Kvale, 2008).

However, according to Eneroth (1994) the data should be collected in an unstructured manner in order to produce an unsorted amount of data (Eneroth, 1994). Despite this request, I have still decided to use semi-structured interviews as the preliminary method for collecting data. This is because, as Weick (1979) argues, that *"many pseudo observers seem bent on describing everything, and as a result describe nothing"* (Dubois & Gadde, 2002). His suggestion for solving this problem is to "*invest in theory to keep some intellectual control over the burgeoning set of case descriptions"* (Weick, 1979 in Dubois & Gadde, 2002). Thus, the reason why I use semi-structured interview as the primary method for collecting data is because

the semi-structured interview provides me with a degree of structure but also allows for room to pursue topic of particular interest to the interviewees.

In Table 2-1 key demographics of the interviewees are summarized. The interviewees were selected using a convenience sample as the interviewees were selected by members of the organization rather than be me. However, the interviewees were selected based on age as this was a characteristic of interest.

Table 2-1: Key Demographics of the interviewees (% of the total)

Demographic variable	Total Sample	JTM	UCN
Number of respondents	8	5	3
Gender			
Male	38%	60%	0%
Female	63%	40%	100%
Nationality			
Danish citizen	100%	100%	100%
Country inside the EU	0%	0%	0%
Country outside the EU	0%	0%	0%
Age			
18-29	50%	80%	0%
30-39	13%	0%	33%
40-49	38%	20%	67%
50-59	0%	0%	0%
> 60	0%	0%	0%

Source: Web Survey

As Table 2-1 shows, the semi-structured interview technique was used to interview 8 individuals (5 in JTM and 3 in UCN). 38% (n = 3) of the respondents were males where as 63% (n = 5) were females. 50% (n = 4) of the respondents was 18-29 year olds, while 50% (n = 4) were above 30 years old. The reason why this particular sample was used for the purpose of this thesis was because the sample allowed me to explore the perceptions of motivation from both younger and older employees, by asking them to describe situations where they felt extra and less motivated.

In preparation for the semi-structured interviews an interview guide was created that reflected the research questions, which was presented in paragraph 1.5 (see p. 21). The interview guide was divided into two main parts. The first part focused on the respondent's use of technology and how often they engage in different activities online. The second part focused on the respondents' attitudes toward work and what motivates them in their work. The interview guide can be found in appendix 1.

2.6.2 ONLINE QUESTIONNAIRE

Additionally, an online self-completion questionnaire was used to collect further data. The in-depth knowledge, which was acquired through the qualitative semi-structured interviews, was used to inform the design of the online self-completion questionnaire questions.

The purpose of the online self-completion questionnaire was to allow me to triangulate[3] the data (Bryman & Bell, 2007). In other words, by using the online self-completion questionnaire to collect additional data, I was able to cross-check the results of the semi-structured interviews against the results of the online self-completion questionnaire. This allowed me to support the main findings, which emerged from the qualitative data, with the findings from the online survey.

Bryman & Bell (2007) argues that the combined use of qualitative and quantitative research methods represents a common pattern in case study research in business and management, used by researchers in order to enhance the generality of their findings (Bryman & Bell, 2007). Thus the quantification of the findings acquired from the qualitative semi-structured interviews can also help me to uncover the generality of how digital natives are motivated, and if any differences in motivation exist between digital natives and digital immigrants, because the online self-completion questionnaire allows me to cross-check the results of the semi-structured interviews on a bigger sample.

One of the main critiques of qualitative research that is often referred to by critics of qualitative research is that the scope of the findings of qualitative investigations is restricted. When qualitative methods are used with a small number of individuals in a certain organization or locality, they argue that it is impossible to know how the findings can be generalized. However, since I am quantifying the findings acquired from the semi-structured interviews can help me to uncover the generality and help to enhance the generality of my findings. However, it should be noted, due to the samples used in this thesis, the findings are not generalizable. Still, by using self-completions questionnaire, they were tested on a larger sample.

The demographics of the sample are summarized in Table 2-2. The respondents used in the Web Survey were also selected using convenience sampling, that is, because they were simply available to the

[3] *Triangulation* entails using more than one method or source of data in the study of social phenomena (Bryman & Bell, 2007). The triangulation metaphor is taken from navigation and military strategy, where it refers to the process whereby multiple reference points are used to locate an object's exact position.

researcher by virtue of its accessibility (Bryman & Bell, 2007). As a consequence of using this sampling method, the results of the survey should be treated with some caution. This is because it is not known of what population this sample is representative. As a consequence, this places constraints on the generalizablility, why the data will not allow definitive findings to be generated (Bryman & Bell, 2007). However, the results can be used as a springboard for further research or allow links to be forged with existing findings in an area (Bryman & Bell, 2007)

Table 2-2: Key Demographics of the sample (% of the total)

Demographic variable	Total Sample	JTM	AAU
Number of respondents	143	81	62
Gender			
Male	54%	65%	39%
Female	46%	35%	61%
Nationality			
Danish citizen	75%	98%	45%
Country inside the EU	10%	0%	24%
Country outside the EU	15%	2%	31%
Age			
18-29	87%	93%	81%
30-39	8%	6%	10%
40-49	2%	1%	3%
50-59	1%	0%	2%
> 60	2%	0%	5%

Source: Web Survey

Within a two-week period, 160 questionnaires were completed. However, after reviewing each of the questionnaires for relevant missing data, 17 were eliminated, resulting in a final sample size of 143. As one can see from Table 2-2, there are 143 respondents in the total sample of which 54% (n = 77) were male, while 46% (n = 66) were female. As one can see from Table 2-2, there were significant differences in a both nationality and age. 75% (n = 107) of the respondents were Danish citizen, while 11% (n = 15) were from countries inside the EU and 14% (n = 21) from countries outside the EU. Furthermore, 87% (n = 125) of the respondents were 18-29 year olds, 8% (n = 11) were 30-39 year olds, 2% (n = 3) were 40-49 year olds, 1% (n = 1) were 50-59 year olds, and finally 2% (n = 3) were above 60 years old. The reason why the 18-29 year olds was representing the majority of the sample was because the main focus of this thesis was the so-called digital natives, which is often argued to be young people born after the introduction of the digital technology. The remaining part of the sample was used to examine whether any differences exists between the digital natives and the digital immigrants.

However, as a consequence of the differences in some of the demographic features, especially age, there is a possibility of sampling error as small samples are less precise (Bryman & Bell, 2007). However, while a larger sample cannot guarantee precision, increasing the size of a sample increases the likely precision of a sample (Bryman & Bell, 2007). As a consequence of this possible sampling-error, there is a chance that the results from the survey are biased[4] why the results should be treated with some caution, because this limits the generalizablility of the results. Therefore, the reader should be cautious if trying to transfer these results into other contexts than the cases.

The online questionnaire consisted of two sections. The first section focused on the how the respondents use technology and how often they engage in various activities online. The second part focused on the respondent's feelings about work and their work motivation. The measures adopted in the online questionnaire were previously validated in the literature with acceptable reliability results. The online questionnaire can be found in appendix 2.

Work motivation:

Work motivation was measured using Amabile *et al.'s* (1994) 30-item 'Work Preference Inventory' (WPI), designed to *"capture individual differences in the degree to which adults perceive themselves to be intrinsically and extrinsically motivated toward what they do"* (Amabile, 1994). The items are written in the first person, and respondents are asked to indicate the extent to which each item describes them (on a 4-point scale, from 1 = always true of me to 4 = never true of me). The WPI aims to capture the major elements of intrinsic motivation (self-determination, competence, task involvement, curiosity, enjoyment, and interest) and extrinsic motivation (concerns with competition, evaluation, recognition, money or other tangible incentives, and constraint by others). The instrument is scored on two primary scales (*intrinsic* and *extrinsic* motivation), each subdivided into 2 secondary scales. The intrinsic motivation was subdivided into secondary scales labeled *challenge* (5 items; e.g. "The more difficult the problem, the more I enjoy trying to solve it") and *Enjoyment* (10 items; e.g. "I enjoy doing work that is so absorbing that I forget about everything else"). Extrinsic motivation was subdivided into secondary scales labeled *Compensation* (5 items; e.g. "I am strongly motivated by the money I can earn") and *Outward* (10 items; e.g. "I am strongly motivated by the recognition I can earn from other people"). Mean scores are calculated for each scale, with the highest possible mean being 4.

[4] A biased sample is *"one that does not represent the population from which the sample was selected"* (Bryman & Bell, 2007)

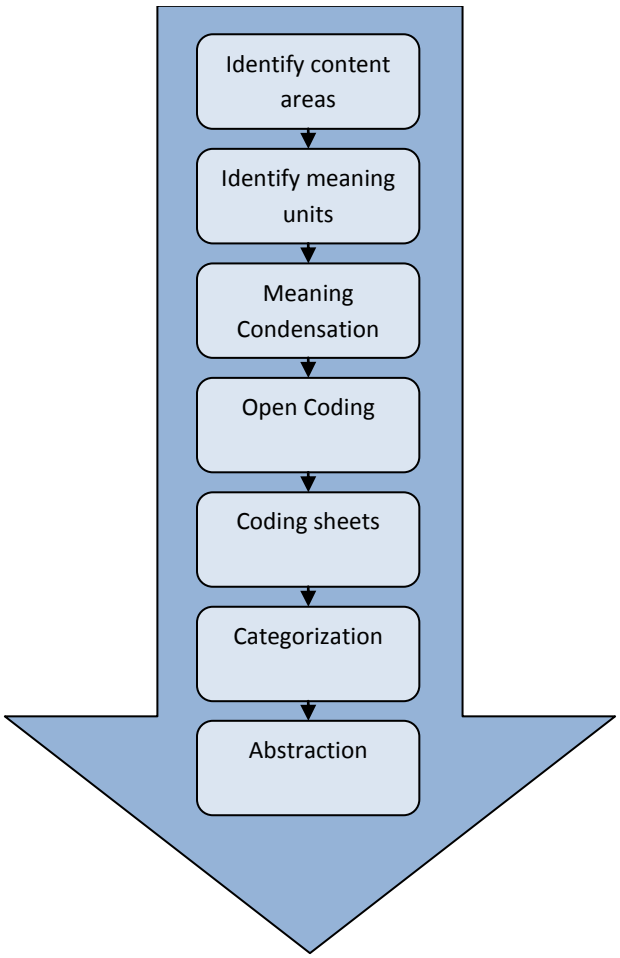
Workplace fun:

Furthermore workplace fun was included in the section about work motivation. Workplace fun was measured using Karl *et al.'s* (2005) 13-item '*Attitude toward workplace fun*' scale, designed to capture the dimensions of *appropriateness* (3 items; e.g. "Having a good time and doing a good job are incompatible achievement"), *salience* (5 items; e.g. "Having fun at work is very important to me"), and *perceived consequences* (5 items; e.g. "When work is fun, employees work harder and longer") (Lamm & Meeks, 2009). Individuals are likely to have diverging views on whether having or pursuing fun at work is appropriate. Some may think that work-hours are solely for work while others think that play and work are complementary in workplace. Employees also have varying attitude toward the salience or importance of having fun at work. Some may regard workplace fun as a critical element of a job while others may regard it as a pleasant extra, but not necessarily required. People may also vary in views on expected consequences of fun at work. Some may view fun activities as facilitators of individual and team performances while others may view them as impeding work processes.

2.7 DATA ANALYSIS

After collecting the data, a vast amount of data emerged. The next step in the in my research process was to analyze the qualitative data. There are numerous approaches for analyzing qualitative data. However, I have decided to analyze the semi-structured interviews using *qualitative content analysis.* Qualitative content analysis is a flexible method for analyzing text data (Hsieh & Shannon, 2005) Qualitative content analysis deals with manifest content, that is, what the text says, as well as latent content in a text, that is, what the text is talking about (Graneheim & Lundman, 2004). Below the qualitative content analysis process is illustrated:

Figure 2-2: The Qualitative Content Analysis Process



Source: Created by Author based on Graneheim & Lundman (2004) & Elo & Kyngäs (2008)

The first step of the qualitative content analysis is to sort the interview into content areas. Content areas refers to parts of a text dealing with a specific issues and can be parts of the text based on theoretical assumptions from the literature, or parts of the text that address a specific topic in an interview or observation guide (Graneheim & Lundman, 2004). Based on the research questions, the interview was sorted into two content areas. The first content area concerned people's use of technology and how they interacted with technology. The second content area concerned attitudes toward work and how people are motivated in their work. The interviews were read through several times to obtain a sense of the whole. Then the text about the different content areas was extracted and brought together into one text, which constituted the unit of analysis.

The second step of the qualitative data analysis was to divide the content areas into *meaning units*. A meaning unit is the constellation of words or statements that relate to the same central meaning, and is

also referred to as content unit or coding unit (Graneheim & Lundman, 2004). In other words, a meaning unit is words, sentences, or paragraphs containing aspects related to each other through their content and context.

After dividing the unit of analysis into meaning units, the meaning units were condensed. Condensation refers to a process of shortening while still preserving the core (Graneheim & Lundman, 2004). Considering the context, the meaning units were *condensed* into a description close to the text, the manifest content, and, where possible, into an interpretation of the underlying meaning, the latent content.

The condensed meaning units were *abstracted* and labeled with a *code*. A code is a way of labeling meaning units, and are, according to Coffey & Atkinson (1996), "tools to think with" since labeling a condensed meaning units with a code allows the data to be thought about in new and different ways (Graneheim & Lundman, 2004). This process includes open coding, which means that while I have been reading the text, notes and heading have been written in the text (Elo & Kyngäs, 2007). The condensed meanings units is read through again, and as many headings as necessary are written down in the margins to describe all aspects of the content (Elo & Kyngäs, 2007). The headings were then collected from the margins on to coding sheets. When coding the meaning units, the whole text was considered in order to understand the meaning units in relation to the context.

After collecting the headings in coding sheets, the next step is to create *categories,* which is the core feature of qualitative content analysis (Graneheim & Lundman, 2004). A category is a group of content that shares a commonality and often include a number of sub-categories (Graneheim & Lundman, 2004). The purpose of creating categories is to provide means of describing the phenomenon, to increase understanding, and to generate knowledge (Elo & Kyngäs, 2007). The various codes were compared on differences and similarities in order to find commonalities. After the open coding, the lists of categories were grouped under higher order headings (Elo & Kyngäs, 2007). The purpose of grouping data was to reduce the number of categories by collapsing those that are similar or dissimilar into broader higher order categories (Elo & Kyngäs, 2007).

The final step of the qualitative content analysis process is abstraction. Abstraction means formulating a general description of the research topic through generating categories (Elo & Kyngäs, 2007). Each category has been named using content-characteristic words. Sub-categories with similar events and incidents are grouped together as categories, and categories are grouped as main categories.

2.8 DATA PRESENTATION

The final step of the qualitative research process is summarizing the data into a concept of the phenomenon under investigation (Eneroth, 1994), that is, summarize the empirical data into a concept of the digital natives. The basis for this last step is that we are facing a wide range of data that we have made clear in the collected amount of data.

Within this thesis *ideal types* were used to summarize and present the empirical data. An ideal type is a special type of theoretical concepts, which is created by selecting and cultivating certain, typical features of reality in order to produce a meaningful, coherent and orderly whole (Eneroth, 1994). Ideal type is a constructed image and should not be confused with an ideal in the sense of something that should be pursued. In other words Ideal types are not considered as ideal in a normative sense as the name might suggest. Instead the concept is a mentally constructed instrument used as a tool in the description of a complicated social reality. Ideal type is a typological term most closely associated with sociologist Max Weber (1864-1920) who defines ideal types as:

> *"An ideal type is formed by the one-sided accentuation of one or more points of view and by the synthesis of a great many diffuse, discrete, more or less present and occasionally absent concrete individual phenomena, which are arranged according to those one-sidedly emphasized viewpoints into a unified analytical construct (...) In its conceptual purity, this mental construct (...) cannot be found empirically anywhere in reality."* (Weber in Ritzer 1996:117-118)

An ideal type is formed from characteristics and elements of the given phenomena, but it is not meant to correspond to all of the characteristics of any one particular case. The ideal type method tries to group data into a kind of constructed ideal types or caricatures of various 'examples' of the phenomenon under investigation (Eneroth, 1994). It is important to be aware of the fact, that nobody has all the characteristics, which we associate with the caricature or the ideal type in question. Thus the purpose of the ideal type methods is not to provide a complete identification of all the characteristics and qualities of the phenomenon under investigation. Instead it is the purpose to create ideal types that captures the essence of various cases of the phenomenon under investigation (Eneroth, 1994).

In other words, ideal types are not meant to refer to perfect things, moral ideals nor to statistical averages but rather to stress certain elements common to most cases of the given phenomena. However, according to Eneroth (1994), even though we in this way relatively free create ideal types, we cannot just do as we please. Some conditions need to be fulfilled. First of all, the ideal types need to exclude each other, that is, they must be clearly separated from each other. And second, the created ideal types must cover the entire material, that is, each case of the phenomenon under investigation must be referred to one of the ideal types (Eneroth, 1994).

Thus, in relation to this thesis, when presenting the data and findings, I will be referring to the typical digital native and the typical digital immigrant. Thus I will not provide a complete identification of all the characteristics and qualities of the digital natives and digital immigrants, but instead be focusing on the essence of the two and present the characteristics and qualities which are common to most of the cases of the digital natives and digital immigrants.

2.9 TRUSTWORTHINESS OF RESEARCH

Research findings should be as trustworthy as possible and every research study must be evaluated in relation to the procedures used to generate the findings. The use of concepts for describing trustworthiness differs between the qualitative and the quantitative research traditions (Bryman & Bell, 2007). Within the tradition of quantitative research reliability and validity are often referred to as important criteria in establishing and assessing the quality of research. However, these criteria seem to be geared mainly to quantitative rather than to qualitative research (Bryman & Bell, 2007), as used within this thesis. This is because these criteria presuppose that a single absolute account of social reality is feasible, which is conflicting with the paradigmatic assumptions of the qualitative research, and therefore this thesis, where social reality is perceived as a social construction. Therefore it has been argued that qualitative studies should be judged or evaluated according to quite different criteria from those used by quantitative researchers (Bryman & Bell, 2007). As a consequence Lincoln & Guba (1985) propose that alternative terms and ways of assessing qualitative research are required. They suggested credibility as an analog to internal validity, transferability as an analog to external validity, dependability as an analog to reliability, and confirmability as an analog to objectivity (Bryman & Bell, 2007). These criteria are referred to as criteria of trustworthiness (which is a parallel to the term *rigor*)

2.9.1 CREDIBILITY

Credibility is one of the most important factors in establishing trustworthiness and refers to an evaluation of whether or not the research findings represent a "credible" conceptual interpretation of the data drawn from the participants' original data (Lincoln & Guba, 1985). It is the credibility or feasibility of the results that I arrive at that is going to determine whether or not the results are perceived as acceptable to others.

Bryman & Bell (2007) recommend using *triangulation* in order to establish credibility of the findings. As mentioned above, an online self-completion questionnaire was used to triangulate the data preliminary findings from the quantitative semi-structured interviews. This has allowed me to cross-check the results of the semi-structured interviews, which has allowed me to support the main findings, which emerged from the qualitative data.

Another technique, recommended by Bryman & Bell (2007), in order to establish credibility of the findings is to ensure that the research is carried out according to the canons of good practice; that is, adopting research methods which are well established in qualitative research. In order to ensure, that I have used well established research methods I have turned to relevant academic literature about qualitative research. Additionally I have explicitly presented, discussed, and justified the research methods I have used in this thesis. This allows the reader to evaluate my choices and whether or not the research is established upon well established research methods that are accepted in the qualitative research literature.

2.9.2 TRANSFERABILITY

Trustworthiness also includes the question of *transferability*, which refers to the extent to which the findings can apply or transfer beyond the bounds of the study (Lincoln & Guba, 1985).

As qualitative research typically entails the intensive study of a small group of individuals, that is, focus on depth rather than breadth, qualitative findings tend to be oriented to the contextual uniqueness and significance of the aspect of the social world being studied. In order to increase the transferability of the findings within this thesis I have used data triangulation. As mentioned above, an online self-completion questionnaire was used to triangulate the data that was collected during the quantitative semi-structured interviews, and the results that I have derived from these data. This has allowed me to cross-check the

results of the semi-structured interviews, which have allowed investigate the degree to which the findings can be transferred to another context and setting.

Another strategy used to address the issue of transferability is to provide the reader with access to the complete set of data analysis documents, which have was used to generate the answer to the research questions including transcribed interviews, online questionnaire, and qualitative data analysis. This gives the reader the ability to transfer the conclusions of this research to other cases. The complete set of data analysis documents are on file and available upon request.

However, even though I can give suggestions about transferability, it is important to understand that it is the reader's decision whether or not the findings are transferrable to another context (Graneheim & Lundman, 2004).

2.9.3 DEPENDABILITY & CONFIRMABILITY

Dependability is an assessment of the quality of the integrated processes of data collection, data analysis, and theory generation. Confirmability is a measure of how well the findings are supported by the data collected (Lincoln & Guba, 1985)

To address the issues of dependability and confirmability more directly, the research process within the study have been reported in detail (Bryman & Bell, 2007) thereby enabling others to repeat the work, if not necessarily to gain the same results. Furthermore I relied on an independent audit of my research methods by my supervisor (Bryman & Bell, 2007). My supervisor has extensive experience within the field of social science research and therefore has extensive knowledge within the field of this thesis. Throughout the process of writing this thesis, my supervisor has thoroughly and enthusiastically examined my research process and the text of the thesis itself.

Furthermore, the reader is provided with insight into all phases of the research process. The reader is provided with access to interview transcripts, qualitative content analysis. Such in-depth coverage also allows the reader to assess the extent to which proper research practices have been followed. So as to enable readers of the research report to develop a thorough understanding of the methods and their effectiveness, the thesis explicitly describes the research process, including the process of case selection, data collection, data analysis, and data presentation.

3 GENERATIONAL THEORY

In the following the reader will be introduced to the theoretical underpinnings of the study of generations. As mentioned in the introduction, there has been relatively little academic work either to confirm or refute popular generational stereotypes. Thus it was argued, that the digital native literature demonstrates a clear mismatch between the confidence with which claims are made and the evidence for such claims.

Therefore the aim of the chapter is to draw together an understanding of what a generation is. In other words, I will begin by considering the extent to which the discussion of generations and generational differences are based upon a sound theoretical framework and empirical evidence base.

3.1 GENERATIONS AS SHARED CULTURE

The common understanding of the term generation is that a generation can be described as a cohort that shares birth years, age location, and significant life events, especially those events at the critical late adolescent and early adulthood years. As a consequence of the shared significant life events, they develop their own unique personalities (Meredith & Schewe, 2002; Kupperschmidt, 2000; Zemke *et al.*, 2000).

It has been argued that never before in the history have so many generations occupied the workplace as they do now (Johnson & Johnson, 2010). In general, while researchers differ slightly in the precise years of birth that define the different generations, most agrees that there are four broad generations of employees. These are *Veterans, Baby Boomers, Generations X,* and *Digital Natives* as presented in Table 3-1. Scholars and authors, who are discussing generations, do not necessarily agree about the exact years that mark the dividing line between these generational groups (Parry & Tyson, 2011). The problem with deciding a cut-off point is that there are no hard stops or road signs indicating when one generation ends and another begins (Zemke *et al.*, 2000). People born close to the dividing line between generations are known as *cuspers* (Johnson & Johnson, 2010). They have the advantage of having one foot in two generational worlds. Cuspers have a natural ability to identify with multiple generations' beliefs and interests. However, it is not all cuspers who identify with both sides of the generational dividing line. Instead many adopt the values of one side and conduct themselves accordingly. However, according to Parry & Urwin (2011) one of main problems in generational research is the assumption, before any research has taken place, that there are four specific cohorts of individuals and these are the generations (Parry & Tyson, 2011).

Table 3-1: Generations at work

Generation	Years of birth	Also known as:	Age in 2011
Veterans	1925 - 1945	Silent generation, Matures, Traditionalists	66 - 86
Baby Boomers	1946 - 1964	Woodstock Generation	47 - 65
Generation X	1965 - 1979	Baby Busters, Lost Generation	32 - 46
Digital Natives	1980 - 1997	Generation Y, Millennials, Net Generation	14 - 31

Source: Adapted from Parry & Tyson (2011); Tapscott (2009); Zemke et al. (2000)

The theoretical basis for the term generations can be traced back to the 1950s, and has its early origins in sociology, most notably in the work of the German philosopher and sociologist Karl Mannheim (1893-

1947). In his paper 'The Problem of Generations' (1952) Mannheim used the idea of generations to understand and explain the structure of social and intellectual movements. According to Mannheim (1972) a generation is not a *concrete* group in the sense of a community, that is, a group which cannot exist without its members having concrete knowledge of each other, and which ceases to exist as a mental and spiritual unit as soon as physical proximity is destroyed. Mannheim (1972) describes this as follows:

> *"By a concrete group, then, we mean the union of a number of individuals through naturally developed or consciously willed ties. Although the members of a generation are undoubtedly bound together in certain ways, the ties between them have not resulted in a concrete group."* (Mannheim, 1972:289)

Instead Mannheim (1972) defined generations as a 'social position' similar to the class position of an individual in society. Mannheim (1972) argued that the class position is materially quite unlike the generation, but bearing a certain structural resemblance to it, arguing that:

> *"In its wider sense class position can be defined as the common "location" (Lagerung) certain individuals hold in the economic and power structure of a given society as their "lot." One is proletarian, entrepreneur, or rentier, and he is what he is because he is constantly aware of the nature of his specific "location" in the social structure, i.e. of the pressures or possibilities of gain resulting from that position. This place in society does not resemble membership of an organization terminable by a conscious act of will. Nor is it at all binding in the same way as membership of a community (Gemeinschaft) which means that a concrete group affects every aspect of an individual's existence."* (Mannheim, 1972:289)

Members of the same generation share the same year of birth and thus have a common location in the historical dimension of the social process. However, Mannheim (1972) argues that it is too simple to assume that individuals are members of the same generation simply because they share a year of birth (Mannheim, 1972). In addition to shared years of birth they must at the same time be in a position to participate in certain common experiences so that a concrete bond is created between members of a generation and so that they share 'an identity' of responses, a certain affinity in the way in which all moves with and are formed by their common experiences (Mannheim, 1972).

