Is this a threat to my individual self-perception, or an opportunity?

A qualitative study unfolding the effects of generative AI chatbots on students' individual self-perception in the process of revising and updating their "selves"

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Abstract

For long, scholars have been interested in the concept of identity and its continuous development, conceptualized as identity work – emphasizing its ongoing process rather than a fixed state. As a subject to change, our identities are seen to be influenced by various factors, playing a significant role in shaping our self-perceptions and determining who we are, as well as who we aspire to become. Among these influencing factors are technological innovations, which bring about shifts in identities and roles. Generative Artificial Intelligence (GenAI) is currently gaining more attention from management scholars but is lagging behind in the intersection of identity work. In this thesis, we investigate how individuals' process of identity work is affected by the use of GenAI. While the word "generative" in this thesis sheds light on the textual content, it brings us to the discussion of the academic field, but leaves us with unanswered questions about how it shapes and impacts students' self-perceptions and identities. As higher education institutions (HEIs) prepare students for future decision-making positions, it is crucial to comprehend the implications of new technologies on students' self-perception. This thesis seeks to add to existing research by exploring the effects of GenAI chatbots on students' self-perceptions in the process of revising and updating their identities. The method of choice for this purpose was a qualitative approach, where data was collected through semi-structured interviews with 61 students studying business and economics disciplines, representing three prominent HEIs in Stockholm, Sweden. In addition, 8 principals, professors, and experts in the field, from the three institutions, have been interviewed in order to gain deeper insight into the students' academic contexts – to enhance the authors' understanding of the central research question. The empirical results show that students are affected by their usage of GenAI chatbots in the process of revising and updating their identities; however, how they are affected, and what the consequences are, differ. Using chatbots is seen to engender both tensions and cohesions between their multiple selves, giving rise to either an identity threat or an opportunity, as well as spillover effects. Further, the lack of clear guidelines from higher education institutions puts students in an ambiguous situation, prompting the process of revising and updating their "selves" in order to make sense of themselves and what they stand for in this new era of academic context. A theoretical framework is developed that outlines three distinct "selves" prevalent in the context of this study; the Achievement-Oriented Self, the Communal-Oriented Self, and the Moral-Oriented Self, all with a unique set of identity content. The study makes contributions to existing literature by providing a novel understanding of the intersection between AI and identity work, and how different identities interact with one another. By examining how this impacts students' self-perceptions and identities, we provide valuable insights to practitioners within the field.

Keywords: Self-Perception, Identities, Identity Work, Identity Conflicts, Identity Opportunities, Identity Threats, Generative Artificial Intelligence, Chatbots, Higher Education

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Definitions

Term	The Definition Used in This Thesis
Self-Concept	A complex construct of affective-cognitive structures encompassing all knowledge an individual has about oneself, developed from an individual's past experiences in a particular domain (Markus & Nurius, 1986)
Self-Perception	How individuals view their own attitudes, emotions and other internal states by inferring them from observations of their own behavior and the circumstances in which this behavior occurs (Bem, 1972)
Identity	Individuals' subjective interpretations of who they are, based on their socio-demographic characteristics, roles, personal attributes, and group memberships, guiding behavior and perceptions. An ongoing process rather than a static concept. (Caza et al., 2018; Gecas, 1982)
Selves	The term "selves" will be used interchangeably with "identity" in this thesis
Identity Content	Encompasses the values, meanings, and enactments linked to an identity, which often changes as a result of identity work (Petriglieri, 2011)
Identity Conflict	A conflict between the values, beliefs, norms, and demands inherent in individual and group identities (Ashforth & Mael, 1989)
Identity Threat	An experience appraised as indicating potential harm to the value, meanings, or enactment of an identity (Petriglieri, 2011)
Identity Opportunity	An experience appraised as indicating potential for growth to the value, meanings, or enactment of an identity (Bataille & Vough, 2022)
Identity Work	The range of activities individuals engage in for forming, repairing, maintaining, strengthening or revising their self-meanings (Alvesson & Willmott, 2002)
Ambiguous Situation	An event open to more than one interpretation, where correct behavior is unclear (Carlsmith & Darley, 2008)
Ambivalence	The existence of simultaneous or rapidly interchangeable positive and negative feelings toward the same object or activity (Conner & Sparks, 2002; Asforth et al., 2014)
Generative AI	Deep learning model that is able to create text, images, and other content based on training data (Berg et al., 2023)
Language Models	Deep learning models that are designed to comprehend and produce natural language (Shen et al., 2023)
Chatbots	Chatbots provide information and perform tasks through interactive interfaces, promoting communication and learning. They map the best possible response in the system and are widely used for chatting and executing tasks (Hwang & Chang, 2021; Dwivedi et al., 2023). This study primarily focuses on ChatGPT but also includes other GenAI chatbots mentioned by students.
ChatGPT	ChatGPT (Chat Generative Pre-Trained Transformer) is a language model trained on a vast internet dataset, capable of performing various natural language tasks, specifically textual content (Kasneci et al., 2023; Dwvedi et al., 2023). Launched 30 November 2022, by OpenAI, and serves as a student-driven education technology according to Dai et al. (2023).