Therefore Mannheim (1972) argued that there are two important elements to the term generation, which is important to have in mind when studying generations:

1. Generations share a common location in historical time
2. Generations share a distinct collective memory of that historical position shaped by the events and experiences of that time

In the context of this thesis, this means that young people are not member of the digital native generation simply because they are born into a world where digital technology is available. The individuals have to have been in a position to participate in the common experiences, that is, the digital revolution. Just because you were born after the introduction of digital technology does not necessarily mean that you have been in a position where you have been exposed to it. In accordance with this, Rettie (2002) argues that the effect of the digital technology is not ubiquitous because not everyone has the opportunity or desire to use the digital technology, why the impact will vary. This is often referred to as the digital divide[5]. Thus it is not everyone who is born after 1978 that has had the opportunity, or desire, to access the Internet or be a heavy user of digital technology. Therefore it is argued that the digital technology will not affect the culture of the non-users and rejecters, why non-users and rejecters are not to be considered members of the digital native generation.

Mannheim's second element is clearly emphasized by recent academics that have focused on the concept of 'collective memories' (Parry & Urwin, 2010). This body of work has suggested that people who are in adolescence or early adulthood during particular significant events will form a shared memory of those events, which will affect their future attitudes, preferences and behavior (also referred to as generational imprinting) (Parry & Tyson, 2011). Johnson & Johnson (2010) refers to these events as *generational signposts*. A generational signpost is an event or cultural phenomenon that is specific to one generation, and Johnson & Johnson (2010) argue that they are *"harbingers of things to come"* (Johnson & Johnson, 2010). They argue that generational signposts shape, influence, and drive our expectations, actions, and mind-sets about the products we buy, the companies for which we work, and the expectations we have about work in general. Generational signposts mold our ideas about company loyalty, work ethics, and the definitions of a job well done (Johnson & Johnson, 2010). Put differently, it is argued that differences between generations occur because of major influences in the environment, also referred to as

[5] The term digital divide refers to the gap between people with effective access to digital and information technology and those with very limited or no access at all. In other words, it refers to the disparity between the "haves" and the "have-nots" in the technology revolution

generational signposts, within which early human socialization occurs; influences that impact on the development of personality, values, beliefs and expectations that, once formed, are stable into adulthood (Macky *et al.,* 2008). Thus, at the heart of the generation concept is the idea that significant external events that are happening when we are coming of age imprint core values. This is supported by Parry & Urwin (2011) who argues that a cohort *must* exhibit separate and distinct values and attitudes in order to be considered a generation (Parry & Tyson, 2011)

This means that the digital natives, who were born after the digital technology was introduced, and who have embraced it and had access to it, have developed different attitudes, behaviors, and preferences. Furthermore these are different from other generations, as they were born previously to the digital technology, and as a consequence have been exposed to digital technology later in life.

Mannheim's theory of generations has been extended by Eyerman & Turner (1998) who introduced the idea of a generation as a shared culture. Eyerman & Turner (1998) defines a generation as *"… a cohort of persons passing through time who come to share a common habitus[6], hexis and culture, a function of which is to provide them with a collective memory that serves to integrate the cohort over a finite period of time*" (Eyerman & Turner, 1998:93). Eyerman & Turner (1998) draws special attention to the idea of a shared or collective cultural field of values and norms, and *a set of embodied practices*, that is, it identifies the importance of collective memory in creating a generational culture or tradition (Eyerman & Turner, 1998). In other words, members of a generation share a common culture in which individuals share meanings and common ways of viewing events and objects (Landy & Conte, 2010) and not just share years of birth. Hofstede (2001) defines culture as *"the collective programming of the mind which distinguishes members of one human group from another"*. This means that, given that culture is defined as a circumstance of shared values, generational differences could be construed as differences between cultures, much like the differences between nationalities as discussed by Hofstede (2001).

In relation to this thesis, this means that the digital natives, as a consequence of the common mind-set of personality, values, norms, and attitudes, have developed a set of embodied practices that distinguishes them from the digital immigrants. According to Tapscott (2009) the digital natives use digital technology in a very different way than previous generations do (Tapscott, 2009). The digital natives have developed

[6] Bourdieu (1990) defines habitus as "... systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them" (Bourdieu, 1990)

different reflexes and behaviors, which they use when they are on their mobile phones or are surfing the Internet. This generation is revolutionizing the very nature of the Internet itself. The digital natives are transforming the Internet from a place where you find information to a place where you share information, collaborate on projects of mutual interest, and create new ways to solve some of our most pressing problems (Tapscott, 2009) One way of doing this is by creating content – in the form of their own blogs, or in combination with other people's content.

Based on the discussion of generations above, different assumptions about generations can be identified and summarized as follows:

1. Shared experiences, such as economic changes, wars, political ideologies, technological innovations, and social upheavals, at the critical late adolescent and early adulthood, that have a consequence on society translates into shared future values, attitudes, preferences, and behaviors.
2. Members of a generation also share a common culture of values and norms in which individuals share meanings and common ways of viewing events and objects, and as a consequence develop a set of embodied practices.

When these assumptions are transferred to the debate about the digital natives it is found that generational theory argues that, as a result of their upbringing and experience with technology, digital natives have developed a distinct set of values, attitudes, norms and preferences and as a consequence have different work values that differ from earlier generations of employees. As a consequence of their shared upbringing and experience with technology the digital native generation possesses sophisticated knowledge of and skills with information technologies and as a consequence uses digital technology in a very different way than earlier generations.

Based on the discussion above I define a generation as:

A generations is an identifiable group that shares birth year and significant life events at critical developmental stages and who share a common culture in which individuals share values and norms and as a consequence share meanings and common ways of viewing events and objects which manifest itself in a set of embodied practices

3.2 REVIEW OF THE DIGITAL NATIVE LITERATURE

Above it was argued, based on the generational theory that it was too simple to assume that people are members of the same generation, simply because they share a year of birth. Despite this, the digital native literature often view differences between those who are or who are not digital natives as primarily about when a person was born (Helsper & Eynon, 2010). Instead it was argued that a generation is a group of people who shares a set of embodied practices, that is, shared behaviors. Thus, a digital native is more than a person who was born after the introduction of digital technology. This is also emphasized by Helsper & Eynon (2010) who argues that generation (i.e. year of birth) alone does not adequately define if someone is a digital native or not (Helsper & Eynon, 2010). This means, that in order to be a digital native you also have to have a certain set of embodied practices or behaviors. In the following I will review the digital native literature in order to get an understanding about these shared embodied practices.

In the digital native literature, the claim made for the existence of a generation of 'digital natives' is based on three main assumptions, which can be summarized as follows:

1. Young people of the digital native generation have integrated digital technology into every aspect of their lives why they are characterized as large-scale consumers of digital technology (Palfrey & Gasser, 2010; Tapscott, 2009; Prensky, 2004,2001)
2. As a consequence of their upbringing and experience with digital technology, digital natives possess sophisticated knowledge of and skills with digital technologies (Tapscott, 2009; Bennett *et al.,* 2008; Prensky, 2001)
3. Young people of the digital native generation are the new content creators and are heavy users of Web 2.0 technologies (Palfrey & Gasser, 2010; Tapscott, 2009)

An exact definition of being a digital native is not often presented in the literature and when a definition is presented it alone focuses on when a person was born (Helsper & Eynon, 2010). *Based on the assumptions above it is possible to define a digital native as someone who is techno-savvy and to whom digital technology is an integral part of their lives and use this digital technology to create and share new content online.*

The attempt in this thesis is to empirically explore these above mentioned presumptions about the digital natives. By questioning the presumptions about the digital natives it is hopefully possible to achieve a more

nuanced picture of the digital natives. The above mentioned presumptions will be discussed further in detail in the following. The purpose of this discussion is to get an understanding of what characterizes a digital native. This is a necessary step in order to determine whether digital natives are fact or fiction.

3.2.1 THE DIGITAL NATIVES ARE TECH-SAVVY

The digital native generation is often defined in relation to technology (Stoerger, 2009). One of the founding assumptions for a generation of digital natives is that they have spent their entire lives *"surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tolls of the digital age"* (Prensky, 2001) and as a consequence of this extensive contact with digital technology throughout their upbringing are *"fluent in the digital language of computers, video games, and the Internet"* (Prensky, 2009). In other words, supporters claim that digital natives have an in-depth grasp and almost intuitive knowledge of how to use technology, simply because they have never known a world without the Internet and technological change (Combes, 2008). The digital native literature present this generation as super users of technology and assign labels such as tech-savvy, web-savvy, Internet-savvy, and computer-savvy (Combes, 2008). Similarly Oblinger & Oblinger (2005) argues, that having grown up with widespread access to technology, the digital natives is able to intuitively use a variety of IT devices and navigate the Internet and are comfortable using technology without an instruction manual (Oblinger & Oblinger, 2005). According to Tapscott (2009) digital natives are more comfortable, knowledgeable, and literate than earlier generations in terms of digital technology. According to Tapscott (2009) this is because it is easier for young people to learn how to use new technology since they are more familiar with it from birth. In other words, Tapscott (2009) argues that digital natives assimilate technology, while digital immigrants must accommodate to technology, which is often a more difficult learning process (Tapscott, 2009). To sum it up, the digital native literature highlights the generation gap by posing young people as technologically savvy. Being techno-savvy for this group means not being intimidated by technology (Tapscott, 2009; Prensky, 2001)

In summary, though limited in scope and focus, the research evidence to date indicates that a proportion of young people are highly adept with technology. However there also appears to be a significant proportion of young people who do not have the technology skills predicted by the presumptions in the digital native literature. This emphasizes that year of birth alone does not adequately define if someone is a digital native or not.

3.2.2 DIGITAL TECHNOLOGY IS AN INTEGRAL PART OF THE DIGITAL NATIVES LIVES

As a consequence of 'growing up digital', we are told that the digital native have assimilated digital technology because they grew up with it (Tapscott, 2009). The digital natives are highlighted as using the Internet for everything, for extended periods of time and from various places (Zimic, 2010). Furthermore, Prensky (2004a) argues that the digital natives have invented new, online ways, of making almost every activity happen, based on new technologies available to them. In other words, Prensky (2004a) argues that digital natives are not just using technology differently today, but are approaching their life and their daily activities differently because of the technology. In other words, Prensky (2004a) argues that *"in a very short time technology has changed an entire generation's behavior radically"* (Prensky, 2004a)

Thus, it is claimed that these digital technologies have become integral parts of the lives of the digital natives (Bennett *et al.*, 2008). Frand (2000) claims that this immersion is so complete that young people do not even consider computers 'technology' anymore (Bennett *et al.,* 2008). In line with this, Tapscott (2009) argues that the digital natives have *"a natural affinity for technology and instinctively turn to the Internet to communicate, understand, learn, find, and do many things"* (Tapscott, 2009). As this suggest, digital natives are claimed to be enthusiastic technology users. In other words, we are told that the digital natives use technology at high rates. According to Prensky (2001) it is estimated that the digital natives have spent over 10,000 hours playing videogames, sent and received over 200,000 emails and instant messages, spent over 10,000 hours talking on cell phones, and over 20,000 hours watching television *before* they even go to college (Prensky, 2001). Thus it is argued that the digital natives have not just grown up with technology, but have integrated with it (Tapscott, 2009).

Personal testimonials depicting young people's online lives as constantly connected appear to confirm such generalizations (Bennett *et al.*, 2008). However, recent research into how young people access and use technology offers a more diverse view of the role of technology in the lives of the digital natives (Jones *et al.*, 2010; Maragaryan & Littlejohn, 2009; Kennedy *et al.*, 2008). According to Kennedy *et al.* (2008) recent large scale surveys, which have focused on determining characteristics of younger people with regard to their access and use of particular technologies, show that access and use of particular types of technology are very high amongst the majority of young people. However, they also show that some technology activities are lower than might be expected or that frequency of use varies according to factors other than age such as gender or socio-economic status (Kennedy *et al.*, 2008). In the UK, Maragaryan and Littlejohn (2009) found that students make limited, mostly recreational, use of social technologies such as media

sharing tools and social networking. Jones *et al.* (2010) found that students are active users of technology and that in general they use technologies more than they believe that they have to (Jones *et al.*, 2010). These studies demonstrate that there might be significant differences within cohorts of young people in terms of their use of technologies why young people might not be as tech-savvy as is often portrayed.

3.2.3 DIGITAL NATIVES ARE THE NEW CONTENT CREATORS

Another one of the founding assumptions of claims for a generation of digital natives is that digital native use digital technology differently from people who were not born in a digital world. Tapscott (2009) argues that, as a consequence of their sophisticated knowledge of and skills with digital technology, the digital natives use technology in a very different way than earlier generations (Tapscott, 2009). Tapscott (2009) argues that the digital natives have developed *"different reflexes and behaviors, which they use then they are on their mobile phones or are surfing the Internet"* (Tapscott, 2009:40). As a consequence of these new reflexes and behaviors, Tapscott (2009) argues that the digital natives are *"revolutionizing the very nature of the Internet itself"* (Tapscott, 2009:40)

Tapscott (2009) describes the digital natives as the new content creators, claiming that they are heavy users of Web 2.0 technologies. Tapscott (2009) argues that whereas earlier generations consume content on the Internet, the digital natives seem to be constantly creating or changing online content (Tapscott, 2009). This is supported by Palfrey & Gasser (2010) who argues that digital natives are increasingly engaged in creating information, knowledge, and entertainment in online environments (Palfrey & Gasser, 2010). Furthermore they argue that many digital natives are creators every day of their life (Palfrey & Gasser, 2010). According to Palfrey and Gasser (2010) it is important to distinguish between "creation" and "creativity" when discussing user-generated content. Creation is related to any digital content made by a digital native, ranging from an apparently trivial update on Facebook to an artistic video clip. Creativity, in contrast, is a differentiating term that has a qualitative connotation. The word suggests that the respective content created by the user is unique, useful, and organized (Palfrey & Gasser, 2010). Palfrey and Gasser (2010) argues that the creations of digital natives are quite often limited to the thoroughly unspectacular, that is, a new personal profile on Facebook, a posting on Twitter, digital photos uploaded onto Flickr or Picassa. Palfrey and Gasser (2010) furthermore argues that many digital natives are offering up contributions that fall somewhere on the spectrum between the mundane and the magnificent, i.e. editing an article on Wikipedia or programming a new Facebook application (Palfrey & Gasser, 2010). However, Palfrey & Gasser (2010) argues that not all digital natives are participating in the creative renaissance that is

happening online (Palfrey & Gasser, 2010). According to Palfrey & Gasser (2010), only about one in four young people say they remix content of any kind into their own artistic creations such as artworks, photos, stories, videos, or the like (Palfrey & Gasser, 2010). Thus, the digital natives are most likely to engage in "creation" whereas only some digital natives engage in creative acts.

According to Palfrey & Gasser (2010) approximately 64 percent of online teens in the United States have created some sort of content on the Internet, whereas among adults, about a third of Internet users have created and shared user-generated content such as text, audio, video, categories or tags, and networks (Palfrey & Gasser, 2010). This is supported by recent surveys from Statistics Denmark (2010) where it was found that approximately 65 percent of the online teens in Denmark have uploaded user-generated content with a view to share it with others (Statistics Denmark, 2010). Among adult above 39, about one fifth of Internet users have created and shared user-generated content (Statistics Denmark, 2010).

3.3 ANALYTICAL FRAME TO DISCUSS DIGITAL NATIVENESS

In order to answer whether the digital natives a myth or reality, it is necessary to create an analytical framework, which allows me to determine whether they exist or not. In other words, I need an analytical framework that I can use to scrutinize my empirical data and allow me to examine whether the respondents fits the picture drawn in the literature of the digital natives. In the following I will attempt to create such an analytical framework. The analytical framework is based on the presumptions identified and discussed above.

Based on the review of the digital native literature above, it was found that the digital native literature is based on the claims that (1) Young people of the digital native generation have integrated digital technology into every aspect of their lives, (2) digital natives possess sophisticated knowledge of and skills with digital technologies, and (3) Young people of the digital native generation are creating and sharing content online. Derived from these presumptions, two dimensions can be identified which have been identified as the main digital native attributes:

Dimension 1: Digital Participation

Dimension 2: Breadth of use

The reason why the presumption about digital natives being tech-savvy is not chosen as a dimension is because high digital skills are positively related to breadth of use (LaRose *et al.*, 2010). Thus, in other words, digital skills are an indicator of breadth of use, why it falls under this dimension. This is supported by Prensky (2001) who argues that as a result of their upbringing and experience with technology, digital natives possess sophisticated knowledge of and skills with information technologies and as a consequence use digital technology in a very different way than earlier generations. Thus Prensky (2001) argues that the technology use is a manifestation of being tech-savvy.

The two dimensions above allow me to examine my empirical data and identify the respondents who have these digital native attributes. In other words, it is argued that these two dimensions provide me with a tool that allows me to measure the digital nativeness

According to the Oxford English Dictionary, *Participation* refers to the act of taking part in and sharing something. In an attempt to define what is meant by digital participation, Henry Jenkins (2006) defined the concept of participatory culture as a "*culture in which individuals are invited to actively participate in the creation and circulation of new content"* (Jenkins, 2006). Furthermore, Livingstone, Bober and Helsper (2005) argues that digital participation in relation to the Internet include activities such as communicating and webpage/content creation (Livingstone *et al.,* 2005). This means that digital participation is used to measure the extent to which people actively participate in the creation and sharing of new content using digital technologies (E.g. blogs, wikis, social networking, podcasting, and vodcasting).

In contrast, breadth of use is defined as *"the number of activities a person undertakes online"* (Helsper & Eynon, 2010). The reason why breadth of use is chosen as one of the dimensions is that breadth of use can be used to measure the extent to which the digital technology, and especially the Internet, is integrated into the person's everyday life (Helsper & Eynon, 2010). Furthermore, Helsper & Eynon (2010) found that breadth of use tend to be the most important variable in predicting if someone is a digital native (Helsper & Eynon, 2010)

When combining these two dimensions, a 2x2 matrix can be created which can be used to determine the *digital nativeness* of the respondents. This digital profile matrix is illustrated in Figure 3-1. This digital nativeness matrix provides me with a tool that allows me to examine whether the empirical data, in terms of 138 respondents in the age 18-29, fits the picture drawn in the literature of the digital natives. In other words, it provides me with a tool for examining whether the digital native's are myth or reality, that is, to

answer the research question 1. According to the digital profile matrix, people can be sorted into one of four ideal types according to their 'digital nativeness' (See Figure 3-1):

Category 1: Low Breadth-of-Use, Low Digital Participation

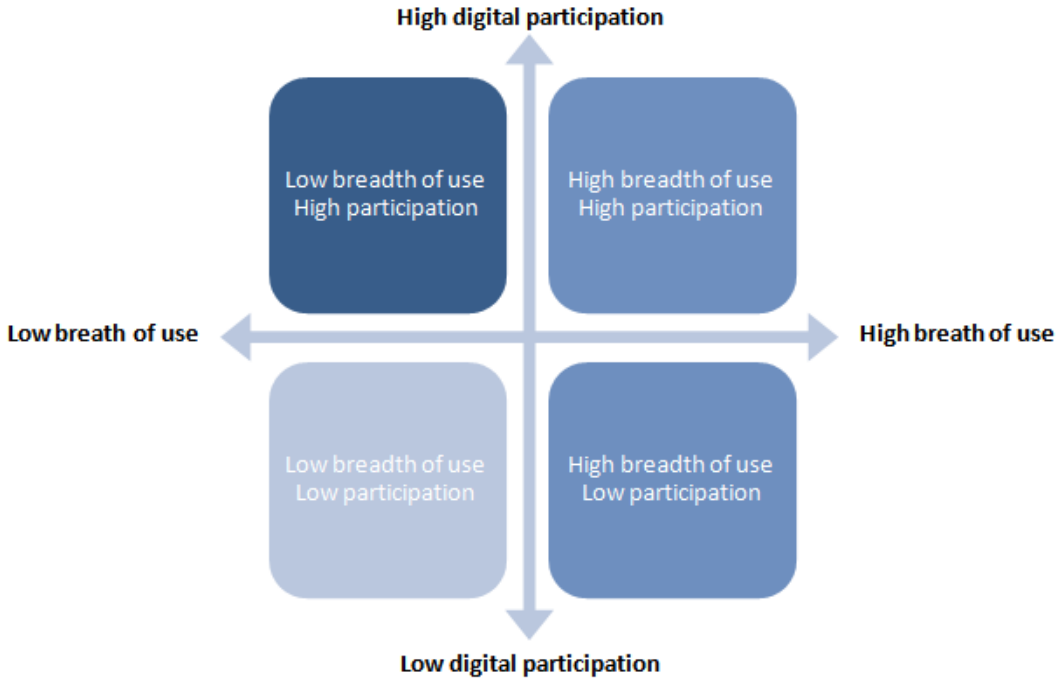
Category 2: Low Breadth of Use, High Digital Participation

Category 3: High Breadth of Use, Low Digital Participation

Category 4: High Breadth of Use, High Digital Participation

According to the digital native literature, all or most of the 125 respondents in the age 18-29 should fall into category 4: High Breadth of Use, High Digital Participation, while the remaining 18 respondents should fall into one of the remaining 3 categories.

Figure 3-1: Digital Nativeness Matrix



Source: Created by author

In summary, based on the presumptions discussed earlier, two main dimensions are identified which captures the main digital native attributes. Thus, when combining these two dimensions into a matrix, I create an analytical frame which allows me to examine my empirical data and identify the 'digital nativeness' of the respondents. This means that the matrix allows me to answer research question 1.

3.4 OPERATIONALIZING THE ANALYTICAL FRAMEWORK

Before it is possible to use the Digital Nativeness Matrix (see Figure 3-1 p. 57) to scrutinize the empirical data in order to examine whether the digital native literature provides an accurate picture of the youth generation or misrepresents them, the matrix must be operationalized, that is, make it measurable. In other words, I must define how to measure the breadth of use and digital participation. This is done by deciding what are indicators of breadth of use and digital participation, and then specify how these indicators will be scored.

The process of operationalizing the matrix is summarized in the four steps below:

Step 1: Choose a set of variables to be used to gauge the breadth of use and digital participation

Step 2: Rate individual factors using a rating system specific to each dimension

Step 3: Find the average scores for consumption and involvement.

Step 4: Plot the scores from step 3 into the matrix. The score from consumption is plotted on the x-axis. The score from involvement is plotted on the y-axis.

Breadth of use was measured using 24 items in the online questionnaire, which indicates the extent to which digital technology is integrated into the person's life, that is, the number of different activities a person undertakes online (Helsper & Eynon, 2010). These 27 items can be found in appendix 12. The response items include "How often do you use your mobile phone to surf the Internet" and "How often do you engage in watching video from other users". As mentioned above, breadth of use is defined as *"the number of activities a person undertakes online"* (Helsper & Eynon, 2010) why each of the 24 items is scored from 0=never and less than monthly to 1=Monthly, Weekly, Daily. An individual score is then calculated for each of the 24 items. Afterwards all the individual scores are summed in a total score, which returns a value between 0 and 24.

Digital participation was measured using 9 items in the online questionnaire, which indicates the extent to which the respondents take part the creation and sharing of new content. The questions regarding digital participation were chosen based the extent to which they match the definition of participatory culture mentioned previously (Jenkins, 2006), that is, the extent to which the activities invite individuals to actively participate in the creation and circulation of new content. These 10 items can be found in appendix 12. The

response items include “How often do you publish your own blog or web page” and “How often do you contribute to/edit articles in a wiki (e.g. Wikipedia)”. In this dimension I want to measure the extent to which the person participates, why each of the 10 items is scored 0=never, 1=Less than monthly, 2=Monthly, 3=Weekly, and 4 (daily). An individual score is then calculated for each of the 9 items. Afterwards, all individual scores are summed in a total score, which returns a value between 0 and 36.

After the total score for consumption and involvement is determined, these two sums are plotted on a scattergram as a single point. The score from Breadth of Use is plotted on the x-axis while the score from Digital Participation is plotted on the y-axis. This allows me to place the respondents into four categories identified in the digital nativeness matrix illustrated in Figure 3-1 (see p. 57).