Abbreviations

Abbreviation	Definition
GenAI	Generative Artificial Intelligence
GPT	Generative Pre-trained Transformer
HEI	Higher Educational Institution
KTH	Royal Institute of Technology
SSE	Stockholm School of Economics
SU	Stockholm University

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"Before, I knew I was a good writer, but now, I question my own abilities as I have an urge to always use AI. I compare myself with it, like I could never produce this myself. It is making me feel worse about myself."
— Student 17

"I have no finance degree, but still, I somehow have a part-time job in finance. Thanks to the access to ChatGPT, I can now pursue a job I have previously dreamed about. It is almost insane, and I am definitely smarter together with ChatGPT."
— Student 42

1. Introduction

1.1 Background

The lingering question of who one is, and whom to become, serves as an ongoing and underlying navigation process for students in higher education. The destination may not be a fixed point, but an evolving understanding of oneself in relation to one's career aspirations and personal traits. Scholars have long delved into the complexities of identity work, the act of revising and updating one's identity, highlighting its ongoing process (Sveningsson & Alvesson, 2003). While at first glance, it is easy to assume one's identity is a fixed state, scholars suggest that identity is constantly evolving. Thus, it is more a question of becoming rather than simply being (Ashforth & Mael, 1989; Caza et al., 2018). As identity is a subject of perpetual change, influenced by various factors, it is particularly susceptible to shifts brought about by technological innovations (Craig et al., 2019).

In this journey of self-discovery, external influences play a significant role, and the introduction of innovative technologies, particularly generative artificial intelligence (GenAI), adds a fascinating twist. GenAI is a category of AI technologies able to create text, images, and other content based on training data (Berg et al., 2023). GenAI is gaining attention from management and organization scholars, but has been slower to integrate into the intersection of identity work, specifically in understanding how individuals shape their self-perception within the context of their occupations. While the term 'generative' sheds light on textual content in academic discussions, it leaves unanswered questions about its impact on students' self-perceptions and identities. Notably, an individual can possess multiple identities, or "selves", making up the content of the self-concept (Markus & Nurius, 1986; Caza et al., 2018).

GenAI is not only generating content; it is shaping how we see ourselves and our capabilities – like a sudden gust of wind that sweeps through the garden, rearranging the flowers and plants. This tech, with its generative powers, brings both threats and opportunities to our identities, acting like a swift wind that could either shake up our self-perception or push us toward achieving our long-held dreams, as seen in the quotes on the preceding page. As students dive into GenAI chatbots in academics (Dai et al., 2023), there might be a need to reassess personal skills and career goals, prompting us to closely examine the effects of this rapid integration. The emergence of these new tools raises questions about what is considered right or wrong, and how these tools can be utilized in conjunction with academic pursuits. The ambivalence surrounding what is right and wrong, coupled with the uncertainty of how these tools fit into the *meaning* of being a student, adds to the confusion, putting students in an ambiguous situation. When faced with ambiguous situations, scholars have established that identity work intensifies, as it functions as a navigational tool for individuals, akin to grappling with the question of how to make sense of oneself (Sveningsson & Alvesson, 2003; Ashforth & Mael, 1989). Yet, in the absence of clear answers within the ambiguous realm of GenAI usage in an academic context, it becomes an ongoing cycle of ambivalence.

Despite the meteoric rise of GenAI, we know very little about how individuals use, understand, or avoid GenAI in the broader process of identity work. As such tools not only augment

individual abilities but also serve as a de facto replacement (Shrestha et al., 2019), it is important to understand how individuals come to understand GenAI as either a tool or replacement in the process of shaping themselves. The contrast in how individuals perceive it—whether as a threat or an opportunity—affects the extent of self-doubt and, subsequently, self-perception (Petriglieri, 2011). These discrepancies risk creating tensions in the environment, where some students will take a leap forward while others will take a step back. In this underexplored area, the question arises regarding how the identity work of individuals is influenced by the rapid integration of GenAI chatbots in the academic context—a question that this thesis aims to address.

1.2 Purpose and Expected Contribution

The aim of this thesis is to investigate the influence of GenAI chatbots on students as they engage in the ongoing process of revising and updating their "selves". The impact of GenAI chatbots will significantly shape the lives and futures of students, making them one of the most relevant stakeholders to examine (Dai et al., 2023). Specifically, the objective is to determine whether these chatbots pose a risk to students' identities by potentially disrupting their established norms or, conversely, if they present opportunities for identity development. Given that these tools possess the dual capacity to either enhance personal capabilities or, in some instances, replace certain human skills, it becomes crucial to comprehend how individuals perceive and integrate GenAI chatbots into their self-shaping endeavors.

Despite the widespread use of GenAI chatbots in education, their impact on identity work remains inadequately understood, contrasting with the extensive research on various other factors influencing this process (Caza et al., 2018; Ashforth & Schnioff, 2016; Bataille & Vough, 2022). The primary goal is to contribute to the body of research on identity work by investigating the recent introduction of these tools within an educational context. It is essential to underscore that if GenAI chatbots are perceived as a threat, there is a potential for decreased performance, lowered self-esteem, and a diminished inclination to assume leadership roles (Petriglieri, 2011). Further, in-depth research on new forms of human-AI collaboration, particularly concerning the implications on individuals' attitudes and behaviors, is requested. This includes an examination of the psychological, emotional, and social aspects, as advocated by Mirabae et al. (2022). Therefore, a comprehensive understanding of this phenomenon is critical, offering valuable insights for both practitioners and scholars in the field.