3.5 SUMMARY

In this chapter, the theoretical underpinnings of the study of generations have been introduced. Based on a review of the generational literature, it was argued that it is too simple to assume that young people are members of the digital native generation simply because they share years of birth. Instead a generation was defined as an identifiable group that shares birth year and significant life events at critical developmental stages and who share a common culture in which individuals share values and norms and as a consequence share meanings and common ways of viewing events and objects which manifest itself in a set of embodied practices.

In an attempt to identify these embodied practices, the digital native literature was reviewed. The purpose of the literature review was to get an understanding of what a digital native ‘looks’ like. Based on the review of the digital native literature it was concluded, that the claim made for the existence of a generation of digital natives, is based on three main presumptions in the literature. First, young people of the digital native generation have integrated digital technology into every aspect of their lives why they are characterized as large-scale consumers of digital technology. Secondly, As a consequence of their upbringing and experience with digital technology, digital natives possess sophisticated knowledge of and skills with digital technologies. Finally, Young people of the digital native generation are the new content creators and are heavy users of Web 2.0 technologies.

Based on these presumptions, the digital nativeness matrix was proposed. The digital nativeness matrix allows me to measure the extent to which people are digital natives.

4 Are the Digital Natives Myth or Reality?

As discussed in paragraph 3.2(see p. 51), the digital native debate is based on the presumptions that digital natives diverges from earlier generation in relation to the use of the Internet. The digital natives are presumed to be techno-savvy, why they do many activities online. Furthermore digital natives are presumed to be using the Internet differently than earlier generation as they are characterized as the new content creators, that is, they use the Internet to create and share content online.

In the following, based on these presumption, the empirical data will be examined in order to determine whether the digital nativeness of the respondents. In other words, it will be examined if the digital native is myth or reality.

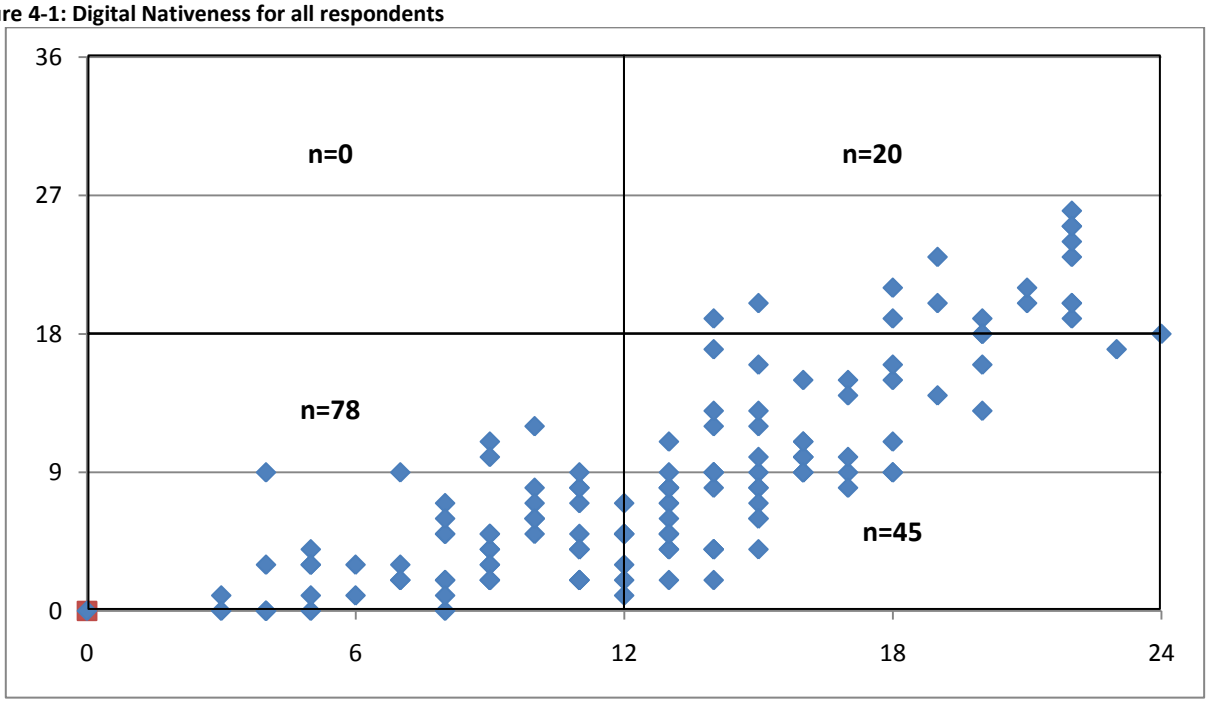
4.1 THE DIGITAL NATIVENESS OF RESPONDENTS

In the following the empirical data will be examined, using the analytical frame presented in paragraph 3.3. This analytical framework proposes attributes that indicate a person's digital nativeness, that is, high breadth of use and high digital participation. This, in turn, allows me to examine which types of people are most likely to demonstrate these characteristics (if any) and examine whether the digital native is myth or reality.

As mentioned earlier, the digital native literature often view differences between those who are or who are not digital natives as primarily about when a person was born. Thus, the digital native literature often provides a stereotypic image of the digital natives as someone who are turning to the Internet for everything. This means that, according to the digital native literature, the majority of the respondents should fall into category 4: high breadth of use/high digital participation, as the majority of the respondents (n=125) from the online survey are within the age group 18-29.

The digital nativeness of the respondents is illustrated in Figure 4-1. Here the respondents' total score in breadth of use and digital participation are plotted on a scattergram as a single point. The score from Breadth of Use is plotted on the x-axis while the score from Digital Participation is plotted on the y-axis.

Figure 4-1: Digital Nativeness for all respondents



Source: Created by author

As indicated in Figure 4-1, contrary to the digital native literature, most of the respondents fall into category 1: Low breadth of use/Low digital participation (n=78) and category 3: High breadth of use/Low digital participation (n=45) whereas only a small population fits into category 4: high breadth of use/high digital participation (n=20). As mentioned above, this is contrary to the digital native literature and their presumptions about young people where these are characterized by high breadth of use and high digital participation. This suggests that the young people who fit the presumptions of digital natives might be the exception rather than the rule. This is in line with previous research evidence, which indicates that while some young people are highly adept with technology and rely on it for a range of activities, there also appears to be a significant proportion of young people who do not fit the digital native image as predicted in the much of the digital native literature (Jones *et al.* 2010; Kennedy *et al.,* 2010; Helsper & Eynon, 2010; Bennett *et al.*, 2008). As a consequence, Helsper & Eynon (2010) argue that generation alone does not adequately define if someone is a digital native or not.

In the following an ideal type for each of the categories will be created by identifying the typical features of the respondents within each of the categories. Thus I will propose an ideal type that captures the essence of the different respondents who are placed in the category. The purpose of this is to identify which types of people are most likely to be placed within each of the categories by examining the demographics of the respondents placed into each of the categories. The purpose is to examine whether young people are more likely to be characterized by high breadth of use and high digital participation whereas older people are more likely to be characterized by low breadth of use and low digital participation as suggested by the digital native literature.

4.1.1 Low Breadth of Use/Low Digital Participation

In the following, the typical features and characteristics of respondents who are likely to be characterized by low breadth of use and low digital participation will be described.

As indicated in Figure 4-1, 55% (n=78) of the respondents fall into category 1: low breadth of use/low digital participation. The demographics of the respondent, who fall into this category, are described in Table 4-1.

Table 4-1: Demographics of category 1: low breadth of use/low digital participation (% of N total)

Demographic variable	% of total sample
Total Number of respondents	55%
Gender	
Male	56%
Female	53%
Age	
18-29	52%
30-39	55%
40-49	100%
50-59	100%
> 60	100%

Source: Web Survey

According to Table 4-1, the majority of respondents fall into the low breadth of use/low digital participation category (55 %). According to the findings, older people were more likely to fit into category 1, meaning that older people are less likely to demonstrate the digital native attributes, and more likely to demonstrate digital immigrant characteristics. This is indicated by the increase in age, in relation to the types of people who demonstrate low breadth of use and low digital participation. This implies that older people were less likely to have integrated the Internet into their lives and to participate in creating and sharing content online. When examining the different age groups it is found that as age increase the more likely the person is to demonstrate digital immigrant characteristics in terms of breadth of use and digital participation (30-39 year olds=55%; 40-49 year olds=100%; 50-59 year olds=100%; above 60 years old=100%).

These findings are in line with the much of the digital native literature, where digital immigrants are defined by their contrast to digital natives (e.g. Tapscott, 2009; Prensky, 2001). Digital immigrants are often characterized as being afraid of the new technology, or may question its value, why the Internet is not an integrated part of their lives (Tapscott, 2009; Kennedy *et al.,* 2008; Prensky, 2001). Thus the digital immigrants are often characterized by low breadth of use and low digital participation and therefore should fall into category 1.

However, it is interestingly to find, that more than half of the 18-29 year olds also fall into this category (n=65). This is interesting because this is in contrast to the presumptions identified through the review of the digital native literature as discussed and presented in paragraph 3.2 (see p. 51). Here it was found that digital natives are often defined solely by generation, that is, year of birth. One of the founding

presumptions found in the paragraph 3.2 (see p. 51) was that all young people live their lives completely immersed in technology and instinctively turn first to the Internet for almost every activity. Contrary to this presumption, these findings imply that a large proportion of young people were more limited in their use of the Internet as the majority of the 18-29 year olds (56%) fall into the low breadth of use/low digital participation category. Thus the findings indicate that young people are not as homogeneous in terms of their use of technologies as argued in the digital native literature (e.g. Tapscott, 2009; Oblinger & Oblinger, 2005; Prensky, 2001).

These findings are supported by recent research into the digital natives that has demonstrated that there are significant differences within cohorts of young people in terms of their use of technologies (e.g. Kennedy *et al.,* 2008; Combes, 2009). These studies argue that the all young people are not as tech-savvy as is often portrayed. Scallon (2009) argue that a large number of the so-called digital natives are in fact what he calls digital refugees, that is, *"…people who are lost when it comes to using technology, simply because nobody sat down and showed them how to use technology or use it effectively"* (Scallon, 2009 in Combes, 2009)

People placed into category 1 are characterized by a low breadth of use, that is, the Internet is less integrated into the person's everyday life. However, as illustrated in Table 4-2, this does not mean that they are not using the Internet at all.

The Internet activities were categorized by communication, information, and entertainment. The communication category consisted of activities such as instant messaging, video chat, VoIP and email. The information category was about searching for information, and consisted of activities such as reading blogs, news and forums and searching for information about a specific topic. Furthermore, activities regarding entertainment online such as listening to music and watching TV online were summarized into an entertainment category. Finally, a category of Web 2.0 activities was also conducted. These included activities such as publishing blogs, uploading videos/audio, updating status on social networking sites, and contributing/editing wikis.

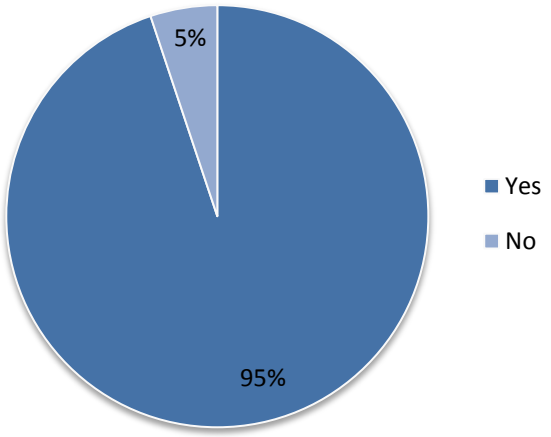
Table 4-2: Use of Internet activities within low breadth of use/low digital participation category

	Daily	Weekly	Monthly	Less than monthly	Never	Mean
Communication:						
Communicate via webcam	4%	5%	10%	32%	49%	1.83
Communicate via VoIP	9%	12%	9%	9%	62%	1.97
Communicate via IM	**42%**	28%	8%	9%	13%	3.78
Send/receive email	**71%**	18%	4%	5%	3%	4.49
Information:						
Search for information about a specific topic	62%	28%	5%	4%	1%	4.45
Read blogs	4%	17%	17%	23%	40%	2.22
Read online forums	4%	19%	18%	26%	33%	2.35
Read news online	64%	18%	10%	4%	4%	4.35
Read customer ratings/reviews	1%	9%	24%	28%	37%	2.09
Entertainment:						
Listen to internet radio or watch online TV	17%	21%	12%	27%	24%	2.78
Watch video from other users	6%	26%	24%	17%	27%	2.68
Listen to podcasts	4%	17%	17%	23%	40%	2.22
Download software	9%	19%	27%	32%	13%	2.79
Visit social networking sites	44%	14%	8%	13%	22%	3.45
Web 2.0:						
Publish blog/web page	0%	1%	0%	8%	91%	1.12
Upload videos	0%	0%	1%	17%	82%	1.19
Upload music/audio	0%	0%	0%	6%	94%	1.06
Update status on SNS	10%	40%	17%	17%	17%	3.10
Post ratings/reviews	0%	3%	4%	27%	67%	1.42
Comment on blog	1%	17%	4%	21%	58%	1.83
Contribute to online forums	4%	5%	0%	22%	69%	1.53
Contribute to/edit articles wikis	0%	0%	0%	9%	91%	1.09
Use RSS	0%	1%	3%	9%	87%	1.18
Comment on SNS	15%	27%	18%	9%	31%	2.87

This particular group of people can be referred to as *basic users* (Kennedy *et al.*, 2010). The people are moderate users of standard Web technologies for communication, information, and entertainment purposes, and are infrequently engaging in Web 2.0 activities. The basic users were using the Internet as mainly a functional tool to communicate and find information. In terms of communication, as illustrated in Table 4-2, these people are frequent users of email (daily use=71%; weekly=18%) and instant messaging like MSN messenger and Facebook chat (daily use=42%; weekly use=28%).

These people are also frequent users of the Internet for information purposes. They use the Internet to search for information about a specific topic (daily use=62%; weekly use=28%) and read news online (daily use=64%; weekly use=18%). Furthermore, these people are really not interested in the new and more advanced tools such as Web 2.0; with the exception of social networking sites. These people are frequent visitors of social networking sites such as Facebook (daily use=44%; weekly use=14%) and also update their status on social networking sites (daily=10%; weekly=40%) and comment on social networking profiles (daily=15%; weekly=27%). However, these people are not likely to engage in any of the other Web 2.0 activities such as publishing a blog (never=91%), uploading music/audio (never=94%) or contributing to wikis (never=91%).

Figure 4-2: Pct. of respondents in category 1 who have a profile on a social networking site



As illustrated in Figure 4-2, these people have a profile on a social networking site. The Web Survey results are supported by the interview results. The interviews illustrate that Digital Immigrants perceive the Internet to be important but they primarily use the Internet as a place where you find information, which have been created by others:

> "*The Internet is important. The Internet is where you find your information today*" (Digital immigrant 2, appendix 8)

However, many are also using social networking sites such as Facebook and LinkedIn. Many have a profile on these social networking sites but they are mostly using it for fun:

> "*I have profiles on both Facebook and LinkedIn … I only use them sometimes for fun*"

4.1.2 Low Breadth of Use/High Digital Participation

As Figure 4-1 shows, no respondents fall into category 2: low breadth of use/high digital participation. One reason why no respondents fall into category 2 can be because of the possible sampling-error, as discussed in paragraph 2.6.2 (see p. 35). Another reason why no respondents fall into category 2 can be because there is a positive correlation between breadth of use and digital participation. However, given that the focus of this thesis is digital natives (category 3: high breadth of use/high digital participation) and digital immigrants (category 1: low breadth of use/low digital participation) I do not see the fact that none of the respondents fall into category 2 as a problem for this thesis.

4.1.3 High Breadth of Use/Low Digital Participation

In the following it is examined which types of people are most likely to be characterized by low breadth of use and low digital participation and hence fits into category 1. As indicated in Table 4-3, 31% of the respondents fall into category 3: high breadth of use/low digital participation (n=45).

Table 4-3: Demographics of category 3: high breadth of use/low digital participation

Demographic variable	% of total sample
Number of respondents	31%
Gender	
Male	34%
Female	29%
Age	
18-29	33%
30-39	36%
40-49	0%
50-59	0%
> 60	0%
Generation	
Digital natives	33%
Digital immigrants	22%

Source: Web Survey

As illustrated by Table 4-4, gender was not an important variables in determining which types of people are most likely to demonstrate high breadth of use and low digital participation as males and females were almost evenly represented in this category (Male=34%; Female=29%). Thus, both males and females are equally likely to be characterized by high breadth of use and low digital participation. However it seems that age is an important variable in explaining which type of people is demonstrating high breadth of

use/low digital participation. As illustrated in Table 4-4, 18-39 year olds were more likely to be haracterized by high breadth of use and low digital participation compared to people older than 39 years. This means that 18-39 year olds are more likely to have integrated the Internet into their everyday life as indicated by a high breadth of use. This is in line with the digital native literature, where it is argued that young people have invented new, online ways, of making almost every activity happen, based on the new digital technologies available to them (Prensky, 2004a).

However it was interestingly to find that 30-39 year olds were more likely (n=11) to demonstrate high breadth of use than 18-29 year olds, even though the 30-39 year olds are rarely characterized as digital natives in the literature. One explanation why some of the 30-39 year olds were found in this category is because they are born close to the dividing line between digital natives and digital immigrants. As discussed in paragraph 3.1 (see p. 46) people born close to the dividing line between generations, also referred to as cuspers, have the advantage of having one foot in two generational worlds (Johnson & Johnson, 2010). In other words, cuspers have a natural ability to identify with multiple generations' beliefs and interests, why they have the ability to adopt the shared culture and the set of embodied practices from both sides, or only one side.

Table 4-4: Use of Internet activities within high breadth of use/low digital participation category

	Daily	Weekly	Monthly	Less than monthly	Never
Communication:					
Communicate via webcam	18%	27%	24%	13%	18%
Communicate via VoIP	31%	24%	16%	9%	20%
Communicate via IM	80%	18%	2%	0%	0%
Send/receive email	89%	11%	0%	0%	0%
Information:					
Search for information about a specific topic	80%	16%	4%	0%	0%
Read blogs	29%	29%	20%	9%	13%
Read online forums	36%	27%	27%	11%	0%
Read news online	93%	7%	0%	0%	0%
Read customer ratings/reviews	11%	44%	24%	13%	7%
Entertainment:					
Listen to internet radio or watch online TV	27%	42%	16%	9%	7%
Watch video from other users	33%	42%	20%	4%	0%
Listen to podcasts	29%	29%	20%	9%	13%
Download software	27%	27%	40%	7%	0%
Visit social networking sites	76%	20%	2%	2%	2%
Web 2.0:					
Publish blog/web page	7%	4%	2%	22%	64%
Upload videos	0%	0%	7%	24%	69%
Upload music/audio	0%	2%	7%	9%	82%
Update status on SNS	22%	42%	24%	11%	0%
Post ratings/reviews	2%	9%	24%	40%	24%
Comment on blog	9%	27%	22%	29%	13%
Contribute to online forums	13%	16%	20%	27%	24%
Contribute to/edit articles wikis	2%	7%	20%	71%	71%
Use RSS	7%	11%	7%	18%	58%
Comment on SNS	53%	31%	13%	2%	2%

These people can be referred to as *ordinary users* (Kennedy *et al.*, 2010). These people are similar to the basic users, but engage in most of the activities more frequently. They are regular users of standard Web technologies; however, they are still infrequent users of Web 2.0 technologies. As illustrated in Table 4-4, in terms of communication, these people are frequent users of email (daily use=89%; weekly=11%) and instant messaging like MSN messenger and Facebook chat (daily use=42%; weekly use=28%). However, these people are also frequent users of more advanced communication tools such as VoIP (daily use=31%; weekly use=24%). These people are also frequent users of the Internet for information purposes in terms of searching for information about a specific topic (daily use=80%; weekly use=16%) and reading news online

(daily use=93%; weekly use=7%). In addition to using the Internet as a functional tool for searching for information and communicating, this particular group of people also use the Internet for entertainment purposes. These include activities such as watching videos (daily use=33%; weekly use=42%), listening to internet radio or watch online TV (daily use=27%; weekly use=42%), and listening to podcasts (daily use=29%; weekly use=29%).

Just like those characterized by low breadth of use and low digital participation, these people are also not very engaged in Web 2.0 activities; with the exception of social networking sites. These people are also frequent visitors of social networking sites such as Facebook (daily use=76%; weekly use=20%) and also update their status on social networking sites (daily=22%; weekly=42%) and comment on social networking profiles (daily=53%; weekly=31%). However, these people are not likely to publish a blog (never=64%), upload music/audio (never=82%) or contribute to wikis (never=71%).

4.1.4 HIGH BREADTH OF USE/HIGH DIGITAL PARTICIPATION

In the following it is examined which types of people are most likely to be characterized by high breadth of use and high digital participation.

As mentioned earlier, digital natives are often defined by year or birth, which means that all people born after approximately 1980 are expected to be digital natives, hence being characterized by high breadth of use (Tapscott, 2009; Parry & Tyson, 2011; Bennett *et al.,* 2008). This is because it is claimed that young people have integrated digital technology into every aspect of their lives (Palfrey & Gasser, 2010; Tapscott, 2009; Prensky, 2004, 2001). Furthermore, young people are expected to be characterized by high digital participation, as the it is claimed that young people more likely to engage in Web 2.0 activities, why they have been characterized as the new content creators (Palfrey & Gasser, 2010; Tapscott, 2009).

According to Table 4-5, only a small numbers of respondent fall into the high breadth of use/high digital participation category. This finding is in contrast to the presumptions about the digital natives, which was identified in paragraph 3.2 (see p. 51), as the digital native literature argues that all young people are characterized by high breadth of use and digital participation. If this is an accurate finding, this means that only a small minority of people demonstrate the digital native characteristics.

Table 4-5: Demographics of high breadth of use/high digital participation category

Demographic variable	% of total sample
Number of respondents	14%
Gender	
Male	10%
Female	18%
Age	
18-29	15%
30-39	9%
40-49	0%
50-59	0%
> 60	0%

Source: Web Survey

As Table 4-5 shows, age was an important variable in relation to determining the 'digital nativeness'. It was found that younger people were, in line with the assumptions found in the digital native literature, more likely to demonstrate digital native characteristics, in terms of high breadth of use and digital participation. Thus, the digital native literature were right in their claims about young people being more likely to engage in many activities online and engage in creating and sharing content online. That age is an important variable in relation to digital nativeness is illustrated by the decline in age in relation to the types of people who demonstrate high breadth of use and high digital participation. Thus, it was found, that younger age groups (18-39 year olds) can indeed be qualified as digital natives when defining digital nativeness in terms of breadth of use and digital participation.

However, as mentioned earlier, it was, contrary to the digital native literature, only a minority of the young people who demonstrate high breadth of use and high digital participation. Thus, even though there is a clear group of 18-39 year olds who fit the digital native literatures idea of a digital native, these young people may be more the exception rather than the rule. In other words, the findings demonstrate that there are significant differences within cohorts of young people, in terms of their use of technologies. This indicates that generation alone (that is, year of birth) does not adequately define if someone is a digital native or not.

As Table 4-5 shows, gender might also be an important variable in determining which types of people are most likely to demonstrate digital native characteristics. It was found that females were more likely to be characterized by high breadth of use and high digital participation than males (male=10%; female=18%).

This indicate that females are perhaps more likely to be digital natives than males. This is supported by recent research, which indicated that females are more regular users of Web 2.0 technologies (Chan & McLoughlin, 2008) and given relatively high use of Web 2.0 technologies partly distinguishing this group of people from both ordinary users and basic users; this may go some way in explaining why women were more likely to fall into this category.

According to Tapscott (2009), digital natives are using the Internet in a much greater extent than the previous generations. Similarly, Prensky (2004) argues, that digital natives are inventing new, online ways of making many activities happen, based on the new technologies available to them (Prensky, 2004a).
Based on the evidence presented in Table 4-5, this particular group of people can be referred to as *power users* (Kennedy *et al.,* 2010). Representing 14% of the sample, these people are engaged in a wide range of activities and engaged more frequently in activities within communication, information, entertainment, and Web 2.0 than both ordinary users and basic users.

Similar to ordinary users, the power users were frequently using the Internet for communication purposes, with 80% of the power users using instant messaging daily and 75% using email daily. However, also the more advanced technologies such as VoIP and video chat were used frequently, with approximately 50% of the power users using these technologies daily.
For information purposes, the power users were engaging in more activities than both basic users and ordinary users. As Table 4-6 shows, the power users were more frequently engaging in reading blogs (daily=65%; weekly=15%), online forums (daily=50%; weekly=30%) and customer ratings (daily=35%; weekly=30%).
The power users were also engaging in entertainment activities more often than both basic users and ordinary users. It was found that the power users are frequent users of podcasts, with 65% listening to podcasts daily. Furthermore, the power users were frequently listening to internet radio and watching online TV and video from other users, with approximately half of the power users doing so daily.