1.3 Research Question

Motivated by the above reasoning, the following research question has been formulated:

How are students' self-perceptions affected by GenAI in the process of revising and updating their "selves"?

1.4 Delimitations

The study has been narrowed down to concentrate on students enrolled in three of the top higher educational institutions (HEIs) in Stockholm, Sweden, with a particular focus on business and economics disciplines. The choice of these disciplines is motivated by being the common denominator among the chosen HEIs with similar academic agendas and practices, in order to create a comparable sample. The authors' inclusion in the research context provides a deeper

understanding and a more comprehensive outlook on the topic at hand. Further, it should be noted that this study is delimited to investigate the impact of GenAI usage – specifically the generation of textual content – on the processes of identity work. As such, the study does not delve into the broader use of chatbots in an educational context.

2. Theory

The upcoming chapter encompasses (1) a comprehensive review of existing literature deemed relevant in order to answer the research question, followed by (2) a research synthesis and the identified research gap, and finally, (3) a presentation of the developed framework for this thesis.

2.1 Literature Review

2.1.1 Identities and the Self-Concept

To understand how students' self-perceptions are affected by GenAI in the process of revising and updating their "selves", it is crucial to first understand and define the notion of *identities* and the related *self-concept*. The research on identities has been extensively explored in organizational studies, taking standpoints on various levels such as professional, organizational, social, and individual levels (Sveningsson & Alvesson, 2003). The different approaches to the understanding of identity, however, emphasize different aspects of identities, depending on the theoretical lens applied and assumptions about the nature of self and identity (Alvesson et al., 2008). The four dominant perspectives in identity research are Identity Theory, Social Identity Theory, Critical Theory, and Narrative Theory (Caza et al., 2018). The differences between the theoretical lenses and type of identities in focus are visualized in Figure 1. However, in an organizational context, such as higher educational institutions (HEI), individuals may exhibit multiple identities across levels and types of identities, impacting their feelings, thoughts, and actions (Caza et al., 2018; van Knippenberg et al., 2004). Therefore, various perspectives must be considered to understand *how* GenAI chatbots influence individuals while revising and updating their "selves." This aligns with Brown's (2021) argument that identity approaches cannot be fully separated when studying identities within the organizational context. Further, to understand the dynamics that may occur in the process of revising and updating the "selves", this thesis will draw upon the Identity Control Theory (ICT) by Burke (2007), which focuses on the internal dynamics between the identity and the present behavior – central to the question and subjective meaning of what it *means* to be a student.

Theoretical Lense	Type of Identities	Description	Representative Article
Identity Theory	Role Identities	Identity theory is concerned with self and social perceptions and experiences of role identities	Stryker & Serpe (1982)
Social Identity Theory	Collective Identities	Social identity theory emphasizes when and how individuals will define themselves as part of a larger group	Tajfel & Turner (1979)
Critical Theory	Collective Identities	Critical theory focus on the strong role played by collectives in regulating and controlling individuals' identities	Foucault (1980)
Narrative Theory	Personal Identities	Narrative theory explains how people make sense of their experiences by constructing their historical, personal story, that is told internally and through interactions with others	Bruner (1991)

Figure 1. Theoretical Lenses on Identities

Identity refers to the subjective meanings and understandings that individuals assign to themselves based on various factors such as socio-demographic characteristics, personal attributes, roles, and group membership (Ashforth & Mael, 1989; Caza et al., 2018; Bataille & Vough, 2022). This encompasses an individual's unique perspectives and interpretations of themselves, answering questions about who they are and how to behave in different contexts (Caza et al., 2018; McLean & Pasupathi, 2012). How individuals view and perceive themselves in a specific situation will influence their emotions, thoughts, and behaviors (van Knippenberg et al., 2004).

People can have multiple identities, such as being a mother, teacher, daughter, and activist (Bataille & Vough, 2022), all of these with different dimensions (Caza et al., 2018). These multiple identities make up the content of a person's self-concept (Caza et al., 2018). Although individuals may possess different identities, one can only hold a single self-concept (Ibarra, 1999; Stets & Burke, 2000). The self-concept is a complex construct that encompasses *all* knowledge one has about oneself. It is constructed through a system of affective-cognitive structures called "schemas," which are creatively and selectively developed from an individual's past experiences in a particular domain (Markus & Nurius, 1986). Thus, the self-concept comprises various dimensions, made up of multiple identities, often linked to specific social contexts (van Knippenberg et al., 2004; Caza et al., 2018).

As humans, we assign subjective meanings and understandings to ourselves, creating a sense of identity (Burke, 2007) however, these meanings are constantly evolving and subject to change (Ashforth & Schinoff, 2016). Therefore, our identities are dynamic and susceptible to external influences (Burke, 1991; Alvesson & Willmott, 2002; Gioia & Patvardhan, 2012; Caza et al., 2018). This makes the construction of our identity a continuous process, conceptualized as *identity work* (Ashforth & Mael, 1989; Sveningsson & Alvesson, 2003; Horton et al., 2014; Boudreau et al., 2014). This dynamic conceptualization of identity raises the question of not only what, but *how*, factors contribute to creating or changing one's identity (Boudreau et al., 2014; Boudreau & Robey, 2005). Given the complexity of this process, further research is necessary to fully understand the complex interplay of different factors that contribute to the development of an individual's identity, and how they make sense of themselves, in specific contexts.

This literature review explores various aspects of identity relevant to the study's context. It initially focuses on students in the process of becoming young professionals and the performance-based identities among them. These aspects are motivated by the three HEIs involved in this study, as they shape students' career paths and impact how they perceive performance and expectations (Thunborg et al., 2016). The review also delves into how students' social identity is shaped by their interactions with peers within the organizational environment. Finally, personal identity, which is connected to students' values, norms, and beliefs, is examined, as well as how they influence their self-perception.

2.1.1.1 Performance-Based Identities Among Students

Thunborg et al. (2016) have shown that the idea of becoming *someone* motivates students to pursue higher education. In understanding who to become, in relation to who one is and how one acts (Anteby et al., 2016; Brown, 2021), organizations set the stage for identity construction by influencing and inspiring how individuals view themselves (Ashforth & Schinoff, 2016).

However, defining one's self-concept can be challenging for young people due to various factors, such as changing circumstances, diverse environments, and multiple relationships. Questioning and revisiting one's identities is a present theme for students navigating their way through the context of higher education (Brown, 2015; Modestino et al., 2019; Brown & Coupland, 2015; Alvesson et al., 2008) as they construct their current and future identities (Levinson, 1978).

The self-awareness of one's personal values and goals plays a crucial role in shaping their expectations for success and the importance one assigns to specific tasks (Eccles, 2009). In higher education, success is often defined by academic performance and emphasized as highly important (Thunborg et al., 2016). As a result, many tend to identify with their level of performance (Walker & Caprar, 2020). When an individual's understanding of their performance goes beyond personal meanings and strongly impacts their identity, it is known as performance-based identity. This self-definition is constructed by individuals themselves, based on their perceived performance. To become aware of their performance, individuals rely on external cues that indicate their success or failure, which either validate or invalidate their performance-based identities (Walker & Caprar, 2020; Deaux, 1993; Turner, 1991). In higher education, success is often evaluated based on grades, degrees, and qualitative feedback from professors and peers. Depending on how one's performance is evaluated, it can impact self-esteem and lead to negative emotions (Walker & Caprar, 2020). Self-esteem is based on one's belief in their ability to achieve their potential. An individual's accomplishments often play a role in this assessment and can motivate them to persevere through challenges (Crocker & Park, 2004). People who place a high value on their performance are more prone to develop a performance-based identity centered around their achievements. However, if an individual's accomplishments and performance-based identity are not acknowledged by their surroundings, it can pose a threat to their identity (Walker & Caprar, 2020).

A performance-based identity can create a sense of belonging while also distinguishing an individual from one's peers (Walker & Caprar, 2020). As a result, the drive to perform well can stem from both the desire to be a part of a group and the need to feel unique. This further strengthens the argument that different levels of identity can not be fully separated when explored in an organizational context (Brown, 2021), such as the HEI.

2.1.1.2 Social & Organizational Influences in Higher Education

An organization's identity can influence an individual's performance by acting as an external cue and trigger (Ashforth & Mael, 1989; Walker & Caprar, 2020). Being a part of a group or organization serves as the foundation for shaping oneself, as noted by Walker and Caprar (2020) and Brewer and Gardner (1996). However, in contrast to the argument put forth by Walker and Caprar (2020) that organizational identity remains relatively stable, we contend that this is not necessarily the case within an academic context. Drawing on Albert and Whetten (1985), the identity of an organization may not be limited to the academic institution itself; it also involves the contribution of peers, corporate partners, and student associations in this study, making it a dynamic endeavor. This leads to the concept of "collective identity," where identities are influenced by the collective, according to the Social Identity Theory (Caza et al., 2018).

The notion of social identity can be examined on two levels: one stemming from interpersonal and collective relationships and the other from impersonal collectives. This thesis will concentrate on the former, specifically the connections between in-group members. While "student" might fall into the latter category, this thesis will focus on the smaller networks of subgroups within the in-group and dyadic conversations, where interpersonal social comparison occurs (Brewer & Gardner, 1996; Tajfel & Turner, 1979). It is important not only to establish one's identity to oneself but also to demonstrate it to others, to feel a sense of belonging (Baumeister & Leary, 1995). As per Brewer and Gardner (1996), individuals tend to imitate the behaviors they observe within a group to share values and norms, which can also be seen in Tajfel and Turner's (1979) work. This reference group creates a collective self and serves as a frame of reference for self-evaluation (Brewer & Gardner, 1996; Suls & Wills, 1991). However, individuals may encounter obstacles when balancing their authentic selves with the group's expectations and norms (Ibarra, 2015).

2.1.1.3 Individuals' Values, Norms and Beliefs

Moral traits are seen as essential components of our identities, selves, and souls, shaping our behaviors in different situations (Strohiminger & Nichols, 2014; Stets & Carter, 2011). According to Eriksson (1964), identity stems from the core of our being and involves aligning our actions with our moral and authentic selves. Similarly, Hart et al. (1998) emphasize the significance of remaining true to oneself and following personal beliefs and values to achieve a sense of authenticity. Personal meanings serve as guiding principles for our behavior, and failing to align our actions with these meanings can result in negative emotions (Stets & Carter, 2011; Burke, 2007). Our moral identities are diverse and influenced by various factors, including our beliefs, attitudes, and actions. These factors help regulate our behaviors and enable us to engage in complex moral thinking that can ultimately impact our actions (Aquino & Reed, 2002).