Table 4-6: Use of Internet activities within high breadth of use/high digital participation category

	Daily	Weekly	Monthly	Less than monthly	Never
Communication:					
Communicate via webcam	45%	25%	10%	5%	15%
Communicate via VoIP	50%	15%	25%	10%	10%
Communicate via IM	80%	10%	5%	5%	5%
Send/receive email	75%	15%	5%	0%	5%
Information:					
Search for information about a specific topic	70%	25%	5%	0%	0%
Read blogs	65%	15%	15%	5%	0%
Read online forums	50%	30%	10%	10%	0%
Read news online	75%	20%	0%	0%	5%
Read customer ratings/reviews	35%	30%	25%	10%	10%
Entertainment:					
Listen to internet radio or watch online TV	40%	40%	5%	15%	15%
Watch video from other users	50%	15%	25%	10%	0%
Listen to podcasts	65%	15%	15%	5%	0%
Download software	35%	40%	10%	15%	0%
Visit social networking sites	55%	30%	15%	0%	0%
Web 2.0:					
Publish blog/web page	25%	45%	10%	5%	15%
Upload videos	5%	25%	30%	15%	25%
Upload music/audio	0%	15%	20%	25%	40%
Update status on SNS	35%	50%	15%	0%	0%
Post ratings/reviews	15%	30%	35%	10%	10%
Comment on blog	60%	30%	10%	0%	0%
Contribute to online forums	35%	45%	15%	5%	0%
Contribute to/edit articles wikis	15%	25%	10%	40%	40%
Use RSS	20%	10%	25%	30%	15%
Comment on SNS	55%	10%	30%	0%	0%

Source: Web Survey

However, what distinguish the power users from the ordinary users is that they are more likely than both ordinary users and basic users to engage in the more advanced Web 2.0 activities. In other words, power users are more likely to be using technologies such as blogs, wikis, social bookmarking etc. to publish and share their own content online. Similar to ordinary users and basic users, the power users are frequent users social networking sites such as Facebook (daily=55%; weekly=30%). They are also frequently updating their status on these sites (daily=35%; weekly=50%), and commenting on other peoples profiles (daily=55%; weekly=10%). However, the power users are also engaging in more advanced Web 2.0 activities more

frequently that the other categories. According to Table 4-6, the power users are frequently engaging in creating and publishing content via blogs or web pages (daily=25%; weekly=45%), uploading videos to sites like YouTube (daily=5%; weekly=25%), contribute to online forums (daily=35%; weekly=45%) and contributing to wikis (daily=15%; weekly=25%)

4.2 SUMMARY

Above it was examined whether the digital native is myth or reality. This was done by analyzing the empirical data in order to determine whether the empirical data fits the presumptions found in the digital native literature. Furthermore it was examined which types of people are most likely to demonstrate these digital native characteristics in order to determine if age was a determining factor.

In some respects, the findings above do support the arguments put forward in the digital native literature. Based on the evidence presented above, it is clear that younger people were more likely to demonstrate digital native characteristics, that is, high breadth of use and high digital participation. In contrast, older people were more likely to demonstrate digital immigrant characteristics, that is, low breadth of use and low digital participation. However, contrary to the presumptions identified in the digital native literature, it was found that only a minority of young people demonstrate digital native attributes.

However, based on the evidence above, it was found that the digital natives are real and do exist. But it is important to have in mind it is only a minority of the respondents who are characterized as digital natives, making up less than 15% of the sample. On the other hand, the majority of the respondents, making up 45% of the sample, were characterized as basic technology users, who engaged only in standard Web activities on a relatively frequent basis. Thus, contrary to the presumptions in the digital native literature, these research findings suggest that it is likely that generation (i.e. year of birth) alone does not adequately define if someone is a digital native or not, implying that demographic variables other than age have an impact on the degree to which people adopt and use technology. Thus, the discussion about the digital native generation must be nuanced. This is supported by Bennett *et al.* (2008) who argues that some digital native research has "*identified potential differences related to socio-economic status, cultural/ethnic background, gender, and discipline specialization, but these are yet to be comprehensively investigated*" (Bennett *et al.,* 2008)

5 MOTIVATIONAL THEORY

In the following the reader will be introduced to the theoretical underpinnings of motivation, as work motivation will be discussed and defined. Additionally different types of motivation will be introduced, in order to illustrate how motivation varies between individuals.

The purpose of this part is to integrate different types of motivation into one coherent theoretical framework that clearly defines, distinguish, and relates different types of motivation. A framework that incorporates several types of work motivations allows a more fine-grained analysis of the generational differences between digital natives and digital immigrants.

5.1 WHAT IS MOTIVATION?

In the following work motivation will be discussed and ultimately a working definition will be proposed. To be motivated means to be *moved* to do something and stems from the Latin word *movere* (Pinder, 1998). A person who feels no drive or inspiration to act is thus characterized as unmotivated, whereas someone who is energized or activated toward an end is considered motivated (Ryan & Deci, 2000). In general terms, motivation can be described as the *direction* and *persistence* of action. It is concerned with why people engage in a particular behavior in preference to others, and why they continue with a chosen behavior, often over a long period of time and in the face of difficulties and problems (Pinder, 1998). The purpose of the theories of motivation it to contribute to predict, understand, and influence organizations efforts in order to motivate employees and thus increase the organizations efficiency, turnover, or whatever the goal of motivation is for the organizations (Latham & Pinder, 2005). Thus motivation is not the goal itself, but merely a means to achieve a goal, which can vary from increased earnings, improved employee retention, or developing new and better products (Christensen, 2008)

There have been proposed numerous definitions of motivation in the literature through the years. Pinder (1998) argues that *"it is only a slight exaggeration to say that there have been almost as many definitions of motivation offered over the years as there have been thinkers who have considered the nature of human behavior"* (Pinder, 1998) However, when reviewing the literature it was found that the definition can be divided into two broad categories. One group of definitions focused on the outcome of motivation, whereas another group of definitions focuses on the origins of motivation.

In their definition of motivation, McShaw & Von Glinow (2004) focuses on the outcome of motivation as they proposes that motivation is "*...the forces within a person that affect his or her **direction**, **intensity**, and **persistency** of voluntary behavior"* (McShaw & Von Glinow, 2004). According to McShaw & Von Glinow (2004), motivated employees are willing to exert a particular level of effort (*intensity*), for a certain amount of time (*persistence*), toward a particular goal (*direction*). Thus *direction* refers to an individual's choice, when presented with a number of possible alternatives (e.g., whether to pursue quality, quantity, or both in one's work). *Intensity* refers to an individual's willingness to exert a particular level of effort. *Persistency* refers to the length of time a person sticks with a given action (e.g., to keep trying or to give up when something proves difficult to attain). Similarly, Schermerhorn *et al.* (2008) defines motivations as "*the individual forces that account for the direction, level, and persistence of a person's efforts expended at work"* (Schermerhorn *et al.*, 2008). In their definition, McShaw & Von Glinow (2004) argues that motivation

is intentional. Similarly Mullins (2007) argues that motivation is "*the degree to which an individual wants and chooses to engage in certain specified behaviors"* (Mullins, 2007).

Instead of focusing on the outcome of motivation, Robbins (2004) focuses on the origins of motivation. Robbins (2004) defines motivation as "...*the willingness to do something and is conditioned by this action's ability to satisfy some need for the individual"* (Robbins, 2004). A need is a physiological or psychological deficiency, which makes certain outcomes appear attractive (Robbins, 2004). As illustrated in Figure 5-1, an unsatisfied need creates tension, which stimulates drives within the individual. These drives generate a search to find particular goals that, if attained, will satisfy the need and lead to the reduction of tension. In other words, motivated employees are in a state of tension, why they engage in activity in order to relieve this tension (Robbins, 2004). Extending this definition, Robbins & DeCenze (2005) defines motivation as: "*the willingness to excert high levels of effort to reach organizational goals, conditioned by the effort's ability to satisfy some individual need"* (Robbins & DeCenzo, 2005). This definition focuses more on the organizational aspect of motivation in their definition of motivation as they include the ability of reaching organizational goals in the definition.

Figure 5-1: The Motivation Process

Source: Robbins & DeCenzo (2005)

Even though all these definitions are different, Mitchell (1982) identified common characteristics which underlie the definitions of motivation (Mullins, 2007):

- **Motivation is individual:** every person is unique and motivated differently.
- **Motivation is intentional:** motivation is assumed to be intentional, i.e. under the individual's control, and behaviors that are influenced by motivation (e.g. effort expended) are seen as choices of action.
- **Motivation is multifaceted:** the two factors of greatest importance are: (1) what gets people activated (arousal) and (2) the force of an individual to engage in desired behavior (direction or choice of behavior)

- **The purpose of motivational theories is to predict behavior:** motivation concerns action and the internal and external forces which influence a person's choice of action. It is not the behavior itself and it is not performance.

Based on the discussion above, it is argued that it is useful to use a definition of motivation that integrates both the outcome and origins of motivation into one comprehensive definition. Thus, for the purpose of this thesis, I use the following definition of motivation by Pinder (1998). According to Pinder (1998) this definition applies to work behaviors of all sorts, while avoiding many of the ontological and epistemological issues that have caused debate and confusion (Pinder, 1998). This definition recognizes the influence on work-related behavior of both environmental forces (e.g. organizational reward systems) and forces inherent in the person (e.g. individual needs and motives).

> ***"work motivation is a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behavior and to determine its form, direction, intensity, and duration"*** (Pinder, 1998)

5.2 INTRINSIC & EXTRINSIC MOTIVATION

Above work motivation have been discussed and a defined. In the following, the reader will be introduced to two different types of work motivation, that is, intrinsic motivation and extrinsic motivation. It is necessary to identify different types of motivation in order to create a theoretical framework, which allows me to analyze generational differences in terms of motivation.

Research on motivation has frequently drawn a distinction between intrinsic and extrinsic motivation (Amabile, 1994). According to Pinder's (1998) definition the energetic forces, which initiate the motivation, originate both within as well as beyond the individual. Thus a way to categorize the needs and expectation is into *intrinsic motivation,* which refers to doing something because it is inherently interesting or enjoyable and *extrinsic* motivation, which refers to doing something because it leads to a separable outcome (Mullins, 2008). The concepts of intrinsic and extrinsic motivation and rewards have been theorized for some time and are generally accepted in the field of organizational behavior (Pinder, 1998).

However, there have been disagreements on what exactly is meant by both extrinsic and intrinsic rewards and motivation. Herzberg first popularized the distinction between intrinsic and extrinsic work rewards. He proposed two basic classes of work rewards: (1) intrinsic factors, referred to as growth factors, such as achievement, personal growth, and advancement, and (2) extrinsic factors, referred to as hygiene factors, such as pay, working conditions, and job security.

Although the concepts of intrinsic and extrinsic motives, rewards, and outcomes have not always been understood and used consistently, because there have been disputes for many years about the precise dividing line between intrinsic and extrinsic motivation, the distinction is important (Mullins, 2008). Intrinsic and extrinsic motivation has primarily been studied as consequences of the social situation, however, it has in recent years been suggested that they, too, may exist as relatively stable individual differences, that is, as enduring individual differences characteristics that are relatively stable across time and across situations (Amabile, 1994).

Thus, the distinction of motivation into intrinsic and extrinsic motivation allows me to assess the extent to which the digital natives' and the digital immigrants' intrinsic and extrinsic motivations are strong and salient to them, and the extent to which the digital natives and digital immigrants differ in those motivations. This, in turn, allows me to understand and predict motivational behavior of the digital natives. In the following I will discuss the two different types of motivation further.

5.2.1 INTRINSIC MOTIVATION

Much importance is attributed to intrinsic motivation, because it is perceived as a type of motivation that leads to highly valued outcomes such as creativity, quality, spontaneity, and vitality (e.g. Amabile, 1993; deCharms, 1968; Ryan & Deci, 2000). *Intrinsic* motivation can be defined, loosely, as *"The doing of an activity for its inherent satisfaction rather than for some separable consequence"* (Ryan & Deci, 2000). When intrinsically motivation, people pursue activities for the interest and enjoyment those activities provide. In other words, when individuals are intrinsically motivated, they will seek to perform well because they either enjoy performing the actual task or enjoy the challenge or successfully completing the task.
An example of intrinsic motivation is an employee who is motivated to solve a problem because of the feeling of achievement after completing a particularly challenging task. In other words, when intrinsically motivated a person is moved to act for the *fun* or *challenge* entailed rather than because of external pressure, or rewards (Gagné & Deci, 2005). Hence, in contrast to extrinsic motivation, the behavior is

involved in for its own sake and not for any external rewards such as pay or praise. In fact, if employees are being paid for something they enjoy may reduce their satisfaction and intrinsic motivation (Pinder, 1998).

Thus it is argued that feelings of interest and enjoyment, and even excitement, characterize intrinsic motivation (Pinder, 1998). Similarly Amabile (1994) posits that intrinsic motivation contain elements of both *enjoyment* and *fun* (Amabile, 1994) Yet, even though feelings of competence and interest in the task are central to intrinsic motivation, a person must also feel free of *pressures* such as rewards or potential punishments. The person must feel that his "locus of causality"[7] is internal, meaning that she is responsible for the choice of the activity, that is, that he is in command of how he is spending his time. Hence, the notion of choice is central to the concept of self-determination. A person must be in control of the alternatives for action and be able to choose among them in order to be intrinsically motivated. In addition, the person must feel challenged, that is, experiencing, finding, or creating situations that will provide opportunities for mastery[8].

Thus, in their cognitive evaluation theory, Deci & Ryan (1985) posits that a person is intrinsically motivated when activities provide satisfaction of the innate needs for ***competence*** and ***autonomy*** (Ryan & Deci, 1985). In other words, Deci & Ryan (1985) argues, that self-determination and competence are the hallmarks of intrinsic motivation. Deci & Ryan (1975) describes intrinsic motivation as follows:

> "*Intrinsic motivation is based in the innate, organismic needs for competence and self-determination. It energizes a wide variety of behaviors and psychological processes for which the primary rewards are the experiences of* ***effectance*** *and* ***autonomy****. Intrinsic needs differ from primary drives in that they are not based on tissue deficits and they do not operate cyclically, that is, breaking into awareness, pushing to be satisfied, and the when satisfied, receding into quiescence. Like drives, however, intrinsic needs are innate to the human organism and function as an important energizer of behavior"* (Deci & Ryan, 1985 in Pinder, 1998:165)

[7] The concept perceived locus of causality refers to how an individual perceives the locus of initiation and regulation of own behavior (Deci & Ryan, 1985). That is, whether own behavior is perceived to be caused by internal or external factors. An individual's actions have an internal perceived locus of causality in cases where the individual feels like the initiator of own behavior (e.g. because of own interests and desires) and an external perceived locus of causality in cases where the individual feels that some external event (e.g. the promise of a reward or an order), initiates the behavior.

[8] According to Oxford English Dictionary mastery is *"an action demonstrating or involving great skill or knowledge"*

Competence refers to the *"connection between behaviors and outcomes; it is the extent to which a person feels capable of producing desired and preventing undesired events; its opposite is helplessness"* (Pinder, 1998). According to Deci & Ryan (1985) individuals will feel competent if they obtain feedback that indicates progress in their work, or suggests ways they can increase their competence (Amabile, 1993). From this point of view, activities are intrinsically motivating if one's task performance produces a sense of *mastery* and *competence* (Pinder, 1998).

Autonomy , on the other hand, refers to *"the connection between volition and action; it is the extent to which a person feels **free** to show the behaviors of his choice; non-autonomous behaviors include both compliance and defiance, which have in common that they are reactions to others' agendas and not freely chosen"* (Pinder, 1998). According to deCharms (1968) people desire to be the origin of their own behavior rather than the pawns of circumstances beyond their control. People strive for personal causation, to be in charge of their own lives and for the outcomes that accrue them (Pinder, 1998). In other words, autonomy refers to the extent to which people generally are motivated to see themselves in control of the events of their lives.

Based on the above, it can be argued that events, which are experienced as supporting autonomy and promoting or signifying competence, and thus facilitating an internal perceived locus of causality and perceived competence, tend to increase intrinsic motivation (Deci & Ryan, 1985). In contrast, events that is experienced as pressure toward particular outcomes, and thus co-opting choice and facilitating an external perceived locus of causality, tends to undermine intrinsic motivation (Deci & Ryan, 1985). Hence, the person must feel that his locus of causality is internal, meaning that he is responsible for the choice of the activity, that he is in command of how he is spending his time.

In addition to competence and autonomy, the person must also feel challenged, that is, experiencing, finding, or creating situations that will provide opportunities for mastery, that is, situations that provide people with opportunity for increasing their knowledge and skills. Deci & Ryan (1985) argue that the intrinsic needs for competence and self-determination motivate an ongoing process of seeking and attempting to conquer optimal challenges. People seek situations that interest them and require the use of their creativity and resourcefulness. They seek challenges that are suited to their competencies, which are neither too easy nor too difficult. When they find optimal challenges, people work to conquer them, and they do so persistently (Ryan & Deci, 1985).

However, according to Ryan & Deci (2000) intrinsic motivation will occur only for activities that hold intrinsic interest for an individual – those that have the appeal of novelty, challenge, or aesthetic value for that individual (Ryan & Deci, 2000)

We can link many of these concepts back to earlier notions advanced by writers such as Maslow, Alderfer, and Herzberg. Maslow has separated his five needs into higher- and lower-order needs (Robbins, 2004). Maslow argued that the higher-order needs (which include self-esteem and self-actualization needs) are satisfied internally. In other words, Maslow would relate intrinsic motivation to his higher-order needs. Similarly Alderfer relate intrinsic motivation to his growth needs, which are concerned with the development of potential and cover self-esteem and self-actualization (Mullins, 2007).The distinction between internal and external work motivation originated with Herzberg's study of job satisfaction. Herzberg found that intrinsic factors, such as advancement, recognition, responsibility, and achievement were related to job satisfaction. He referred to these factors as *motivators* (Mullins, 2007). On the other hand, extrinsic factors, such as supervision, pay, company policies, and working conditions, seem to be related to job dissatisfaction. He referred to these factors as *hygiene factors* (Mullins, 2007)

Based on the review of the intrinsic motivation literature above, two elements underlying intrinsic motivation can be identified. That is (1) *Enjoyment* (preference for choice and autonomy, interest, curiosity, and fun), and (2) *Competence*, (preference for challenge and mastery).

5.2.2 EXTRINSIC MOTIVATION

Although intrinsic motivation is clearly an important type of motivation most of the activities people do are not, strictly speaking, intrinsically motivated (Ryan & Deci, 2000). Extrinsic motivation is less elaborate in the literature, but generally includes a cognitive assessment of work as a means to some extrinsic end (Amabile, 1994). Thus, *Extrinsic* motivation can be defined as the *"doing of an activity because it leads to some separable outcome"* (Ryan & Deci, 2000).

On the basis of a review of the extrinsic motivation literature, Amabile *et al.* (1994) argued that *"individuals are extrinsically motivated when they engage in the work in order to obtain some goal that is apart from the work itself"* (Amabile, 1993). Extrinsic motivators, although they may be contingent on the work (like pay for performance) are not a logically inherent part of the work.

Extrinsic motivation contrasts with intrinsic motivation, which as mentioned above, refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value. Extrinsic motivation is most often perceived as a means to an end, that is, the individual merely engages in a certain behavior because of the desirable external consequences it leads to. In other words, external motivation is associated with the desire to obtain consequences separate from the behavior. The concept of external motivation is therefore very much in line with the economic approach to human motivation as the assumption here is routinely made that higher external rewards always lead an individual to put more effort into an activity, whereas more punishment leads an individual to do less of an activity (Mullins, 2008).

Extrinsic motivators include anything coming from an outside source that is intended to control (or can be perceived as controlling) the initiation or performance of the work, for example, tangible rewards such as salary and fringe benefits, promotion, critical feedback, deadlines, surveillance, or specifications on how the work is to be done (Mullins, 2008; Pinder, 1998; Amabile, 1993).

We can link many of the concepts in extrinsic motivation back to earlier notions advanced by writers such as Maslow, Alderfer, and Herzberg. Maslow argued that the lower-order needs (which include physiological and safety needs) are satisfied externally. In other words, Maslow would relate extrinsic motivation to his lower-order needs. Similarly Alderfer relate extrinsic motivation to his existence needs which are concerned with sustaining human existence and survival and cover physiological and safety needs of a material nature (Mullins, 2007).The distinction between internal and external work motivation originated with Herzberg's study of job satisfaction. Herzberg found that dissatisfied employees tended to cite extrinsic factors, such as supervision, pay, company policies, and working conditions (Robbins, 2005). Herzberg refers to extrinsic factors as *hygiene factors*. *Hygiene factors* (or maintenance factors) are related to the context of the job and are concerned with job environment and extrinsic to the job itself. If these factors are absent, it will cause dissatisfaction, but if they are present, they will not cause satisfaction. Therefore *hygiene factors* serve to prevent dissatisfaction (Robbins, 2005). Therefore, managers who seek to eliminate factors that can create job dissatisfaction may bring about peace but not necessarily motivation.

Traditional perspectives view extrinsically motivated behavior as invariantly non-autonomous, however Ryan & Deci (2000) argues that extrinsic motivation can vary greatly in the degree to which it is autonomous (Ryan & Deci, 2000; Gagné & Deci, 2005). For example, an employee who engage in an activity

because he fears sanctions or punishment from his superior for not doing it is extrinsically motivated because he is doing the work in order to attain the separable outcome of avoiding sanctions. Similarly, an employee who does the work because he personally believes it is valuable for his career is also extrinsically motivated because he too is doing it for its instrumental value rather than because he finds it interesting. Both examples involve instrumentalities, yet the latter case entails personal endorsement and a feeling of choice, whereas the former involves mere compliance with an external control. Both represent intentional behavior, but the two types of extrinsic motivation vary in their relative autonomy. External regulation is the type of extrinsic motivation that was considered when extrinsic motivation is contrasted with intrinsic motivation (Gagné & Deci, 2005). Other types of extrinsic motivation result when a behavioral regulation and the value associated with it have been internalized, which refers to *"people taking in values, attitudes, or regulatory structures, such that the external regulation of a behavior is transformed into an internal regulation and this no longer requires the presence of an external contingency*" (Gagné & Deci, 2005). Thought of as a continuum, the concept of internalization describes how one's motivation for behavior can range from amotivation or unwillingness, to passive compliance, to active personal commitment (Ryan & Deci, 2000:60)

Based on the review of the extrinsic motivation literature above, two elements underlying extrinsic motivation can be identified. That is (1) *Compensation,* which refers to a focus on money or other tangible incentives (E.g. how motivated a person is by the money he can earn), and (2) *Outward*, which is orientation one's orientation toward recognition and the dictates of others (E.g. how motivated a person is by the recognition he can earn from other people)

5.3 CROWDING-OUT EFFECT OF MOTIVATION

Above it has been argued that motivation can be divided into *intrinsic* and *extrinsic* motivation. In the following the relationship and interaction between intrinsic and extrinsic motivation will be discussed. The reason why it is important to investigate and discuss the relationship between intrinsic and extrinsic motivation is because some scholars argue that employees' intrinsic motivation may be negatively influenced if they are offered external rewards for engaging in such behaviors. In other words, it is argued that intrinsic and extrinsic motivation may not always "add up". Instead it is suggested that in some circumstance, the addition of an extrinsic, contingently paid incentive (such as money) to a work context in which the employee is intrinsically motivated to do the work may result in loss of some (or all) of the employee's prior level of intrinsic motivation towards that task and perhaps also toward tasks perceived to

be similar (Pinder, 1998). Similarly Gagné & Deci (2005) argues that tangible rewards and other extrinsic factors such as competition and evaluations can be damaging to outcomes such as creativity, cognitive flexibility, and problem solving which have been found to be associated with intrinsic motivation (Gagné & Deci, 2005)

However, Gagné & Deci (2005) argues that it is not that simple. They argue that tangible extrinsic rewards undermine intrinsic motivation whereas verbal rewards enhanced it, thus implying that intrinsic and extrinsic motivation can be both positively and negatively interactive rather than additive. This is supported by Ryan *et al* (1999), who confirmed that whereas positive feedback enhances intrinsic motivation, tangible rewards significantly undermine it (Ryan *et al*, 1999). When rewards were given independent of specific task engagement (as might be the case of salary) or when the rewards were not anticipated (as might be the case with unexpected bonuses), tangible extrinsic rewards did not undermine intrinsic motivation. Additionally, when rewards were contingent on high-quality performance and the interpersonal context was supportive rather than pressuring, tangible rewards enhanced intrinsic motivation relative to a comparison condition with no rewards and no feedback (Gagné & Deci, 2005).

Furthermore Staw (1976) suggested that whether extrinsic rewards enhance or reduce intrinsic motivation depends on at least five factors: (1) the degree of saliency of the reward, (2) the prevailing norm regarding the appropriateness of payment for the activity in questions, (3) the prior level of commitment of the person to the task, (4) the degree of choice the person has to perform, or not to perform, the task, and (5) the existence of potential adverse consequences (Pinder, 1998).

According to Deci & Ryan (1985), external factors such as tangible rewards, deadlines, surveillance, and evaluations tend to diminish feelings of autonomy, prompt a change in perceived locus of causality from internal to external, and undermine intrinsic motivation (Gagne & Deci, 2005). In contrast, some external factors such as providing choice about aspects of task engagement tend to enhance feelings of autonomy, prompt a shift in perceived locus of causality from external to internal, and increase intrinsic motivation (Gagne & Deci, 2005)

5.4 GENERATIONAL DIFFERENCES IN MOTIVATIONAL ORIENTATION

Above it has been argued that motivation can be categorized into intrinsic and extrinsic motivation. However, it is important, for the purpose of this thesis, to understand how motivation varies between individuals. Otherwise it is impossible to investigate the generational differences in motivation and understand if motivation differs between the digital natives, who are currently entering the organizations, and earlier generations, who are dominating the organizations.