Examining the self, Pelham (1993) highlights the importance of the personal self as the focus in which the self-concept, as discussed earlier, is differentiated and individualized. This represents the unique qualities and characteristics of an individual. It is essential for individuals to have a situated identity, which Asforth and Schinoff (2016) describe as making sense of who they are in a local context. They do this by linking the past and present with a desired future identity, consequently creating their own narrative story. The struggle to find out who to become can also be seen in conjunction with the notion of possible selves, as "narrating the self changes the self" (Ashforth & Schinoff, 2016; Ibarra & Barbulescu, 2010). This is as students explore possible selves in relation to what they aspire to become in the future, seeking answers to the question: *Can I really be this?* Further, adding to the essential discussion of personal self (Ibarra, 1999; Ashforth & Mael, 1989), we believe self-worth is essential to consider as well. An individual's self-worth is determined by how they evaluate their qualities and traits (Pelham & Swann, 1989). One seeks to understand one's level of competence and strengths compared to their importance, as well as contrasting their current self-perception to their ideal self-perception. Self-worth is valued based on how it can be linked to the goals and values the individual holds. If self-view is linked to negative self-perceptions, the individual's self-esteem is likely to suffer as a result (Pelham & Swann, 1989; Pelham, 1993). Therefore, it is crucial to understand not only who one is, but also its relation to self-worth, as it can further impact and guide behavior.

2.1.2 Identity Work

To fully comprehend how GenAI chatbots affect individuals as they revise and update their "selves", it is essential to understand when, why, and how identity work occurs (Caza et al., 2018). The concept of identity work pertains to the process and range of activities individuals undertake to understand themselves in their context of occupations (Caza et al., 2018; Ashforth & Schinoff, 2016; Ashforth & Mael, 1989; Löwstedt & Räisänen, 2014). Prior research in this domain has determined that identity work is an ongoing process (Caza et al., 2018), and that individuals actively work on their identities to shape, maintain, reinforce, and redefine their role, collective, and personal self-perceptions (Alvesson & Willmott, 2002; Bataille & Vough, 2022). In organizational settings, including HEIs, people often adopt multiple identities. It is important to note that different kinds of identities influence the *when*, *why*, and *how* individuals engage in identity work. Stryker and Burke (2000), and Caza et al. (2018), highlight the three distinct categories of identities in organizational contexts – role, collective, and personal identities, upon which identity work occurs. As students are part of the organizational setting in HEIs, all three types of identities can be relevant within the context of higher education as well.

First, *role identities* are the positions individuals take in relation to others, which are essential to how they define themselves (Brewer & Gardner, 1996). Research has explored how people establish legitimacy in their roles and present themselves as professionals by reinforcing their expertise claims and meeting social expectations (Grey, 1998). When the external environment changes, individuals may face new demands on their roles (Boudreau et al., 2014). In such situations, individuals tend to experiment with provisional selves (Ibarra, 1999) to find temporary solutions that bridge the gap between their current capacity and self-conceptions, while also considering the attitudes and behaviors expected in the new role. This experimentation helps individuals adapt and succeed in their roles in the face of changing circumstances. Changes in stereotypes can have a significant impact, not only on individual role identities but also on collective identity (Boudreau et al., 2014). This highlights the idea that an individual not only takes on a unique role but is also an integral part of a larger collective that shapes one's identity. It is essential to note that identity construction does not occur in a vacuum; holding identities valued by others can be as important as holding identities valued by oneself (Baumeister & Tice, 1986; Tsui & Ashford, 1994).

Second, people often form *collective identities* by identifying themselves as part of a group and connecting their self-worth with the organizations they belong (Tajfel & Turner, 1979; Ashforth & Mael, 1989). This identification is referred to as organizational identification, and it happens when individuals internalize the cognitive structures of what the organization stands for and its purpose (Brown, 2017; Albert & Whetten, 1985; Albert et al., 2000). This identification may extend to the organization as a whole (Sveningsson & Alvesson, 2003; Alvesson & Robertson, 2006; Boudreau et al., 2014) or a smaller group within it, and the interplay of both is what gives meaning to the subject (Terrion & Ashforth, 2002; Ashforth et al., 2008; Asforth and Mael, 1989). Additionally, individuals often seek meaning in their affiliation with organizations, balancing the desire to belong with the need to stand out (Brewer, 1991) However, understanding the "me" in the "we" is challenging due to the dynamic environment and relationships (Kreiner et al., 2006).

Third, the formation of one's *personal identity* is heavily influenced by one's unique experiences, qualities, and life story, which are considered the foundational aspects of one's identity (Caza et al., 2018). Demographic characteristics, such as gender, can play a significant role in the process of defining one's personal self-meaning within an organization. Despite being associated with broader collective groups, demographic identities can be used to help individuals differentiate themselves within a work context, thereby triggering identity work. As opposed to role identity, which was previously discussed and highlighted how individuals can experiment with provisional selves to bridge gaps between their current and desired future stage (Ibarra, 1999), personal identities entail the use of possible selves to encompass one's envisioned future self, including both aspirations and fears (Markus & Nurius, 1986).