Most theories of work motivation view motivation as a unitary phenomenon, one that varies from very little motivation to act to a great deal of it. However, according to Ryan & Deci (2000), *"…even brief reflection suggests that motivation is hardly a unitary phenomenon"* (Ryan & Deci, 2000). People have not only different amounts, but also different kinds of motivation (Ryan & Deci, 2000). That is, they vary not only in *level* of motivation (i.e. how much motivation), but also in the *orientation* of that motivation (i.e. what type of motivation). Orientation of motivation concerns the underlying attitudes and goals that give rise to action – that is, it concerns the why of actions (Ryan & Deci, 2000). According to Deci & Ryan (1985) different people seem to respond differently to the same events. In other words, there seem to be substantial individual differences in people's interpretations of, or orientations toward, initiating or regulatory events (Deci & Ryan, 1985).

> *"…different people seem to respond differently to the same events. In other words, there seem to be substantial individual differences in people's interpretations of, or orientations toward, initiating or regulatory events"* (Deci & Ryan, 1985:110)

Similarly Mullins (2008) argues that a person's motivation will be determined by the comparative strength of intrinsic and extrinsic satisfaction and the extent to which these needs are fulfilled (Mullins, 2008). For example, some people may make a deliberate choice to forgo intrinsic satisfaction in return for high extrinsic rewards. Other people are happy to accept comparatively lower economic rewards in favor of a job that has high intrinsic satisfaction. Thus it is argued that there are individual differences in motivation, why motivation can operate like a relatively stable *trait* (Amabile, 1993; Judge & Ilies, 2002).

5.5 SUMMARY

Above the concept of work motivation was discussed. Based on a review of the literature, work motivation was defined as a set of energetic forces that originate both within as well as beyond and individual's being, to initiate work-related behavior and to determine its form, direction, intensity, and duration.

Based on this definition, two types of motivation were identified - *extrinsic motivation* and *intrinsic motivation* – as a way to categorize the needs and expectations of individuals. Intrinsic motivation refers to doing something because it is inherently interesting or enjoyable. In contrast, extrinsic motivation refers to doing something because it leads to a separable outcome. However, in order to provide a more fine-grained framework, intrinsic and extrinsic motivation was further broken down into four sub-categories. Intrinsic motivation was divided into two underlying elements, that is, *challenge* (preference for challenge and mastery) and *enjoyment* (preference for fun, interest, and choice). Extrinsic motivation was also divided into two underlying elements, that is, *compensation* (preference for money or other tangible incentives) and *outward* (preference for recognition and the dictates of others).

Finally it was found that the intrinsic-extrinsic motivational orientation are, to some extent, traitlike, that is, enduring individual-differences characteristics that are relatively stable across time and across situation. In other words, it was found that people seem to respond differently to the same events.

6 How To Motivate the Digital Natives

As discussed in the introduction, one of the main topics of interest in this thesis is how to motivate the digital natives. Above it was found that the digital natives exist, even though they only represent a minority of the respondents. In the following I will continue by examining how the digital natives are motivated?

In the following, when referring to digital natives, I will refer to those respondents who were identified as power users. Similarly, when referring to digital immigrants, I will refer to those respondents who were identified as basic users, hence demonstrating digital immigrant characteristics.

6.1 INTRINSIC-EXTRINSIC MOTIVATIONAL ORIENTATION OF DIGITAL NATIVES

As mentioned above, I will continue by examining how to motivate the digital natives and what makes them tick in relation to their work. According to Landy & Conte (2010), as more digital natives enter the workplace, the question of the values and motivation of members of the digital native generation is becoming increasingly important (Landy & Conte, 2010). The reason why it is becoming increasingly important is because management need to understand the how to motivate the digital natives in order to unleash their full potential (Robbins, 2004).

In an attempt to examine how to motivate the digital natives the Work Preference Inventory (WPI) was used. The WPI was used to directly and explicitly assess the degree to which the digital natives perceive themselves to be intrinsically and extrinsically motivated toward their work. A summary of the findings from the WPI are shown in Table 6-1 below.

When I present the data and findings in the following it is important to have in mind that I will be referring to ideal types (see paragraph 2.8 p. 41 for further description). It is not the purpose of ideal types to provide a complete identification of all the characteristics and qualities of the phenomenon under investigation (Eneroth, 1994). Hence, I will not provide a complete identification of all the characteristics and qualities, but instead be focusing on presenting the characteristics and qualities, which are common to the digital natives.

Table 6-1: Means on the WPI scales for the digital natives

	Digital natives Mean	Rank
Primary scales:		
Intrinsic	1.93	1
Extrinsic	2.10	2
Secondary scales:		
Enjoyment (IM)	1.75	1
Compensation (EM)	2.09	2
Outward (EM)	2.10	3
Challenge (IM)	2.30	4

Source: Web Survey
***IM = 'Intrinsic motivation', EM = 'Extrinsic motivation'**

Table 6-1 presents the mean scores on the WPI scales for the digital natives and their ranks. In the table, the means are presented in an increasing order. This is because the closer the mean is to one, the more

motivated the digital natives is by the scale (this is because 1 = 'always true of me' and 4 = 'always never true of me').

According to Table 6-1, it was found that the digital natives were overall more intrinsically motivated (M=1.93) than extrinsically motivation (M=2.10). This implies that the digital natives are more likely to be moved to act for the fun or challenge in a task rather than because of extrinsic rewards. Thus, the digital natives are more likely to be involved in a behavior for its own sake and not for any external rewards such as pay or praise.

However, in the attempt to engage in a more nuanced and fine-grained discussion about how to motivate the digital natives, the intrinsic and extrinsic motivation scale is divided into four secondary scales (enjoyment, challenge, compensation, and outward). When looking at the secondary scales it was found that the digital natives have highest level of preference for enjoyment (M=1.75), which refers to the preference for autonomy, interest, and fun. Enjoyment was followed by compensation (M=2.09), which refers to preference for money and other tangible incentives, outward (M=2-10), that is, preference for recognition from other people, and challenge (M=2.30), that is, preference for competence and mastery.

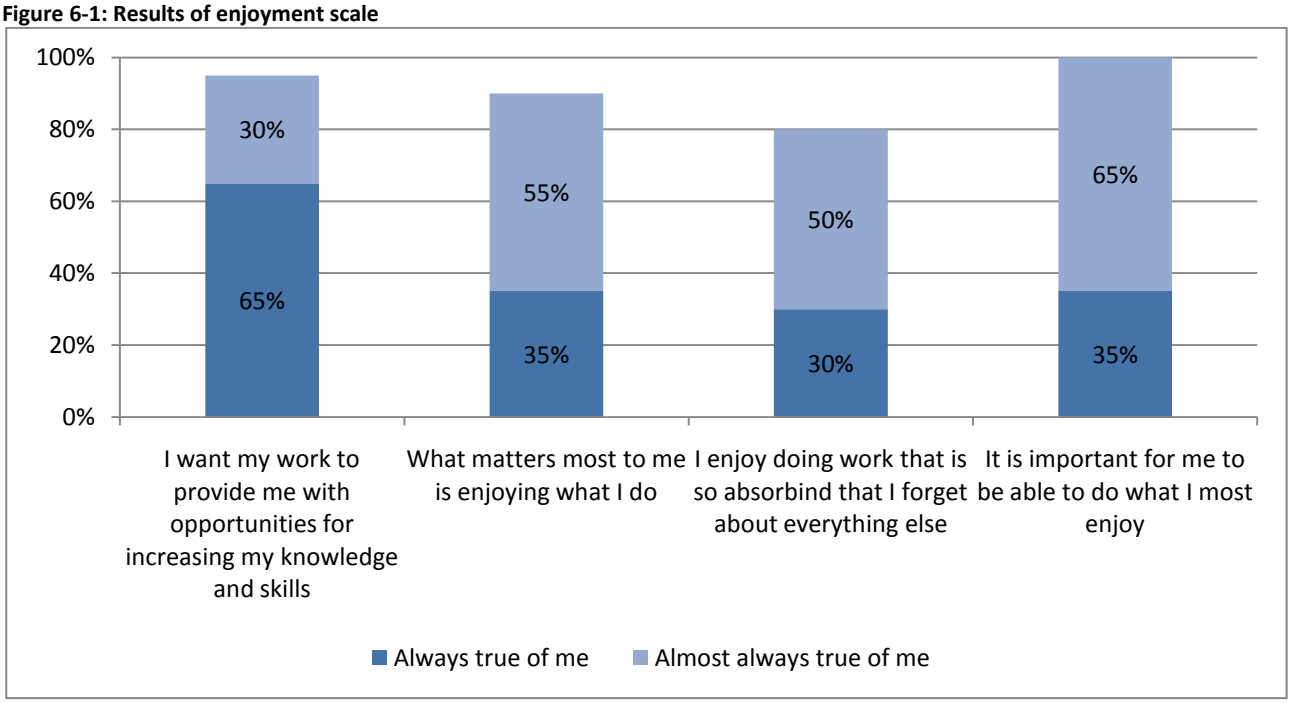
As illustrated above, the digital natives place greater emphasis on enjoyment than compensation, outward, and challenge. However, it is important to note that although the digital natives place lower emphasis on extrinsic rewards, such as compensation and recognition, these rewards are still motivating to the digital natives. Thus it is only the level of preference that is lower and it is not the case that the digital natives dislike these rewards or outcomes.

In the following I will continue to discuss these finding in detail. Furthermore, the findings from the qualitative interviews will be presented in order to create a deeper understanding and a more rich description of the ideal type.

6.2 ENJOYMENT

As Table 6-1 shows, the digital natives have the highest preference for enjoyment (M=1.75). This exemplifies the importance of *fun* and *enjoyment* as critical components of the workplace according to the digital natives.

Figure 6-1: Results of enjoyment scale



Source: Web Survey

According to Figure 6-1, it was found that it is important for the digital natives to be able to do what they enjoy the most (always true of me =65%; almost always true of me =35%). Actually, this is what matters the most to the digital natives (always true of me =55%; almost always true of me =35%). In order to make the digital native enjoy their work, it is important that the work provides the digital natives with opportunities for increasing their knowledge and skills (always true of me =30%; almost always true of me =65%) and that the work is so absorbing that they forget about everything else (always true of me=50%; almost always true of me=30%). This emphasizes the importance of enjoyment in the work and that enjoyment and fun is a powerful motivator for when dealing with the digital natives.

These findings are in line with the results from the interviews. From the interviews it was also found that what matters most to the digital natives is enjoying what they do. If the digital natives are not enjoying what they are doing, all the money in the world cannot compensate for this:

> *"You can earn all the money in the world, but if you are not enjoying your work then I don't think that salary really matters"* (Digital native 1, appendix 3)

This emphasized the importance of exciting, fun, and challenging work as the most important aspect of their work. Enjoyment is the most important aspect of the work according to the digital natives, whereas extrinsic rewards such as salary are valued lower. This is supported by one of the interviewees who observed that:

> *"Salary is actually only number four when we ask our employees what's important in their work. What is most important is that the work should be exciting, fun, and challenging."* (Digital Immigrant 4, appendix 10)

Workplace fun, that is, playful social, interpersonal, recreational, or task activities intended to provide amusement, enjoyment, or pleasure, is also critical in motivating the digital natives. This is illustrated in Table 6-2 were the results from the 'Attitude toward fun at work' scale are summarized.

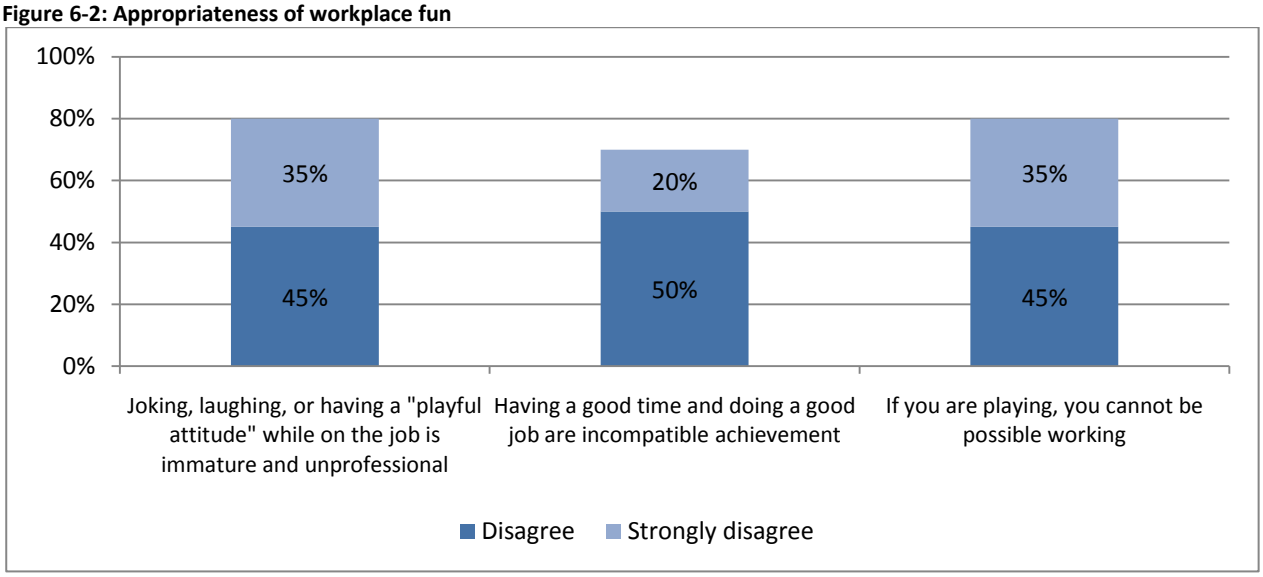
Table 6-2: Means on the attitude toward fun at work scale

	Mean
Appropriateness	1.83
Salience	1.81
Perceived consequences	1.57
Total Score	**1.74**

Source: Web Survey
*** On a scale from 1 = 'strongly agree' to 4 = 'strongly disagree'**

According to Table 6-2, the digital natives believe that workplace fun is appropriate (M=1.83), important (M=1.81), and a facilitator of individual and team performances (M=1.57). This implies that the digital native believed that work and play are complementary in the workplace. They also regard workplace fun as an important and critical element of a job. Finally they view fun activities as facilitators of individual and team performances.

Figure 6-2: Appropriateness of workplace fun



Source: Web Survey

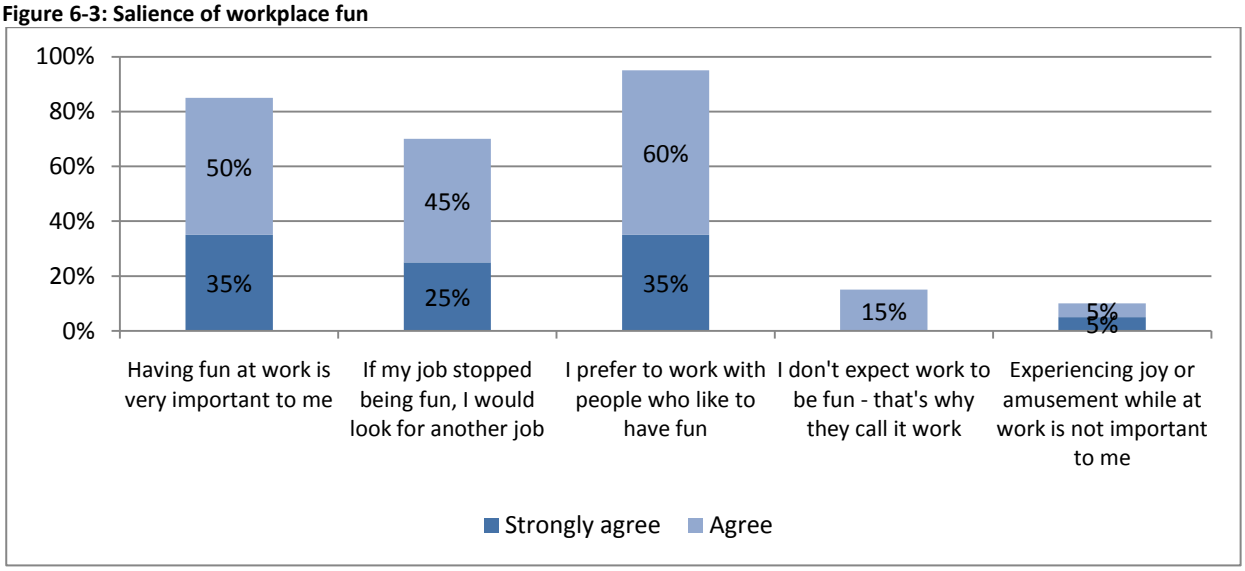
According to Figure 6-2, the digital natives believe that work and fun are complementary in the workplace. 70% of the digital natives believe that it is possible to have a good time and do a good job. 80% of the digital natives think that joking, laughing or having a playful attitude while on the job is important.

The results from the Web Survey support the findings from the qualitative interviews. Here it was found that workplace fun is a powerful motivator to the digital natives. The digital natives do not see work and fun as mutually exclusive. Instead working and having fun can - and actually *must* - be the same thing! This emphasized the importance of the employers being able to make the digital natives feel entertained, even while they are working. One of the interviewees argued that:

> *"…it is a huge motivator for me to enjoy my work and to* ***have fun <u>while</u> working***" (Digital native 1, appendix 3)

Having fun at work, is also a critical part of the job, as illustrated in Figure 6-3. According the findings, the majority of the digital natives believe that it is very important to have fun at work (52% strongly agree and 41% agree). Similarly, only 11% of the digital natives argue that is it is not important to them to experience joy or amusement while at work.

Figure 6-3: Salience of workplace fun



Source: Web Survey

The critical importance of workplace fun, is emphasized by the findings that digital natives would look for another job, if their work stopped being fun (strongly agree=35%; agree=50%). This mean that if the employer fail to embrace workplace fun - and therefore fails to satisfy the digital natives need for workplace fun - the digital natives will quit and find a new job that will satisfy their need for workplace fun. This is also emphasized by one of the interviewees:

> *"If work is not fun they will find another place to work, or even worse, they quit and then try to find something else"* (Digital Immigrant 4, appendix 10)

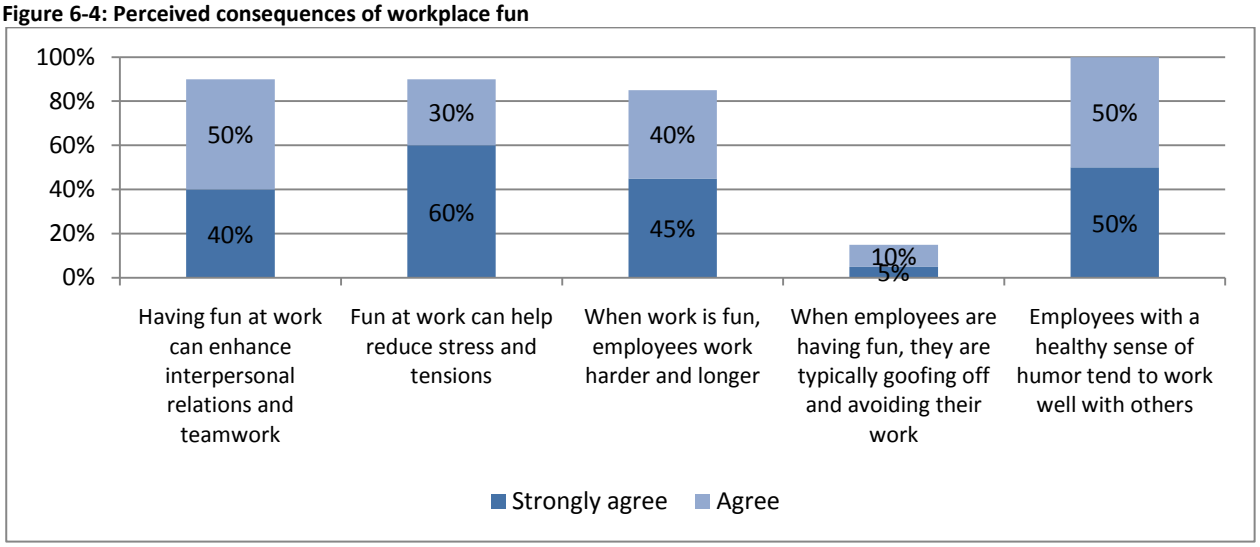
It was found, that one of the main reasons, why workplace fun is perceived to be a critical part of the job, is because workplace fun helps relief the digital natives from boredom. This is because workplace fun creates a varying work environment and ensures that work is not trivial and monotonous. One of the interviewees suggests that:

> *"…it helps to create some variety by trying something new because it is something that we have never tried before …it makes sure that your job is not boring"* (Digital native 3, appendix 5)

If the companies, however, are successful in creating a fun and exciting work environment this can have positive individual, as well as organizational, implications. As illustrated in Figure 6-4, it was found that digital natives work harder and longer when they enjoy their work and feel that it is fun (strongly agree=45%; agree=40%). Furthermore, the digital natives believe that having fun at work will enhance

teamwork (strongly agree=40%; agree=50%) and reduce stress and tensions (strongly agree=60%; agree=30%).

Figure 6-4: Perceived consequences of workplace fun



Source: Web Survey

The findings above emphasize that workplace fun has a positive impact on the attitude and productivity of the digital native employees. This will ultimately lead to positive organizational implications through better organizational performance. This is because the digital native employees are performing at a higher level because they are more motivated in their work. This is emphasized by three of the interviewees. When asked about what is most important for her motivation, having a high salary or enjoying your work, the interviewee argues:

> *"It is important that you enjoy working. If you enjoy working then I think that you will also* ***ultimately achieve better results****"* (Digital native 2, appendix 4)

That enjoyment and workplace fun have a positive influence on the employees motivation was also observed by one of the managers at JTM. According to the manager the digital natives simply perform better when they have fun while they are working. When asked about whether he has observed any differences between employees today and employees ten years ago the interviewee described this as follows:

> *"After all, it actually turns out that it increases their well-being, it increases their efficiency,* ***they simply perform better*** *when there is music and there is a positive atmosphere"* (Digital Immigrant 4, manager, appendix 10)

If the organizations, however, fail to create a fun and exciting work environment this will have negative implications for both the digital native and the organizations. This is basically because, if the digital native does not have fun while working, they will not perform. One of the interviewees suggests that:

> "…if I don't have fun while I'm working, **I will not perform**…" (Digital native 1, appendix 3)

The reason why the digital natives will not perform is because if companies fail to create a fun work environment they will cast the work into the category of "boring" and as a result become less motivated and therefore not perform at their highest. This implies that companies will not utilize the full potential of the digital native if they fail to embrace workplace fun. When asked about what is demotivating, one of the interviewees mentions boring and trivial tasks. One of the interviewee describes this as follows:

> *"The most demotivating job I can imagine is if I had a boring and trivial job where I work from 8-16 and just make phone calls and search on the Internet all day long […] so it's extremely important that you have a variety in your job and you are not doing the same thing 24/7"* (Digital native 3, appendix 5)

That it is demotivating to have a trivial and boring job is shared by two of the other interviewees. One way that organization can combine fun and work is through the use of different competitions. Competitions will have a positive effect on their motivation. This is because it entertains the digital natives and therefore makes sure the work is not boring. All four of the interviewees agree that competitions are motivating in their work. When asked about what incentives he receives and how they affect his motivation, one the interviewees argue as follows:

> *"Earlier we had a lot of competitions here where the person who sold the most could for example win a trip to London, iPhones, and iPads. When we have these competitions you really feel that there is a reason to perform. If you perform you also have the opportunity to be rewarded […] it is really motivates you to make an effort […] it makes it more* ***fun*** *to work when you have to compete in order to be taken into consideration for these rewards"* (Digital native 1, appendix 3)

As implied by the interviewee above, it is motivating to know that you will be rewarded for making an effort. However, the main reason why they are motivated by these competitions is because they are fun and entertaining and not because of a reward. When one of the interviewees where asked about if he remembered a situation where he felt more motivated he argued as follows:

> "*We have a lot of competitions here where you have the opportunity to win both big and small prizes. But it is the variety that motivates you. That you are doing something you have never tried before […] The competitions makes you perform, because you want to win these small or big prizes. If it is a big or small prize doesn't matter […] it makes the work less boring and more fun"* (Digital Native 3, appendix 5)

Thus, the competitions create variety in their job and makes sure the job is not boring, trivial, and monotonous. This is emphasized by one of the interviewees who argue that:

> *"There have been both small and unimportant rewards but also large extravagant rewards. But it is because the competitions are entertaining that my motivation is increased"* (Digital native 3, appendix 5)

Thus competitions made the work more fun because it interrupts the usual routines and therefore creates a feeling of excitement. Thus it was not the rewards alone that was motivating, but more importantly it was because the competition made the work fun and exciting. Thus it doesn't matter if the rewards are small and unimportant or large and extravagant. The competitions are still motivating because the digital natives are entertained. The main reason why the competitions are regarded as entertaining because is because they create some variety in the work and makes sure that the work is not the same 24/7 which ultimately takes the boring out of the job.