To conclude, identity work is a process that often occurs unconsciously, shaped by an individual's social experiences and the inherent tension between group affiliation and individual agency (Caza et al., 2018). However, scholars argue that it becomes more intense after ambiguous situations that create identity conflicts within an individual (Petriglieri, 2011). In the current complex and ever-changing world, the concept of identity can become destabilized (Sveningsson & Alvesson, 2003), leading to internal conflicts and tensions between different identities and "selves".

2.1.3 Identity Conflict

Sometimes, individuals may experience internal conflicts when attempting to reconcile their beliefs and identities in a given situation. This can occur when their values, norms, and expectations, i.e. identity content, associated with their role, collective, and personal identities are not in harmony (Ashforth & Mael, 1989; Caza et al., 2018). Such tension can give rise to identity conflicts, which triggers individuals to engage in more intense identity work to resolve the conflict (Petriglieri, 2011). Acting against our personal values and morals can make us feel that we are pretending to be someone we are not; it can make us feel like imposters (Ibarra, 2015). Whereas some individuals can handle ambiguous situations naturally, and be willing to adapt, others insist on being true-to-self. Individuals in the latter group often prefer to stick with familiar and comfortable practices, leading them to avoid new demands, despite often leading to a crisis.

Exploring identities that contradict personal values can trigger a sense of ambivalence, where individuals experience mixed emotions toward an object or activity (Conner & Sparks, 2002; Gardner, 1987). These conflicting attitudes can significantly influence a person's behavior and intentions, challenging decision-making. Emmons (1996) highlights that approach-avoidance conflicts can arise when individuals desire a goal but simultaneously feel reluctant. This can lead to competing motives and evaluations that fluctuate in response to internal and external cues (Conner & Sparks, 2002). Individuals experiencing identity conflicts often find themselves in ambiguous situations that challenge their sense of self (Horton et al., 2014). This internal conflict can lead to feelings of uncertainty and ambivalence as they strive to reconcile their personal values with external demands. This was also shown by Hoobler et al. (2023), where self-ambivalence was seen to have implications on one's self-concept. Hence, individuals sometimes have to make trade-offs between conflicting identities in order to navigate situations

where they feel ambivalent, which triggers identity work in order to stabilize the sense of self (Sveningsson & Alvesson, 2003).

2.1.4 Identity Threat – Or Opportunity

An identity threat is an experience subjectively appraised as indicating potential harm to one's identity and its value, meaning, or enactment (Petriglieri, 2011). When faced with such a threat, people often use their energy to avoid or minimize the potential harm caused by it. This is typically done by distancing themselves either physically or psychologically from the source of their anxiety (Wittman, 2019). Since primary appraisal is based on both the experience and an individual's identity, people may perceive the same experience differently, with some seeing it as a threat to their identity while others may not (Petriglieri, 2011). Identity threats can come from various sources, including individuals, others, or the material world. First, threats that arise from individuals stem from identity conflicts or actions that are inconsistent with an individual's identity's meaning. As a result, individuals themselves can threaten their identity meanings by behaving in a way that contradicts them, which is in line with Burke (2007). Second, threats originating from others typically manifest in interpersonal interactions and are common in organizations with strong or demanding identities (Petriglieri, 2011). Additionally, Brown and Coupland (2015) argue that individuals' identities are constantly threatened by the judgments of others. The last source of identity threats is the material world, which involves external events that occur randomly and independently of specific individuals or groups (Neimeyer et al., 2002; Pals & McAdams, 2004).

Often, identity-implicating experiences will be appraised as threats, as discussed above. However, alongside threats, experiences can also be appraised as challenges, signaling an opportunity for growth and gain, rather than harm (Bataille & Vough, 2022), and can thus be seen as an identity opportunity. Individuals' responses differ significantly when appraising an experience as a threat, and when appraising it as an opportunity. While threats are likely to be tied to a negative concerned state, such as leading to an individual's decreased performance and self-esteem, as well as a decreased desire to take on leading roles (Petriglieri, 2011; Alvesson, 2010), opportunities, in contrast, are likely to be paired with a more positive state. Further, these positive emotions stemming from an identity opportunity are likely to expand an individual's attention, as well as spark creativity and flexibility, whereas the negative emotions stemming from an identity threat are more likely to result in the opposite (Bataille & Vough, 2022). Over the past few years, technology has emerged as a significant source of identity threats (e.g., Mirbabaie et al., 2022; Jussupow et al., 2021).

2.1.5 Technology and Identity

Technological shifts and advancements have previously taken place, which have made people question their identities and the role they play in their professions and society. Technology has the potential to not only reshape roles and role expectations but also disrupt the social and psychological processes involved in personal and occupational identification (Stryker & Burke, 2000; Nach & Lejune, 2010; Petriglieri et al., 2019; Padavic, 2005; Arthur & Rousseau, 1996). However, in line with Nach and Lejune (2010) and Selenko et al. (2022), there is still a lack of

understanding regarding the connection between these technologies and how they impact our identity and self-perception.