The findings above have important managerial implications. The data reveals that digital natives tend to have a positive attitude toward fun at work. Thus, all employers need to ask themselves the question: am I creating a fun and entertaining work environment? It is argued that the ability to create a company culture that embrace fun and entertainment will become an important competitive advantage for companies in the future, as this will create a working environment that is geared toward attracting, retaining, and motivating the digital natives. In other words, it is crucial that companies have the ability to make work fun and

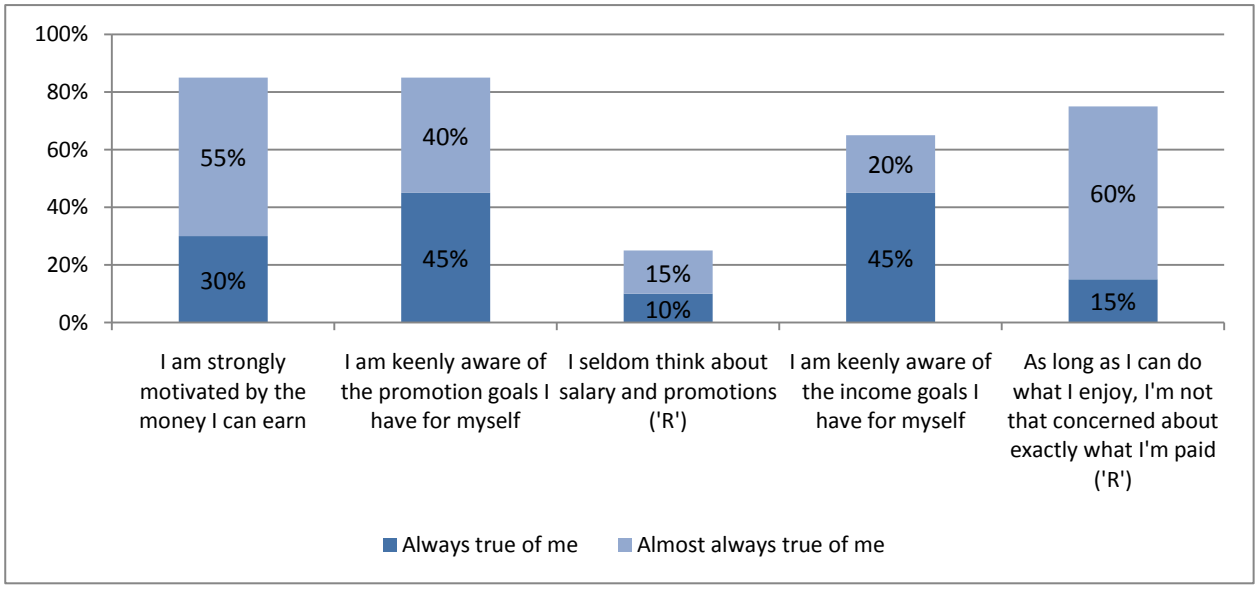
entertaining and creates jobs where fun and work are intermixed if they are to survive in the future. If employers fail to do so they will, at best, have a bunch of demotivated digital native employees and in the worst case they will not have any digital native employees - at all! The digital natives do not only want to have fun and enjoy their work, they *expect* to have fun and enjoy their work. In other words, the Digital Natives are not asking, they are demanding a fun environment – otherwise they will go elsewhere!

6.3 COMPENSATION

As discussed in paragraph 5.2.2, compensation, that is, extrinsic, monetary rewards that employees receive in exchange for their work, is an important part of extrinsic motivation. In fact it was concluded that compensation is one of the most powerful motivation tools (George & Jones, 1999).

According to Table 6-1, the digital natives have second highest preference for compensation (M=2.09), that is, preference for extrinsic rewards such as pay and other tangible rewards.

Figure 6-5: Compensation - Pct of digital natives who rate the following as always or almost always true of them



Source: Web Survey

As illustrated in Figure 6-5 the digital natives were strongly motivated by money, were keenly aware of promotions and income goals, and often think about salary and promotions. The digital natives were found to be strongly motivated by the money they can earn from their work (always true of me=55%; almost always true of me=30%). These findings support the findings from the interviews. Here it was found that

money is an important motivational driver for the digital natives. This is supported by one of the interviewees who argued that:

> *"…the money I can earn is definitely a motivation for me in my work"* (Digital native 2, appendix 4)

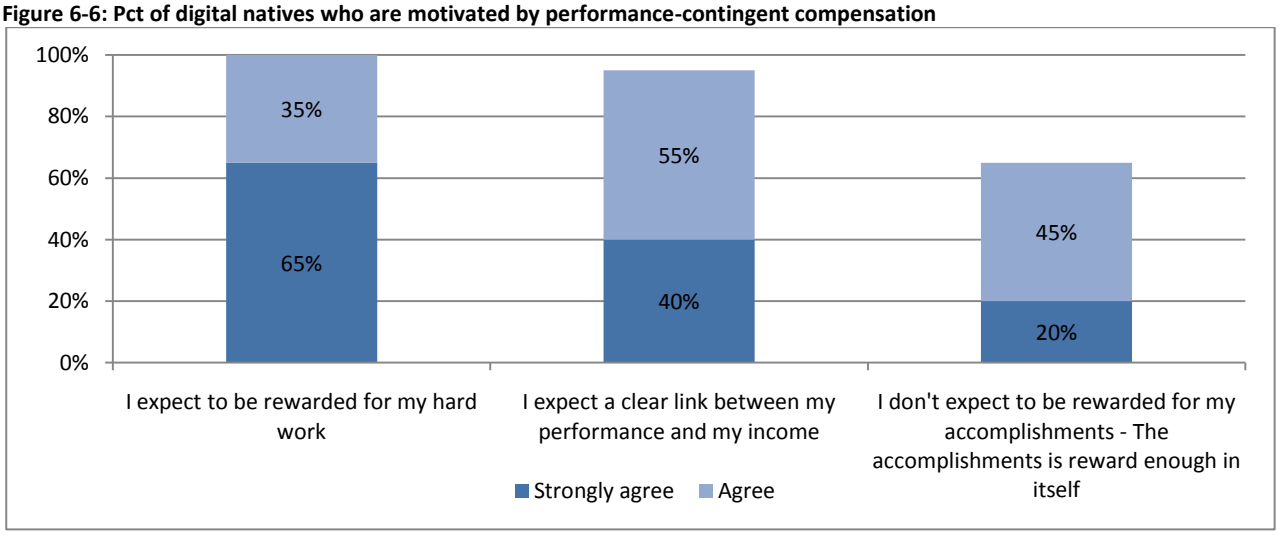
This means that compensation can be used as a carrot, i.e. money can be used to reward people for doing certain tasks. This is also referred to as reinforcement (Robbins, 2004). However, the findings above also indicate, that the content of the work (e.g. that they enjoy what they are doing) are more important than money and promotions. This is emphasized by the fact that 75% of the digital natives argue that it is more important to do what they enjoy than exactly what they are paid (always true of me=15%; almost always true of me=60%).

Compensation was found to be especially suitable for motivating the digital natives when compensation is contingent on performance, in the sense of variable compensation precisely calibrated to the performance achieved by the individual. This kind of compensation is also referred to as performance-contingent compensation (Mullins, 2008). The reason why performance-contingent compensation is particularly motivating is that the digital natives were strongly motivated when they see a clear relationship between their performance and the rewards they receive. In other words, the digital natives expect to see a clear connection between what they produce and how they are rewarded:

> *"I like bonuses. I like that you have something to work towards and that* ***people is rewarded when they work hard****"* (Digital Native 2, appendix 4)

That performance-contingent pay is important when motivating digital natives also correlates with the findings from the Web Survey. This is illustrated in Figure 6-6. Here it was found that the digital natives expect a clear link between performance and rewards (strongly agree=40%; agree=55%). This means that the digital natives expect to be rewarded for their accomplishments and hard work. This implies that using performance-contingent compensation is a very powerful motivator when dealing with and managing digital natives.

Figure 6-6: Pct of digital natives who are motivated by performance-contingent compensation



Source: Web Survey

The reason why performance-contingent compensation is such a powerful motivator is because this makes the digital natives feel that there is a reason for making an extra effort, and that they are rewarded for their efforts and hard work. The size of the compensation or reward has important impact on the digital native's amount of motivation. Generally, it is indicated, that the higher the compensation is, the higher the motivation is, and vice versa. This means that if there is no compensation the digital native does not believe that there is a reason to make an effort. Two of the interviewees describe this as follows:

> *"…there is a reason to make an effort. If you make an effort you will also have the opportunity to be rewarded and get a little extra salary"* (Digital Native 1, appendix 3)

> *"It is very motivating to me if I know that the performance-contingent compensation is high"* (Digital native 4, appendix 6)

The findings above also illustrate, that there is a clear link between the individual's performance and the size of performance-contingent pay. In other words, the higher the compensation, the higher the amount of motivation. If the performance-contingent compensation, however, is low or non-existent, then the amount motivation is lowered or completely disappears. Hence, if there is little or no performance-contingent compensation, the digital natives feel there is no reason to make an extra effort. One of the interviewees suggest as follows:

> *"…the higher the performance-contingent pay, the more motivated you are to sell the product. So the performance-contingent pay have a big influence on what we are focused on selling and whether we are focused on selling or not, because if there is no performance-contingent pay, there is no reason to try and persuade customers to purchase the product* (Digital Native 1, appendix 3)

To summarize the analysis above, it was found that the digital natives expect to be paid for their hard work. However, if the digital natives are justly and promptly rewarded for what they accomplish, they are more than willing to pay their dues and make an extra effort in their work. These findings are supported by recent research, where it was found, that digital natives expect to be rewarded when they have done a good job (Tulgan, 2001).

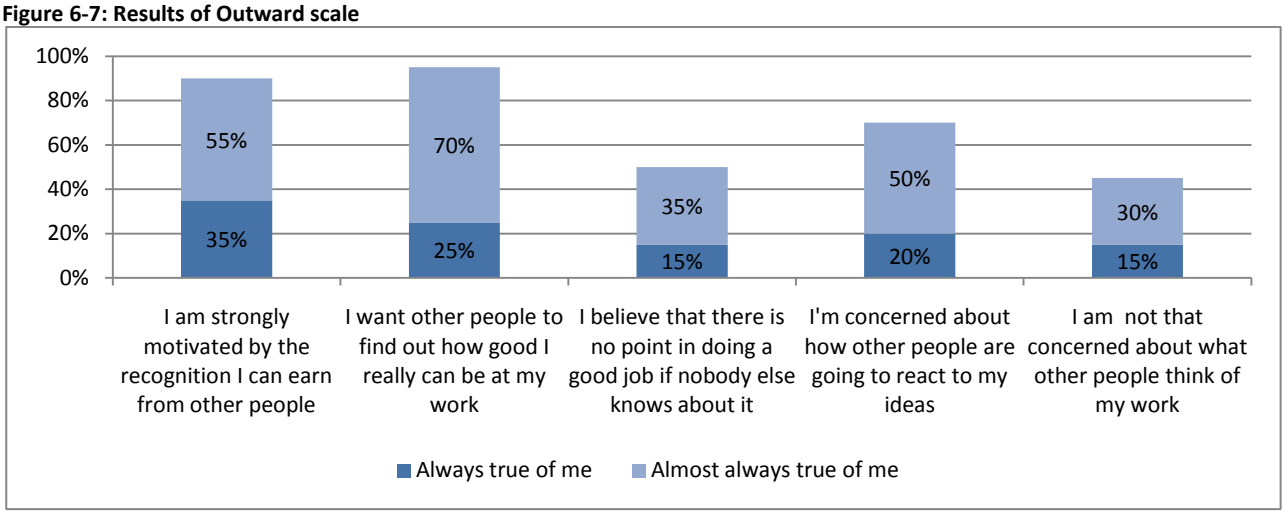
These findings have important implications for management. Management needs to understand, that in order to motivate the digital native employees, it is important that employers have rewards that recognize their achievements. Thus, if the employers want to be in a much better position to motivate the digital natives, they have to be able to establish this connection between performances and. Therefore it is argued that employers need to base the incentives on one factors and one factor only: *performance*. Management need to design strategies to transform monetary rewards to performance motivators in order to effectively motivate the digital natives and by that improve their performance and productivity. Thus, companies need to reward Digital Natives when they perform, and avoid rewarding for poor performance. In other words, when the digital natives achieved well, management needs to give suitable rewards, and only provide compensation when the digital natives can see there is a clear connection between their improved performance and revenue earned.

6.4 OUTWARD

As discussed in paragraph 5.2.2, individual's orientation toward recognition and the dictates of others is an important part of the extrinsic motivation. As mentioned earlier, outward refers to how motivated a person is by the recognition he can earn from other people.

The preference for compensation was followed closely by the preference for outward (M=2.10) according to Table 6-1 (see p. 89). According to the results from the Web Survey it was found that digital natives were strongly by the recognition they can earn from other people. This is illustrated by the findings presented in Figure 6-7.

Figure 6-7: Results of Outward scale



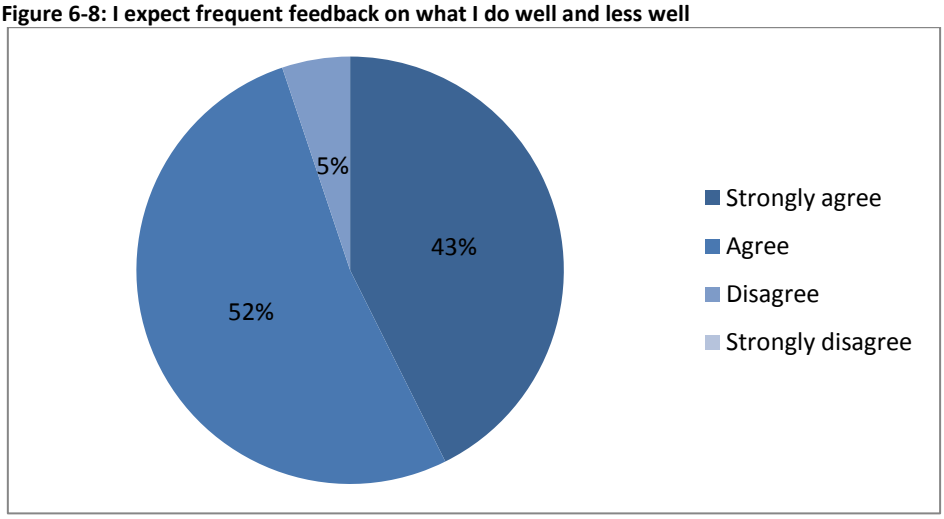
Source: Web Survey

According to Figure 6-7, the digital natives are strongly motivated by the recognition of others (always true of me=35%; almost always true of me=55%). The digital natives want other people to find out how good they are at their job (always true of me=25%; almost always true of me=70%). Many digital natives actually believe that there is no point in doing a good job if nobody else knows about it (always true of me=15%; almost always true of me=35%). These results illustrate the importance of recognition to the digital native and his motivation.

One way to recognize the digital natives for their achievements is through continuous feedback. The digital natives have been raised in a bubble of constant praise and recognition from their surroundings, and they are bringing this with them to the workplace. Therefore they expect this kind of constant reinforcement and recognition whenever the accomplish something.

This is illustrated by Figure 6-8 where it was found that the digital natives expect to receive frequent feedback on their performance (strongly agree=43%; agree=52%). This is both when they are doing well, and when they are doing less well.

Figure 6-8: I expect frequent feedback on what I do well and less well



Source: Web Survey

These findings support the findings from the interviews. Here it was found that the digital natives have a big need for feedback. This is emphasized by one of the interviewees:

> *"The digital natives expect to have contact with their managers 1-2 times a day"* (Digital Immigrant 4, appendix 10)

It is important that the digital natives feel that they are seen and heard. This is important, because the worst thing you can do to the digital native is to make them feel not seen. This is described by one of the interviewees as follows:

> *"Within the last year we have hired more managers and told them to talk to their subordinates at least twice a day. In this way we are sure that they are seen. There is no doubt that the worst thing you can do to the employees is to overlook them"* (Digital Immigrant 4, appendix 10)

The findings above imply that the digital natives revel in recognition for their efforts and have a need for constant feedback. This means that the digital natives are strongly motivated by praise and seek frequent feedback from managers and co-workers. These findings are supported by two of the interviewees:

> *"It is motivating, and a pat on the shoulder, to see you name on the wall and be among the top 20 sales people […] I am really motivated by the feedback I get from my manager […] I feel extra motivated if I get a pat on the shoulder for my efforts"* (Digital native 2, appendix 4)

> *"It is always motivating to be recognized for your work"* (Digital native 1, appendix 3)

However, the need for constant feedback is not only about receiving praise for a job well done. The digital natives also respond well to constructive feedback. Thus their need for constant feedback is also a perfect opportunity for managers to tell the digital native employees if they are not doing well on the job. The reason why they respond well to constructive feedback is because it leads to consistent improvement, and consistent improvement is what truly matters to the digital natives. One interviewee suggested that:

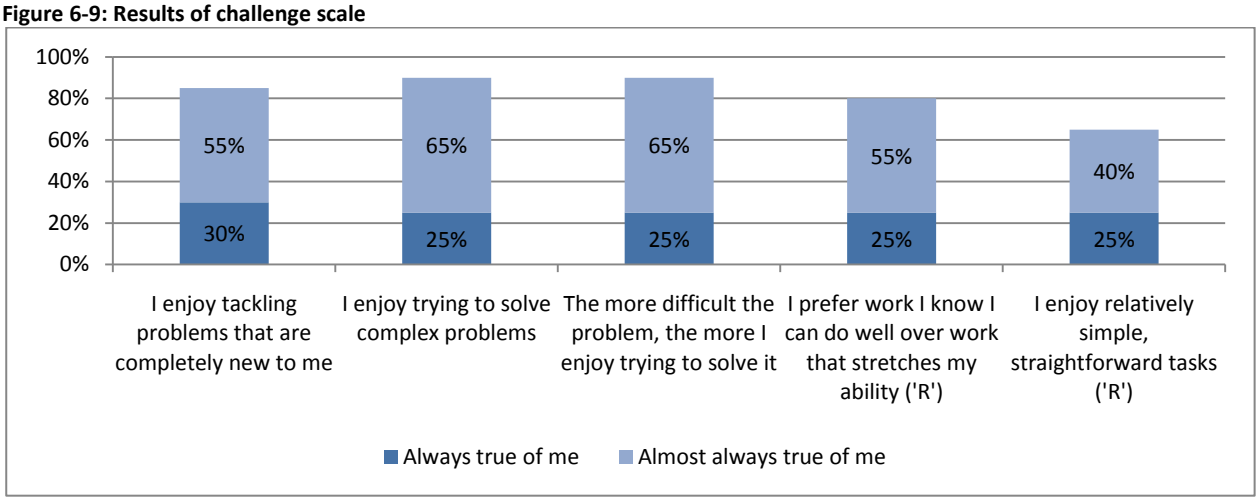
> "*When I am doing well I expect to be told, and when I am not doing well I expect to be told […] I like when my manager gives me constructive feedback […] I expect to be told if I am not doing well*" (Digital native 3, appendix 5)

To summarize the analysis above, it was found that feedback, recognition and acknowledgement of accomplishments is important to the digital native's motivation. This has important implications for companies and managers. As a consequence of the need for frequent feedback, semi-annual or annual performance reviews do not work when dealing with the digital natives. The digital natives want constant feedback. Therefore companies have to incorporate different types of recognition into their people strategy, and with greater frequency. Companies have to train their managers in giving frequent feedback. Companies that don't will have a problem with meeting the digital native employees' demands and as a consequence have a hard time motivating them. Thus companies and managers need to provide the digital natives need constant feedback, evaluations, and positive strokes. Give the digital natives constant feedback and positive recognition, when appropriate, to keep them happy, productive, and motivated.

6.5 CHALLENGE

According to the WPI (See Table 6-1 p. 89), the digital natives had the lowest preference for challenging work. However, it is important to note that despite the fact that digital natives place lowest importance on challenge, it was found that competence and mastery is still a motivating. However, it is not the most important part of their motivation.

Figure 6-9: Results of challenge scale



Source: Web Survey

As Figure 6-9 shows, the digital natives enjoy trying to solve complex problems that stretch their abilities (always true of me=25%; almost always true of me =65%). Actually, the more difficult the problem, the more they enjoy trying to solve it (strongly agree=65%; agree=25%). This implies that challenging work is increasing the motivation of digital native employees.

These findings support the findings from the Interviews. In the interviews it was found that the digital natives rate exciting, fun, and challenging work as the most important aspect of their work. These factors were actually more important than extrinsic rewards such as money and salary. One of the interviewees suggested that:

> *"Salary is actually only number four when we ask our employees what's important in their work. What is most important is that the work should be exciting, fun, and challenging."* (Digital Immigrant 4, appendix 10)

However, it is important to note that there is a limit to how challenging the work can be. According to Figure 6-9 (see p. 105) the digital natives prefer work they know they can do well, over work that stretches their ability (strongly agree=55%; agree=25%). This indicates that there is a limit to how challenging the work can be, if the digital native's motivation is to increase. In other words, the digital natives seek challenges that are suited for the competencies, which are neither too easy nor too difficult. This is emphasized by two of the interviewees, who argued as follows:

> "*If you don't feel that you have the competences needed to do the task, then you don't feel that you can solve the task. Therefore you will have a hard time being motivated toward that task"* (Digital native 2, appendix 4)

> *"It's not funny only to be able to give half answers the whole day and can't complete a task without have to get help from others"* (Digital native 1, appendix 3)

To summarize the analysis above, it was found that challenging work is the least important aspect of the work according to the digital natives. However, it is important to note that the digital natives are still motivated by the need for mastery and competence. This implies that organizations must satisfy the need for enjoyment, compensation, and outward, before focusing on the need for challenge. However, if the three other needs are satisfied, organizations can increase the digital native's motivation by focusing on creating a job which provides opportunities for mastery. In other words, organization must create situations that provide the digital natives with the opportunity for increasing their knowledge and skills. However, it is important that the companies make sure the tasks fit the competencies of the digital native, otherwise it will cause frustration. However, if the tasks are neither too easy nor too difficult, the digital native's motivation is increased.

6.6 SUMMARY

Above it was examined how to motivate the digital natives in order for management to bring out their full potential. In order to examine what makes the digital natives tick and how to motivate them, the WPI was used. The WPI allowed me to assess the degree to which the digital natives were intrinsically and extrinsically motivated toward their work.

Overall it was found that the digital natives perceive themselves to be more intrinsically motivated (M=1.93) than extrinsically motivated (M=2.10) toward their work. This means that the digital natives have a higher preference for fun and challenging work than extrinsic rewards such as pay and recognition from others. However, in order to engage in a more nuanced discussion about how to motivate the digital natives, the two primary scales were divided into four sub-scales (enjoyment, challenge, compensation, and outward). Here it was found that the digital natives have the highest preference enjoyment (M=1.75). In other words, digital natives place greater emphasis on having a fun and exciting job and enjoying what they do than exactly what they are paid. However, it is important to note that compensation is also a powerful motivator for the digital natives. It was also found that the digital natives are strongly motivated by money and other tangible rewards (M=2.09). Furthermore, it was found that compensation is especially suitable for motivating the digital natives when contingent on performance. One reason why performance-contingent pay is a strong motivator is because the digital natives feel that they are rewarded for their accomplishments and hard work. Compensation was closely followed by Outward (M=2.10) meaning that the digital natives also have a high preference for the recognition they can earn from others. The digital natives have been raised in a bubble of constant praise and recognition why they expect constant reinforcement and recognition. Thus, it is important to give the digital natives frequent feedback on their performance. This is both when they are doing well, and when they are doing less well.Finally it was found that the digital natives have the lowest preference for challenge. Thus, the digital natives are less motivated by the feeling of competence and mastery. Here it is important to note that even though the digital natives have the lowest preference for challenge, they are still motivated by opportunities for mastery and competence. However, the digital natives seek challenges that are suited for their competencies, which are neither too easy nor too difficult. Thus there is a limit to how challenging the work can be, if the digital native's motivation is to increase because they seek challenges.

This means that organization can with advantage begin by focusing on satisfying the digital natives need for enjoyment, followed by the need for compensation, outward, and challenge.

7 ARE THE DIGITAL NATIVES MOTIVATED DIFFERENTLY THAN IMMIGRANTS?

Another one of the main topics of interest in this thesis is the differences in work preference between the different generations.

In the following it will be examined whether digital natives are motivated differently than the digital immigrants. In other words, I will present my findings regarding to what extent any generational differences exists in work motivation, which is often claimed to exist in the popular pres.

7.1 DIFFERENCES IN MOTIVATIONAL ORIENTATION

In the following, I will continue with examining whether the digital natives are motivated differently than digital immigrants. According to Landy & Conte (2010) there has been a continuing debate about the extent to which the digital native generation is motivated by similar values and processes as those from earlier generations, who are dominating the workplaces today (Landy & Conte, 2010). According to McShane & Von Glinow (2004), the digital native generation is bringing different expectations to the workplace than earlier generations, why they also have to be motivated differently than earlier generations (McShane & Von Glinow, 2004). Similarly, Tapscott (2009) argues that digital natives have new motivators and management has to understand the digital natives in order to unleash their full potential (Tapscott, 2009). However, Landy & Conte (2010) argues that although there has been a great deal of speculation and opinion regarding the motivation of the digital native generation, there has been relatively little formal research within this area (Landy & Conte, 2010).

In order to answer the question whether the digital native generations really are motivated differently than earlier generations, several *t-tests* have been carried out. The t-test assesses whether the means of two groups are statistically different from each other and is appropriate whenever you want to compare the means of two groups (Davis & Pecar, 2010). In other words, the t-test allows me to assess whether the differences in the means of the scales are significant or accidental.

Table 7-1 presents the means on the WPI scales for the digital natives as well as the digital immigrants. The results of the t-tests, which were conducted in order to determine if any significant differences exists between the two groups, is also presented in Table 7-1.

Table 7-1: Means on the WPI scales and results of t-tests

	Digital Natives Mean	Digital Immigrants Mean	p-value
Primary scale:			
IM	1.93 (1)	2.07 (1)	.43
EM	2.10 (2)	2.37 (2)	.17
Secondary scale:			
Challenge (IM)	2.30 (4)	2.26 (3)	.83
Enjoyment (IM)	1.75 (1)	1.97 (1)	.19
Compensation (EM)	2.09 (2)	2.43 (4)	.41
Outward (EM)	2.10 (3)	2.25 (2)	.09*

Source: Web Survey
*** p < 0.1**

According to Table 7-1, no statistical significant differences in the mean score were found, between the digital natives and immigrants, in terms of their preference for intrinsic motivation (p=.43) and extrinsic motivation (p=.17). This implies that the digital natives and digital immigrants have the same preference for extrinsic rewards, such as pay and praise. Similarly, it was found, that the digital natives and digital immigrants, have the same preference for fun and challenging work.

When looking at the more nuanced secondary scales, there was only found significant difference in one out of four scales. According to Table 7-1, the digital natives have a significant higher preference for outward (p=.09) than their digital immigrant counterparts. In other words, it was found that the digital natives are has a significant higher preference for the recognition they can earn from other people. For the remaining three scales (enjoyment, challenge, and compensation) no significant differences were found between the digital natives and immigrants, meaning that they have the same preference for these. These findings support the findings from the qualitative interviews.

These findings illustrates, that although there are some differences in the level of preference for extrinsic and intrinsic rewards between digital natives and immigrants, there are also similarities. Actually it was found that there were more similarities than there were differences between the generations, as there was only statistical significant difference in one of the scales.

In the following these similarities and differences will be discussed more in detail.

7.2 ENJOYMENT AND WORKPLACE FUN

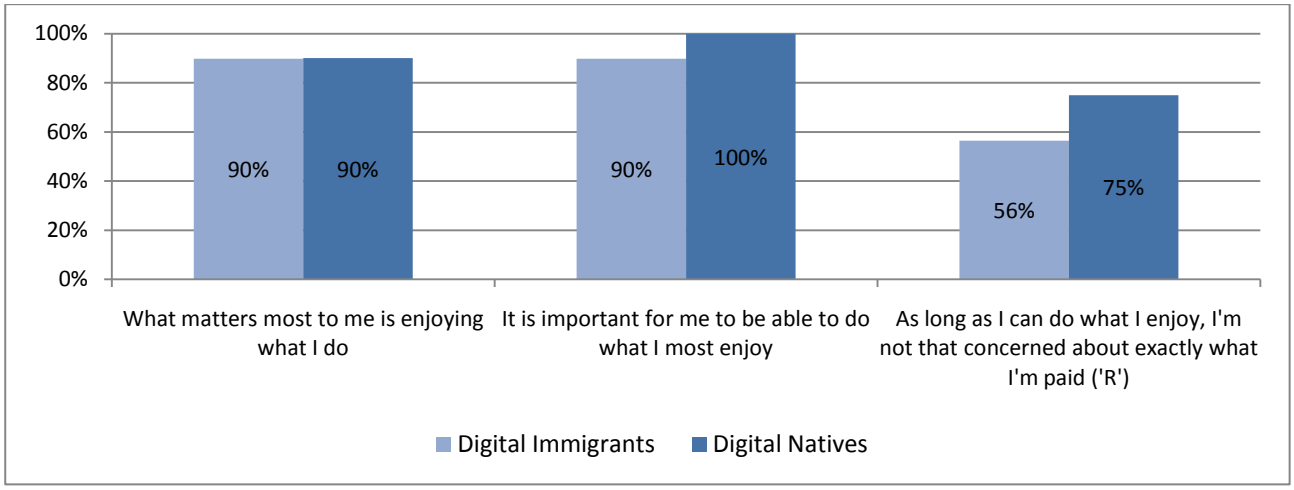
In paragraph 0 (see p. 91) it was found that the digital natives have the highest preference for enjoyment. Thus, digital natives place greater emphasis on having a fun and exciting job and enjoying what they do than exactly what they are paid. Thus, enjoyment and workplace fun are critical aspects of motivating digital natives.

Similarly it was found that the digital immigrants also have the highest preference for enjoyment and workplace fun (M=1.97). According to Table 7-1 no significant differences were found in the preference for enjoyment between the digital natives and digital immigrants. In other words, evidence suggests, that enjoyment and workplace fun are critical aspects when managing both digital natives and digital

immigrants and trying to increase their motivation. This implies that it is important for employers to ensure that they fulfill the need for enjoyment when managing both digital natives and digital immigrants.

That workplace fun and enjoyment are critical aspects of motivating both digital natives and digital immigrants are also emphasized by Figure 7-1. As the figure shows, 90% of the digital immigrants' have a strong desire to be able to do what they enjoy (compared to 100% of the digital natives). Workplace fun and enjoyment are actually the most critical part of work, as 90% of the digital immigrants argue that what matters most to them is to be able to enjoy what they are doing. This is similar to the digital natives as discussed in paragraph 0 (see p. 91).

Figure 7-1: Differences in 'enjoyment' (Pct. of respondents who strongly agree or agree)



Source: Web Survey

Table 7-2 presents the means on the '*attitude toward workplace fun*' scale for the digital natives as well as the digital immigrants. The scales are presented in increasing order in the means of the digital natives. This is because the closer the mean is to one, the more the scale is motivating (1 = '*strongly agree*' to 4 = '*strongly disagree'*). The results of the t-tests, which were conducted in order to determine if any significant differences exists between the generations, is also presented in Table 7-2.

Table 7-2: Means on 'attitude toward workplace fun' scales and results of t-test

	Digital Natives mean	Digital Immigrants mean	p-value
Appropriateness	1.97	1.85	.57
Salience	1.90	1.86	.84
Perceived consequences	1.70	1.61	.62

Source: Web Survey
***1 = 'strongly agree' 4 = 'strongly disagree'**

According to Table 7-2, the t-tests suggests that no statistical significant differences exists in the attitudes toward appropriateness (p=.57), salience (p=.84), or perceived consequences (p=.62) of workplace fun. These findings indicate that, similar to the digital natives, the digital immigrants believed that work and play are complementary in the workplace. They also regard workplace fun as an important and critical element of a job. Finally they view fun activities as facilitators of individual and team performances.

The findings above support the findings from the qualitative interviews. According to the interviews, it was found that enjoyment is also a very important aspect of work according to the digital immigrants. When one of the interviewees where asked about whether or not it was important to feel entertained and to have fun while working, the interviewee argued as follows:

> *"Everything doesn't have to be serious. It's not a library. There should also be room for us to laugh together and to have fun once in a while."* (Digital immigrant 3, appendix 9)

As the interviewee indicates above, it is suggested that having fun concerns having a good time with your co-workers and to laugh. Similarly, when asked about the importance of workplace fun, one of the interviewees argued as follows:

> *"I think it is important to dividing line between fun and work. However, this doesn't mean that it is not important to have fun at work and to be able to laugh. Fun sometimes eases the less fun tasks. Therefore I think that humor is an important part of the workplace. But you still have to remember that you are at work"* (Digital Immigrant 2, appendix 8)

As indicated by the interviewee above, it is important to be able to laugh and have fun while working, but there have to be a balance between fun and work. However, when you have a balanced amount of fun this can have a positive influence on the motivation as it increases the performance of the employees, e.g. by easing the less fun tasks.

That there have to be balance between fun and work is also emphasized by one of the other interviewees. When the interviewee was asked if there have to be a clear separation between work and entertainment the interviewee responded as follows:

> *"Of course work has to be fun. But I don't necessarily think that work becomes more fun just because a lot of things are happening around me. I actually think that it will be more disturbing than fun"* (Digital immigrant 1, appendix 7)

As indicated by the interviewee above, workplace fun can get out of control if there is too much. This will have negative implications on the digital immigrant's motivation, as it will be a disturbance instead of a motivation. Thus it is important for employers to be able to determine and provide the right amount of workplace fun and have a balance between entertainment and work.

Based on the findings above it is argued that both the digital natives and digital immigrants also place a high emphasis on workplace fun. Furthermore it was concluded that there were no statistically significant differences in the attitude toward workplace fun. Thus the digital immigrants also think that play and work are complementary in the workplace, regard workplace fun as a critical element of a job, and view fun activities as facilitators of individual and team performances.

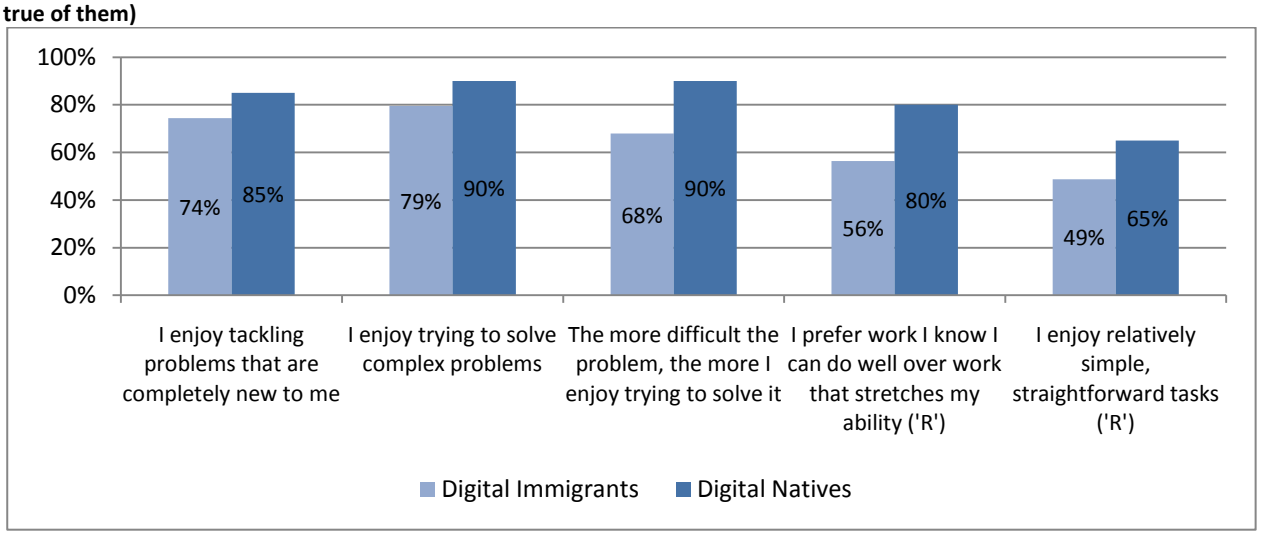
These findings are supported by recent research (Lamm & Meeks, 2009). According to Lamm & Meeks (2009) young people have a strong preference for workplace fun. However, contrary to their expectations, Lamm & Meeks (2009) also found that earlier generations had a strong preference for workplace fun (Lamm & Meeks, 2009).

7.3 CHALLENGE

In paragraph 6.5 (see p. 104) it was found that the digital natives have the lowest preference for challenge. However, it was found, that even though the digital natives had the lowest preference for challenge, they were still motivated by the need for competence and mastery.

According to Table 7-1, no significant differences were found in the preference for challenging work (p=.83) between the digital native and digital immigrants. This implies that both the digital natives and digital immigrants were motivated by challenging work. In the following this will be discussed more in detail and related to the findings from the qualitative interviews.

Figure 7-2: Differences in preference for challenging work (% of respondents who rate the following is always or almost always true of them)



Source: Web Survey

According to Figure 7-2, both the digital natives (85%) and the digital immigrants (74%) enjoy tackling problems that are completely new. Furthermore, both the digital natives (90%) and digital immigrants (79%) enjoy trying to solve complex problems. However, it is interesting to find, that even though both the digital natives and immigrants enjoy tackling complex problems, they also enjoy relatively simple and straight forward tasks (Digital natives=65%; Digital immigrants=49%). This indicates that it is important to provide both the digital natives and immigrants with tasks that are both challenging and straightforward at the same time. Thus employers have to provide them with challenges, which are neither too easy not too difficult. In other words, there is a limit to how challenging a task can be.

These findings support the findings from the qualitative interviews. Here it was found that challenges were a very important part of the interviewees' motivation. When asked about the reason for working, one of the interviewees argued as follows:

> "*The primary reason why I work is probably to be challenged. There is an excitement about being challenged and you get a feeling of satisfaction when you solve a challenging task […] the more challenging a task the more I get turned on and the more I am motivated to solve the task"* (Digital Immigrant 1, appendix 7)

Thus, as indicated by the interviewee above, challenges, and the need for competence and mastery, is one of the primary reasons for working. This emphasizes the importance of challenge when trying to motivate the digital immigrants. The interviewee above also indicate that the more challenging a task the more they

are motivated to solve the task. However, as discussed above, it is important to find the right balance between easiness and difficulty, as the digital immigrants seek challenges that are suited for their competencies, which are neither too easy nor too difficult. That digital immigrant's get a feeling of satisfaction when having solved a particularly challenging task was also indicated by the interviewee above. This implies that it is the intrinsic satisfaction that is the motivating force, and not any extrinsic reward such as a bonus or praise for completing a challenging task.

One of the reasons why a challenging work is motivating is because it provides the opportunity to increase knowledge and skills, and as a result develop the digital immigrants personally.

> "*It is the search for challenges that motivates me […] that is my primary motivator I think […] Thus it is the challenge that is motivating […] Challenges makes sure that I develop both personally and professionally. I think that is extremely important […] I think that personal development is important for the motivation […] It is important that you enjoy going to work every day otherwise you will quickly become bored"* (Digital immigrant 3, appendix 9)

The interviewee above suggests that personal development is important for the motivation of the digital natives implying that the performance of the digital immigrants will increase if they are offered opportunities to increase skills and knowledge. Furthermore the interviewee above suggest that motivation, and thus performance, will decrease if the need for growth is not satisfied as the digital immigrants will become bored.

As discussed above, it was argued that digital immigrants and natives seek challenges that are neither too difficult nor too easy. This was also emphasized by one of the interviewees. When asked about the importance of feeling competent to solve a particular task, the interviewee argued as follows:

> *"If I get a task that I don't feel competent to solve, then I will have a hard time being motivated to solve the task. This is obviously because I will constantly run my head against a wall. Therefore it is important that the manager is capable of assign the employees to tasks that fits their competencies*" (Digital native 3, appendix 9)

If the tasks are too difficult it will have a negative impact on the level of motivation. This is because the digital immigrant will constantly run up against a wall if a task is too challenging.

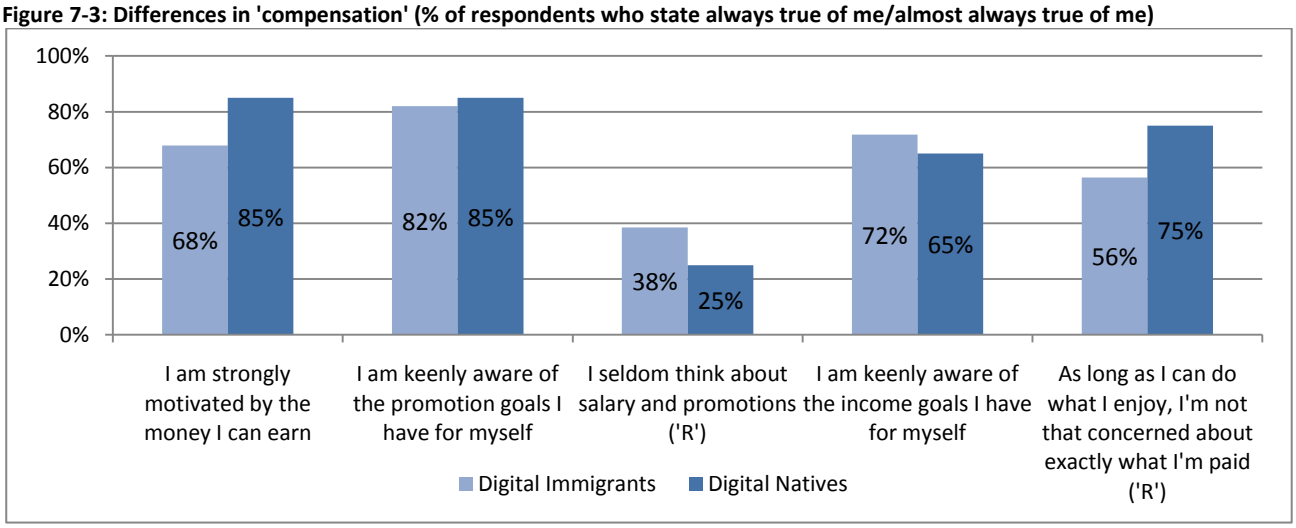
Based on the findings above, it was concluded that both the digital natives and digital immigrants place emphasis on having a challenging work. Furthermore it was found that no statistically significant difference exist in the level of preference for challenges. However, it is important to remember that both the digital natives and digital immigrants seek challenges that were suited for their competencies, which are neither too difficult nor to easy.

7.4 COMPENSATION

In paragraph 7.4 (see p. 116) it was found that digital natives have a high preference for compensation and is strongly motivated by money and other tangible rewards. Furthermore, it was found that compensation is especially suitable for motivating the digital natives when contingent on performance.

As illustrated in Table 7-1 (see p. 109), the digital immigrants have the lowest desire for compensation (M=2.43). This is in contrast to the digital natives who rank compensation 2nd. However according to the t-test, no significant differences exist in the degree to which the two groups are motivated by compensation (p=.41). This implies that the digital natives and digital immigrants have the same level of preference for compensation, and are motivated equally by money and other tangible rewards.

Figure 7-3: Differences in 'compensation' (% of respondents who state always true of me/almost always true of me)



Source: Web Survey

According to Figure 7-3, 85% of the digital natives state that they are strongly motivated by the money they can earn from their work. Furthermore, 25% state that they seldom think about salary and promotions. In

contrast, only 68% of the digital immigrants state that they are strongly motivated by money. Furthermore 38% of the digital immigrants states that they seldom think about salary and promotions. These findings suggest that, similar to the digital natives, the digital immigrants are strongly motivated by the money they can earn. However, it was also found that the digital immigrants, similar to the digital natives, also are more concerned about enjoying what they do than exactly what they are paid (Digital natives=75%; Digital immigrants=56%)

The findings discussed above are also somewhat supported by the findings from the qualitative interviews. The findings from the qualitative interview suggest that compensation is a motivator to the digital immigrants. However, it was suggested that it is only a short-term motivator and will not influence motivation in the long-term. When asked about whether or not money is a good motivator, one of the interviewees answers as follows:

> "*I don't think that money is a good long-term motivator [...] I don't think that it will have any impact to give me a carrot for making an extra effort. Of course it might increase my motivation here and now, but as soon as I get the raise I will be thinking about when I get the next one. It is the pursuit of challenges that motivates me […] It is the satisfaction I get when solving a problem which is the primary motivation for me. But it is of course important that you have food on the table and stuff like that.*" (Digital Immigrant 3, appendix 9)

According to the interviewee above, money is not a good long-term motivator because it will only be motivating in the moment you receive the compensation where after it will be forgotten and the level of motivation will return to the same level as before. However, as described above, compensation is motivating the digital immigrants. It is however not the most important motivator. This is supported by the discussion in paragraph 5.2.2 (see p. 82) where it was argued that extrinsic motivation is most often perceived as a means to an end, that is, the individual merely engages in a certain behavior because of the desirable external consequences it leads to (Mullins, 2008). Thus, when the individual receives the external reward the motivation decreases again because there is no longer any desirable external reward.

That compensation is only a short-term motivator to the digital immigrants is also emphasized by one of the other interviewees. When asked about what is most important, enjoyment or compensation, the interviewee answers as follows:

> *"I think it would be nice to get a 5,000 or 10,000 kr. Bonus. But I think it will be a short-term motivator […] It would sound strange if I said that I wouldn't be happy if someone gave me 5,000 kr. because I had solved a task. Of course I'd be happy. But basically I don't think it would be a motivation for me"* (Digital Immigrant 1, appendix 7)

Similarly, compensation was here described as a short-term motivator which only motivates a person for a short period of time. However, as mentioned above, according to the motivational theory, extrinsic motivation is short-term because an individual only engage in a certain behavior because of the desirable external consequence it leads to. When this external consequence is obtained the motivation will disappear.

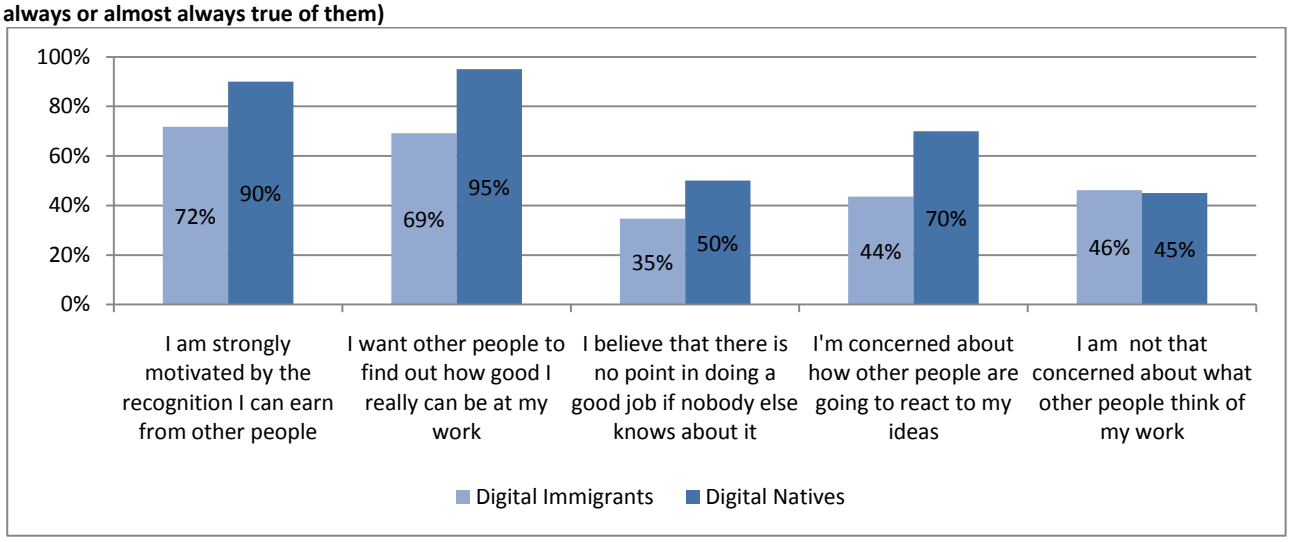
Thus, based on the findings above, it is argued that both the digital natives and digital immigrants had a preference for compensation, that is, money and other tangible rewards. Hence it was found that there were no significant differences in the attitude toward extrinsic rewards in terms of compensation. These findings imply that compensation is suitable for motivating both the digital natives and digital immigrants, why employers with advantage can use compensation plans in order to motivate both digital natives and immigrants.

7.5 OUTWARD

In paragraph 6.4 (see p. 101) it was found that the digital natives have a high preference for the recognition they can earn from others. The digital natives have been raised in a bubble of constant praise and recognition why they expect constant reinforcement and recognition. Thus, it is important to give the digital natives frequent feedback on their performance. This is both when they are doing well, and when they are doing less well.

As Figure 7-4 shows, the t-test suggests that the digital natives have a statistically significant higher preference for recognition from others (p=.09) compared to their digital immigrant counterparts. This suggests digital natives are more motivated by the recognition from others, why recognition and feedback is more important when managing digital natives. However, as will be discussed below, the digital immigrants are still motivated by recognition from others, why the difference is only in the extent to which the two groups are motivated by it.

Figure 7-4: Generational differences in preference for recognition from others (Pct of respondents who state the following is always or almost always true of them)



Source: Web survey

According to Figure 7-4, the digital immigrants are, similarly to the digital natives, also strongly motivated by the recognition they can earn from other people (digital natives=90%; digital immigrants=72%). However, as one can see in the figure above, the digital natives are more concerned about other people finding out how good they are at their job (digital natives=95%; digital immigrants=69%) and about how other people are reacting on their ideas (digital natives=70%; digital immigrants=44%). Furthermore, more digital natives believed that there was no point in doing a good job if nobody else knows about it (digital natives=50%; digital immigrants=35%). These findings indicate that digital natives have a significantly higher preference for recognition from others. However, as mentioned above, it is important to have in mind, that the findings also indicate that recognition has a influence on the digital immigrant's motivation.