AI technologies are rapidly expanding and developing, currently causing a significant shift in identities. Consequently, it receives more attention from management and organization scholars, which touches upon how it may disrupt personal and professional identities. However, most of these studies concentrate on how AI technologies can supplement or replace human labor and the dynamics of organizational change (e.g., Shrestha et al., 2019; Raisch & Krakowski, 2021; Ingram Bougusz et al., 2021; Berente et al., 2011; Volkoff et al., 2007), therefore favoring the organizational perspective over the individual. Yet, some studies are examining the psychological effects on individuals. However, these are primarily focusing on employees who could potentially be replaced by this technology in the workplace, or on the difficulties arising around the identification process in the new role (e.g., Davenport & Katyal, 2020; Mirbabaie et al., 2022; Jussupow et al., 2021; Boudreau et al., 2014, Seleknko et al., 2022). Nonetheless, there is still much to learn about its impact on individuals' experiences and self-perception. Selenko et al. (2022) highlight that the effect on workers is not fully understood and could influence their self-image. Boudreau et al. (2014) have also observed a shortage of research examining the connection between AI and identity. As previously discussed in this literature review, an individual's self-perception can have a significant impact on their emotions, thoughts, and actions in specific contexts (van Knippenberg et al., 2004; Bataille & Vough, 2022; Walker & Caprar, 2020). This underscores the importance of exploring the effects of widely adopted technologies, such as GenAI chatbots, on individuals' identity work and self-perception.

2.2 Research Gap

Although there is considerable research on different identities, identity work, and the self-concept, and an emerging number of scholars investigating the psychological impact on individuals when AI is being integrated, there is a gap in the literature where these two areas are supposed to intersect (Figure 2). Specifically, to the best of the authors' knowledge, there is no current literature exploring how individuals' self-perceptions are affected by the integration of GenAI in the process of revising and updating their identities. Therefore, this thesis aims to contribute to the existing body of literature by providing a novel approach to the integration of two areas of research.
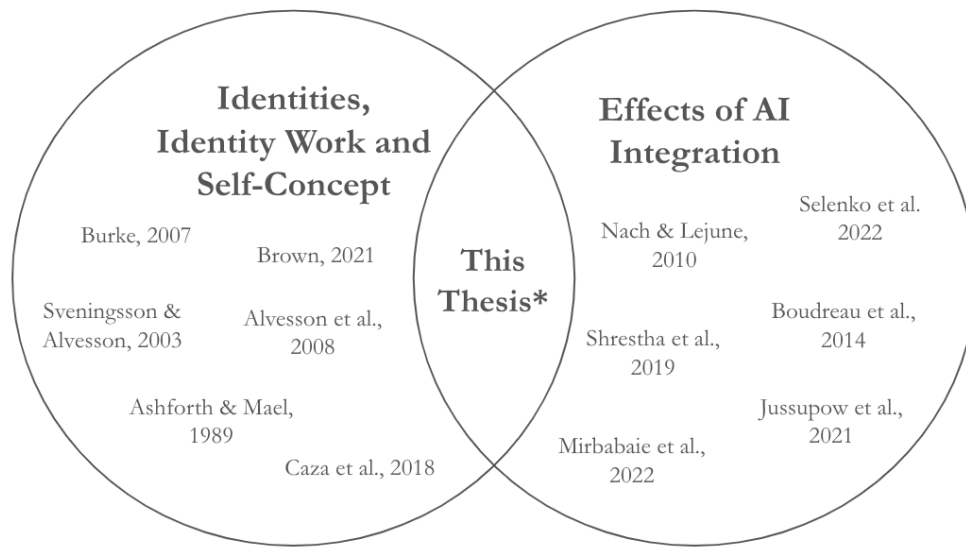
Identities,
Identity Work and
Self-Concept

Burke, 2007   Brown, 2021

Sveningsson &   Alvesson et al.,
Alvesson, 2003   2008

Ashforth & Mael,
1989

Caza et al., 2018

**This
Thesis***

Effects of AI
Integration

Nach & Lejune,   Selenko et al.
2010   2022

Shrestha et al.,   Boudreau et al.,
2019   2014

Jussupow et al.,
2021

Mirbabaie et al.,
2022

* How are students' self-perceptions affected by GenAI in the process of revising and updating their "selves"?

Figure 2. Examples of Existing Literature and the Identified Research Gap

The argument in this study is that further research is necessary to examine the interplay between AI technology and individual self-perception, particularly in the context of higher education, where students are seeking answers to the questions of who they are and who they want to become. Currently, there is no literature that sheds light on whether GenAI poses a threat or an opportunity to one's different "selves" and self-perception. This gap needs to be addressed as the consequences stemming from an identity threat or an identity opportunity can significantly influence the answer to the question of "Can I really *do* this?" and "Can I really *be* this?", as seen in the introductory quotes by student 17 and 42 (p. 7). Notably, the impact of AI on an individual's self-esteem regarding their worth, competence, and authenticity cannot be ignored, as also highlighted by Park and Kaye (2019).