These findings support the findings from the qualitative interviews. Here it was found that recognition is, also an important part of the work according tot the digital immigrants. This is similar to the digital natives. This is emphasized by one of the interviewees who describe this as follows when asked about what is motivating:

> *"I believe that the recognition you can earn is an important part of your motivation. I think that all people seek some kind of recognition from others. I also seek some kind of recognition. I think it's nice if my boss comes up to me and praise me for my performance […] I think that the search for recognition is an important part of my motivation […] However, when I am doing a task I do not think about the recognition I can earn for doing it"* (Digital immigrant 1, appendix 7)

As the interviewee suggest above, recognition is an important part of the motivation. However, digital immigrants were not motivated to perform because of the recognition they can earn. In stead they were motivated *after* completing the task, when they were praised for their performance.

The digital immigrants also have a preference for praise and are motivated when they are praised and told their efforts are appreciated. Constructive feedback is also taken well, as constructive feedback leads to consistent improvement, and consistent improvement is important to the digital immigrants. A reason why the digital immigrants place a great emphasis on recognition is because it provides a feeling of being appreciated and important. In other words, when they are recognized for their efforts and accomplishments they feel like they are needed and make a difference:

> *"It's always nice to be praised, but it's also okay to be criticized because you get some feedback on your performance. I think that it's important for everyone to be told what they do well and what they do less well. It is generally important that someone assess your work […] I think there are very few who go to work only for the salary. I actually think that people go to work because they want something else and feel that they are appreciated and important"* (Digital immigrant 2, appendix 8)

Based on the findings above, it was suggested, according to the t-tests, that the digital natives are motivated significantly more by the recognition they can earn from others. However it was found that the digital immigrants are also motivated by recognition from others, why the difference is only in the extent to which the two groups are motivated by it. These findings support the findings from the qualitative interviews, where it was found that recognition is also an important part of the digital immigrant's motivation.

7.6 SUMMARY

Above, it was examined whether digital natives are motivated differently than earlier generation. In order to answer the question whether the digital native generations really are motivated differently than earlier generations, several *t-tests* have been carried out. The purpose was to contribute to the debate about the extent to which the digital natives is motivated by similar values and processes as the digital immigrants.

The overall conclusion, which was derived from the results above, is that the differences between the digital natives and immigrants in terms of motivation are not as sweeping as often stated in popular press. Overall, no significant differences were found in terms of the digital natives and digital immigrants' orientation toward intrinsic and extrinsic rewards. However, according to the more nuanced secondary scales, it was found that the digital natives have a significant higher preference for outward, that is, the recognition from others. However, it was found that it is only the level of preference that differs between the digital natives and digital immigrants, that is, the extent to which it motivates. Thus there were no differences in kind of preference, that is, the digital natives are motivated by similar things as the digital immigrants. This implies that there were found only a few small statistical differences, but the differences were few and modest at best. Thus, it was found that there were more similarities than there were differences between the digital natives and digital immigrants.

These findings are supported by Wong *et al.* (2008) who found that there were only few meaningful generational differences in motivational drivers in the workplace for their sample. While Wong *et al.* (2008) did find some statistical significant differences; the differences are minimal and are unlikely to be interpreted as "real" differences when used in a practical context. Wong *et al*. (2008) concludes that it there are likely to be greater differences between individuals in the same generation, that there are generational differences (Wong *et al.*, 2008)

8 CONCLUSIONS AND DISCUSSION

In the following, I will present the main findings which have been presented throughout this thesis in the attempt to answer the research questions. Furthermore I will reflect on the implication of these findings and the limitations of the study. Based on these I will propose suggestions for further research within this area.

8.1 MAIN FINDINGS

For the purpose of this thesis, three research questions was created, which has guided the research. The first research question was "*Are the digital natives myth or reality?"* The second research question was *"if the digital natives exist, how are they motivated in their work?"* Finally, the third research question was *"Are the digital natives motivated differently than digital immigrants in their work?"* In the following I will summarize the findings in order to answer these three research questions and link these findings to the work of others.

8.1.1 RQ1 - ARE THE DIGITAL NATIVES MYTH OR REALITY?

The findings presented in this thesis suggest that digital natives are real. Furthermore it was found that 18-29 year olds were more likely to demonstrate digital native characteristics than older people. In contrast, people above 39 years old were more likely to demonstrate digital immigrant characteristics. However, only a minority of the 18-29 year olds demonstrated digital native characteristics, making up 15% of the sample. In other words, it is found that not all youth are digital natives. This is interesting because this suggest that young people are not as homogeneous in terms of their use of technologies, which is in stark contrast to the presumptions found in the digital native literature. Thus, contrary to the digital native literature, the findings suggest that it is likely that digital nativeness is not defined strictly by age, but by embodied practices in part defined by their age.

These findings are supported by recent research into the digital natives that demonstrate that there are significant differences within cohorts of young people in terms of their use of technologies (e.g. Kennedy *et al.,* 2008; Combes, 2009). These studies argue that the all young people are not as tech-savvy as is often portrayed. Scallon (2009) argue that a large number of the so-called digital natives are in fact what he calls digital refugees, that is, *"…people who are lost when it comes to using technology, simply because nobody sat down and showed them how to use technology or use it effectively"* (Scallon, 2009 in Combes, 2009)

8.1.2 RQ2 - How are the digital natives motivated?

Additionally the digital natives' motivational orientation was examined using the *Work Preference Inventory* (WPI). Here it was found that the digital natives perceive themselves to be more intrinsically motivated than extrinsically motivated, meaning that the digital natives are more likely to be moved to act for the fun or challenge in a task, rather than because of extrinsic rewards such as money (or other tangible rewards) or recognition from others. The findings suggest that digital natives have the highest preference for enjoyment. This suggests that digital natives have a strong preference for fun, enjoyable, and exciting work. This finding is supported by Lamm & Meeks (2009), who found that digital natives show strong positive association between workplace fun and job satisfaction, task performance, and organizational citizen behavior (Lamm & Meeks, 2009).

Additionally, the digital natives were found to be strongly motivated by compensation, especially when compensation is contingent on performance. However, it was found that compensation was only motivating if the digital natives enjoy their work.

Compensation was closely followed by Outward meaning that the digital natives also have a high preference for the recognition they can earn from others. The digital natives have been raised in a bubble of constant praise and recognition why they expect constant reinforcement and recognition. Finally it was found that the digital natives have the lowest preference for challenge. Thus, the digital natives are less motivated by the feeling of competence and mastery.

8.1.3 RQ3 - Are the digital natives motivated differently than immigrants?

Finally, it was examined whether digital natives are motivated differently than digital immigrants. The overall conclusion that was derived from the empirical evidence is that the differences between the digital natives and immigrants in terms of motivation are not as sweeping as often argued in the literature.

In order to answer the question whether the digital native generation is motivated differently than digital immigrants, several t-tests have been carried out. These suggests that the there is only a statistically significant difference in outward. It was found that the digital natives have a statistically significant higher preference for outward, meaning that the digital natives are significantly more motivated by the recognition from others. However, it was found that it is only the level of preference that differs between

the digital natives and digital immigrants, that is, the extent to which it motivates. Thus there were no differences in kind of preference, that is, the digital natives are motivated by similar things as the digital immigrants. These findings suggest that there few small statistical differences, but these differences are few and modest at best. In other words, the evidence suggests that there are more similarities than there were differences between the digital natives and digital immigrants as only 1 scale was valued higher by the digital natives.

These findings are supported by Wong *et al.* (2008) who only found a few meaningful differences in motivational drivers in the workplace for their sample. While Wong *et al.* (2008) did find some statistical significant differences the differences are minimal and are unlikely to be interpreted as "real" differences when used in a practical context. Wong *et al*. (2008) argues that it there are likely to be greater differences between individuals in the same generation, that there are generational differences (Wong *et al.*, 2008)

8.2 LIMITATIONS

As with any research, this thesis has some limitations which is important to be aware of when interpreting the findings. In the following I will reflect upon these limitations in order make the reader aware of these when interpreting the findings.

First of all, the issue of age versus generation effects limits the conclusions (Wong, 2008). As with any research on generational differences there is the methodological difficulty of establishing whether differences between generations can be attributed to 'age effects', 'cohort effects', or 'period effects' (Rhodes, 1983). For example, is the significant higher preference for recognition a characteristic of the digital native generation or a characteristic of young people in general? One way to overcome this challenge, and determine whether the age-related differences between digital natives and immigrants are due to age, cohort, or period effects, it would be interesting to adopt a longitudinal research design (Parry & Tyson, 2011). A longitudinal research design allows one to assess motivational orientation of the digital natives and digital immigrants, when the participants are at the same age or the same point in their career (Wong, 2008)

Secondly it is important to have in mind that one of the limitations of the comparative research design is that the findings are not representative for the whole population (Bryman & Bell, 2007). In relation to the findings of this thesis, this implies that the findings cannot just be applied more generally to other cases.

Thus, although it is concluded that the differences between generations are not as sweeping as stated in the digital native literature, I have to stress that the results are not generalizable to the complete population.

8.3 IMPLICATIONS

In the following I will reflect upon the implications of the findings, which have been presented in this thesis. In sum, the findings of the present thesis suggest that only a minority of young people are characterized as digital natives. This is in stark contrast to the discussion going on in the digital native literature as well as the popular literature. Here it is often argued that all young people are digital natives (e.g. Tapscott, 2009; Prensky, 2001). This has important implications for managers because the recent hype about digital natives may serve as a basis of stereotypes. As discussed in the thesis, the digital native literature tends to present a stereotypical image of young people, arguing that all young people are digital natives. These stereotypes may obscure individual differences and prevent managers from getting to know their young employees as individuals and accurately manage those (Schermerhorn *et al.*, 2008).

Furthermore, the ongoing discussion about digital natives and how to manage those, may suggest that managers and practitioners believe that differences between generations are self-evident. This is supported by Parry & Tyson (2011) who argues that consultants and practitioners show an extensive interest in this issue. Managers may therefore see "generation" as a defining characteristic, cutting across gender, nationality, and industry. However, the findings presented in this thesis suggest that these differences between generations are not self-evident. In terms of differences in work motivation only few and modest differences were found between digital natives and immigrants. This suggests that there may be just as big differences between members of the digital native generation, as there are generational differences between natives and immigrants. These findings are supported by recent research that has started to focus on generational differences in work values (e.g. Parry & Tyson, 2011; Wong 2008). According to Parry & Tyson (2011) the academic research on generational differences in work values does not provide support for the idea of generational differences in work values.

The results of the present thesis contribute to our understanding of the digital native generation. This is useful for management since these findings provide them with knowledge on how to increase the digital native employees' motivation and in the end increase the organizational performance.

8.4 SUGGESTIONS FOR FURTHER RESEARCH

The limitations, together with some other issues, lead to suggestions for further research. According to Rhodes (1983) age-related differences in work attitudes and behaviors may be caused by *stage-of-life, generational,* and *period effects* (Rhodes, 1983). Therefore, as mentioned earlier, it is argued that longitudinal research is needed to determine whether the findings in this thesis are really are due to generations or due to period or stage-of-life effects.

As mentioned above, the sample used in this survey are not representative of the Danish working population. Especially the 18-29 year olds was overrepresented. These issues raise concerns about the generalizablility of the findings of the thesis to the remaining workforce. Thus, further research is needed, where a representative sample is used, in order to determine whether these findings are representative for the remaining working population.

Finally, it was found that age alone does not adequately define if someone is a digital native or not. Thus further research is needed, in order to explore what other variables are important in determining if someone is a digital native or not. These factors could for example include experience, that is, the amount of time an individual have been on the Internet, socio-economic status, education, etc.

9 LITERATURE

Abraham, L. & Behrendt, C. 2010, *Oh my God what happened and What should I Do?* Books on Demand.

Amabile, T.M., Hil, K.G., Hennessey, B.A. & Tighe, E.M. 1995, "" The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations": Correction.", .

Amabile, T.M., Hill, K.G., Hennessey, B.A. & Tighe, E.M. 1994, "The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations.", *Journal of personality and social psychology,* vol. 66, no. 5, pp. 950.

Ambrose, M.L. & Kulik, C.T. 1999, "Old friends, new faces: Motivation research in the 1990s", *Journal of Management,* vol. 25, no. 3, pp. 231.

Arbnor, I. & Bjerke, B. 1997, *Methodology for creating business knowledge,* Sage Publications, Inc.

Arsenault, P.M. 2004, "Validating generational differences: A legitimate diversity and leadership issue", *Leadership & Organization Development Journal,* vol. 25, no. 2, pp. 124-141.

Barzilai-Nahon, K. & Mason, R.M. 2010, "How Executives Perceive the Net Generation", *Information, Communication & Society,* vol. 13, no. 3, pp. 396-418.

Bennett, S., Maton, K. & Kervin, L. 2008, "The 'digital natives' debate: A critical review of the evidence", *British journal of educational technology,* vol. 39, no. 5, pp. 775-786.

Blanche, M.T., Durrheim, K. & Painter, D. 2008, *Research in practice: Applied methods for the social sciences,* Uct Press.

Bryman, A. & Bell, E. 2007, *Business Research Methods,* 2. ed. edn, Oxford University Press, Oxford.

Burrell, G. & Morgan, G. 1979, *Sociological paradigms and organisational analysis,* Heinemann London.

Chan, A. & McLoughlin, C. 2008, "Where are we up to? A survey of Web 2.0 uptake in a regional high school", *Proc. ASCILITE*, pp. 160.

Chen, P.J. & Choi, Y. 2008, "Generational differences in work values: a study of hospitality management", *International Journal of Contemporary Hospitality Management,* vol. 20, no. 6, pp. 595-615.

Christensen, P. 2007, *Motivation i videnarbejde,* Hans Reitzel.

Coffey, A. & Atkinson, P. 1996, *Making sense of qualitative data: Complementary research strategies,* Sage Publications, Thousand Oaks, CA.

Combes, B. 2009, "Generation Y: Are they really digital natives or more like digital refugees?", .

Combes, B. 2008, "The Net Generation: Tech-savvy or lost in virtual space", *International Association of School Librarianship,* , pp. 1–17.

Combes, B. 2008, "The Net Generation: Tech-savvy or lost in virtual space", *International Association of School Librarianship,* , pp. 1–17.

Davis, G. & Pecar, B. 2010, "Business statistics using Excel", *OUP Catalogue,* .

De Charms, R. 1968, *Personal causation: The internal affective determinants of behavior,* Academic Press New York, New York.

Dubois, A. & Gadde, L.E. 2002, "Systematic combining: an abductive approach to case research", *Journal of business research,* vol. 55, no. 7, pp. 553-560.

Dulin, L. 2008, "Leadership preferences of a generation Y cohort: A mixed-methods investigation", *Journal of Leadership Studies,* vol. 2, no. 1, pp. 43-59.

Eisenhardt, K.M. 1989, "Building theories from case study research", *The academy of management review,* vol. 14, no. 4, pp. 532-550.

Eisenhardt, K.M. & Graebner, M.E. 2007, "Theory building from cases: Opportunities and challenges", *The Academy of Management Journal ARCHIVE,* vol. 50, no. 1, pp. 25-32.

Elo, S. & Kyngäs, H. 2008, "The qualitative content analysis process", *Journal of advanced nursing,* vol. 62, no. 1, pp. 107-115.

Eneroth, B. 1984, *Hur mäter man "vackert"?: Grundbog i kvalitativ metod,* 5. ed. edn, Natur och Kultur, Stockholm.

Eyerman, R. & Turner, B.S. 1998, "Outline of a Theory of Generations", *European Journal of Social Theory,* vol. 1, no. 1, pp. 91.

Eyerman, R. & Turner, B.S. 1998, "Outline of a theory of generations", *European Journal of Social Theory,* vol. 1, no. 1, pp. 91.

Gagné, M. & Deci, E.L. 2005, "Self - determination theory and work motivation", *Journal of Organizational Behavior,* vol. 26, no. 4, pp. 331-362.

Gagné, M. & Deci, E.L. 2005, "Self - determination theory and work motivation", *Journal of Organizational Behavior,* vol. 26, no. 4, pp. 331-362.

Giancola, F. 2006, "The generation gap: more myth than reality", *Human Resource Planning,* vol. 29, no. 4, pp. 32.

Giorgi, A. 1975, "An application of phenomenological method in psychology", *Duquesne studies in phenomenological psychology,* vol. 2, pp. 82-103.

Graneheim, U.H. & Lundman, B. 2004, "Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness", *Nurse education today,* vol. 24, no. 2, pp. 105-112.

Hargittai, E. 2010, "Digital Na (t) ives? Variation in Internet Skills and Uses among Members of the "Net Generation"*", *Sociological Inquiry,* vol. 80, no. 1, pp. 92-113.

Helsper, E.J. & Eynon, R. 2010, "Digital natives: where is the evidence?", *British Educational Research Journal,* vol. 36, no. 3, pp. 503-520.

Hershatter, A. & Epstein, M. 2010, "Millennials and the world of work: An organization and management perspective", *Journal of Business and Psychology,* vol. 25, no. 2, pp. 211-223.

Hofstede, G.H. 2005, *Cultures and organizations: software of the mind,* 2. ed. edn, McGraw-Hill.

Hsieh, H.F. & Shannon, S.E. 2005, "Three approaches to qualitative content analysis", *Qualitative health research,* vol. 15, no. 9, pp. 1277.

Jelassi, T. & Enders, A. 2008, "Strategies for E-business: concepts and cases", .

Jenkins, H. 2006, *Convergence culture: Where old and new media collide,* NYU Press.

Johnson, M. & Johnson, L. 2010, *Generations, Inc : from boomers to linksters--managing the friction between generations at work*
, AMACOM, New York.

Jones, C., Ramanau, R., Cross, S. & Healing, G. 2010, "Net generation or Digital Natives: Is there a distinct new generation entering university?", *Computers & Education,* vol. 54, no. 3, pp. 722-732.

Karl, K., Peluchette, J., Hall-Indiana, L. & Harland, L. 2005, "Attitudes toward workplace fun: a three sector comparison", *Journal of Leadership & Organizational Studies,* vol. 12, no. 2, pp. 1.

Kennedy, G., Dalgarno, B., Bennett, S., Judd, T., Gray, K. & Chang, R. 2008, "Immigrants and natives: Investigating differences between staff and students' use of technology", , pp. 484–492.

Kennedy, G., Judd, T., Dalgarno, B. & Waycott, J. 2010, "Beyond natives and immigrants: exploring types of net generation students", *Journal of Computer Assisted Learning,* vol. 26, no. 5, pp. 332-343.

Kennedy, G.E., Judd, T.S., Churchward, A., Gray, K. & Krause, K.L. 2008, "First year students' experiences with technology: Are they really digital natives", *Australasian Journal of Educational Technology,* vol. 24, no. 1, pp. 108-122.

Kuada, J. 2008, "Research Methods in Social Science: A Student Project Guide", *Centre for International Business, Aalborg University,* .

Kupperschmidt, B.R. 2000, "Multigeneration employees: Strategies for effective management", *The health care manager,* vol. 19, no. 1, pp. 65.

Kvale, S. & Brinkmann, S. 2008, *Interview: Introduktion til et håndværk,* 15. ed. edn, Hans Reitzel.

Lamm, E. & Meeks, M.D. 2009, "Workplace fun: the moderating effects of generational differences", *Employee Relations,* vol. 31, no. 6, pp. 613-631.

Landy, F.J. & Conte, J. M. 2010, *Work in the 21st Century: An introduction to industrial and organizational psychology,* Wiley-Blackwell, Hoboken, N.J.

Latham, G.P. & Pinder, C.C. 2005, "Work motivation theory and research at the dawn of the twenty-first century", *Annu.Rev.Psychol.,* vol. 56, pp. 485-516.

Lincoln, Y.S. & Guba, E.G. 1985, *Naturalistic inquiry,* Sage Publications, Inc.

Livingstone, S., Bober, M. & Helsper, E.J. 2005, "Active participation or just more information?", *Information, Communication & Society,* vol. 8, no. 3, pp. 287-314.

Loo, R. 2001, "Motivational Orientations toward Work: An Evaluation of the Work Preference Inventory (Student Form).", *Measurement and Evaluation in Counseling and Development,* vol. 33, no. 4, pp. 222-233.

Macky, K., Gardner, D. & Forsyth, S. 2008, "Generational differences at work: Introduction and overview", *Journal of Managerial Psychology,* vol. 23, no. 8, pp. 857-861.

Mannheim, K. 1972, *Essays on the sociology of knowledge,* 5. ed. edn, Routledge & Kegan Paul, London.

Mannheim, K. 1970, "The problem of generations", *Psychoanalytic review,* vol. 57, no. 3, pp. 378-404.

Margaryan, A. & Littlejohn, A. 2008, "Are digital natives a myth or reality?: Students' use of technologies for learning", .

McShane, S. & Von Glinow, M. 2003, *Organizational Behavior: Emerging Realities for the Workplace Revolution,* 2. ed. edn, McGraw-Hill/Irwin, Boston.

Meredith, G.E., Schewe, C.D. & Karlovich, J. 2002, *Defining markets, defining moments: America's 7 generational cohorts, their shared experiences, and why businesses should care,* Wiley.

Mullins, L. 2007, *Management and organisational behaviour,* 8. ed. edn, Prentice Hall, Harlow.

Oblinger, D.G. & Oblinger, J.L. 2005, "Educating the net generation"

Palfrey, J. & Gasser, U. 2010, *Born digital: Understanding the first generation of digital natives,* Basic Books.

Parry, E. & Urwin, P. 2011, "Generational Differences in Work Values: A Review of Theory and Evidence", *International Journal of Management Reviews,* .

Perez, C. 2002, *Technological revolutions and financial capital: The dynamics of bubbles and golden ages,* Edward Elgar Publishing.

Pinder, C.C. 1998, *Work motivation in organizational behavior,* Prentice Hall, Upper Saddle River, N.J.

Prensky, M. 2009, "Listen to the natives", *Kaleidoscope: Contemporary and Classic Readings in Education,* , pp. 306.

Prensky, M. 2009, "Listen to the natives", *Kaleidoscope: Contemporary and Classic Readings in Education,* , pp. 306.

Prensky, M. 2004b, "What can you learn from a cell phone?–Almost anything", *Journal of Online Education,* vol. 1, no. 5.

Prensky, M. 2004a, "The emerging online life of the digital native", *Consultado em,* .

Prensky, M. 2001, "Digital natives, digital immigrants Part 1", *On the horizon,* vol. 9, no. 5, pp. 1-6.

Rettie, R. 2002, "Net generation culture", *Journal of Electronic Commerce Research,* vol. 3, no. 4, pp. 254-264.

Rhodes, S.R. 1983, "Age-related differences in work attitudes and behavior: A review and conceptual analysis.", *Psychological bulletin,* vol. 93, no. 2, pp. 328.

Ritzer, G. 1996, *Sociological Theory,* McGraw-Hill, Singapore.

Robbins, S. 2004, *Essentials of Organizational Behavior,* 8th ed. edn, Pearson/Prentice Hall.

Robbins, S. & DeCenzo, D. 2005, *Fundamentals of management: essential concepts and applications,* 5. ed. edn, Prentice Hall, Upper Saddle River, N.J.

Ryan, R. & Deci, E. 1985, *Intrinsic motivation and Self-determination in Human Behavior,* Springer.

Ryan, R.M. & Deci, E.L. 2000, "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions* 1", *Contemporary educational psychology,* vol. 25, no. 1, pp. 54-67.

Sandelowski, M. 2000, "Focus on Research Methods-Whatever Happened to Qualitative Description?", *Research in Nursing and Health,* vol. 23, no. 4, pp. 334-340.

Schermerhorn, J. & Hunt, J. & Osborn, R. 2008, *Organizational Behavior,* 10th ed. edn, John Wiley & Sons, Chichester.

Smola, K. & Sutton, C.D. 2002, "Generational differences: Revisiting generational work values for the new millennium", *Journal of Organizational Behavior,* vol. 23, no. 4, pp. 363-382.

Stacey, R.D. 2010, *Strategic Management and Organisational Dynamics: The Challenge of Complexity (to Ways of Thinking about Organisations),* 6th edn, Pearson Education.

Statistics Denmark 2009, "Befolkningens brug af internet 2009", .

Stoerger, S. 2009, "The digital melting pot: Bridging the digital native-immigrant divide", *First Monday,* vol. 14, no. 7, pp. 6.

Strauss, W. & Howe, N. 2000, *Millennials rising: The next great generation,* First Edition edn, Vintage.

Tapscott, D. 2009, *Grown up digital: How the net generation is changing your world,* McGraw-Hill Professional.

Tulgan, B. & Martin, C.A. 2001, *Managing Generation Y: Global citizens born in the late seventies and early eighties,* Human Resource Development Pr.

Twenge, J.M., Campbell, S.M., Hoffman, B.J. & Lance, C.E. 2010, "Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing", *Journal of Management,* vol. 36, no. 5, pp. 1117.

Tyson, S. & Parry, E. 2011: *Managing an Age Diverse Workforce,* 1. Ed., Palgrave Macmillan.

Wong, M., Gardiner, E., Lang, W. & Coulon, L. 2008, "Generational differences in personality and motivation: Do they exist and what are the implications for the workplace?", *Journal of Managerial Psychology,* vol. 23, no. 8, pp. 878-890.

Zemke, R. & Raines, C. & Filipczak, B. 2000, *Generations at Work: Managing the Clash of Veterans, Boomers, Xers, and Nexters in Your Workplace,* 1st Edition edn, AMACOM.

Zimic, S. 2010, "Opening the Box: Exploring the presumptions about the 'Net Generation'", *Unpublished PhD,*