2.3 Theoretical Framework

To understand the phenomena and close the identified research gap, a theoretical framework has been developed based on the insights from the above literature review (Figure 3).
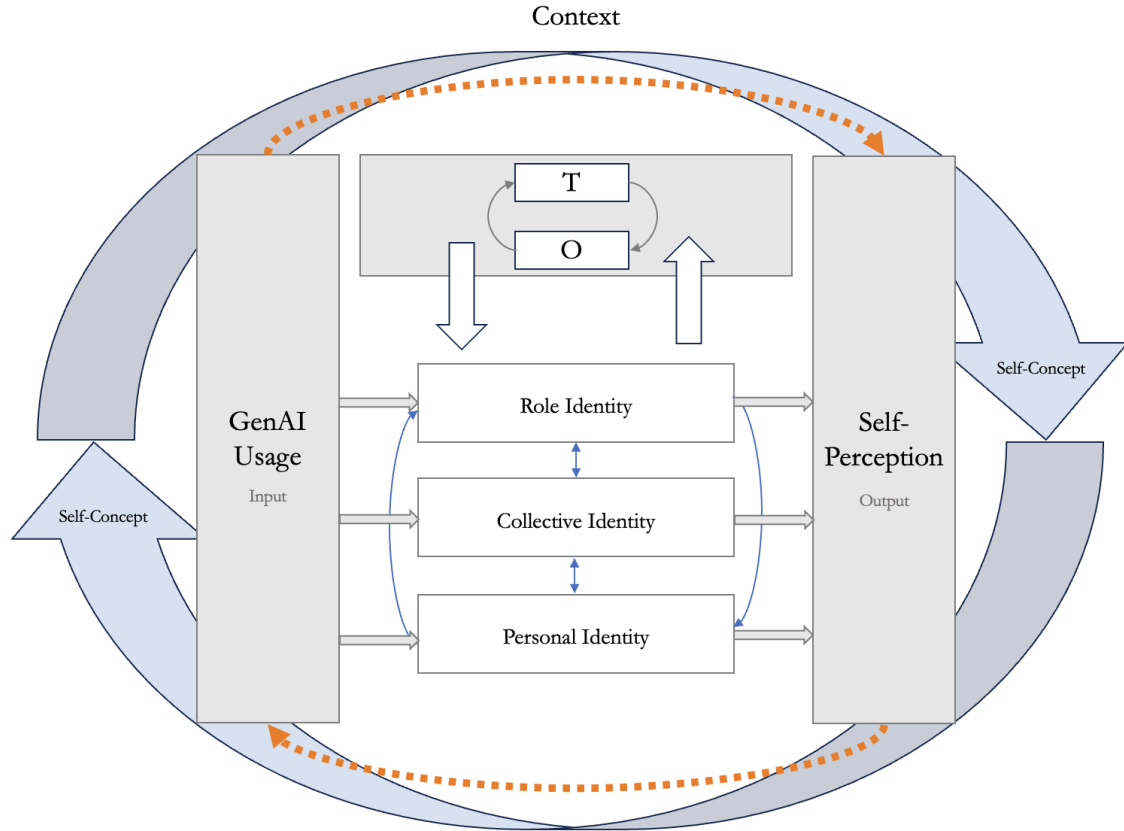
Figure 3. Developed Theoretical Framework

The framework aims to highlight the relationship between GenAI usage in academic contexts and the consequent identity work, ultimately leading to an individual's self-perception. The framework is based on the idea that the use of GenAI chatbots in an academic context prompts individuals to reflect on their identities; therefore, it can be seen as an identity-implicating experience, which triggers the process of identity work. This process involves evaluating the values, norms, and beliefs associated with each identity (role, collective, personal), and attempting to reconcile them. The identity content is changing as a result of identity work, prompting a recurring process, illustrated by the arrows. The identity-implicating experience gives rise to either an identity threat or an opportunity, which will have different influences on individual self-perception. Ultimately, this self-perception will impact the individual's future use of GenAI chatbots in the academic setting, further highlighting the cyclical relationships. The individual's self-concept underpins this entire process, developed from past experiences and knowledge one holds about oneself, including previous GenAI use cases.

3. Methodology

The following chapter guides the reader through (1) the research approach, including the methodological fit, research design, context, and data collection. This is followed by (2) the research process, including the pilot study and main study. Finally, (3) a discussion about the quality and trustworthiness of the theses is held.

3.1 Research Approach

3.1.1 Methodological Fit

The study aimed to examine how the use of GenAI chatbots affects individuals' self-perception in the process of revising and updating their "selves." To initially explore this, preliminary data was gathered through an exploratory pilot study and served as a vital compass for the subsequent research (Makri & Neely, 2021). A qualitative method was selected for three compelling reasons. First, as established in the first chapter, this area has not been widely explored, and a qualitative technique is appropriate for an ambiguous research field (Edmonson & McManus, 2007). It further allows the authors to move back and forth in the emergence of theories when collecting and analyzing the data. Secondly, the aim was to understand the nuanced feelings, meanings, and experiences of the subjects, and to capture such, quantitative measures would fall short (Daft, 1983; Bell et al., 2019; Arsel, 2017). Finally, a qualitative approach aligns with the theoretical underpinning of identity work, where in-depth exploration and understanding are paramount (Caza et al., 2018).

3.1.2 Research Design

The study initially adopted an inductive approach, where the authors kept an open mind and let concepts emerge from the data (Bell et al., 2019; Gill & Johnson, 2010). Consequently, what subjects were conveyed during the interviews was the primary focal point, and from there, theory was applied to make sense of the emergent patterns. Not being completely familiar with the literature beforehand helped guard against any confirmation bias by the authors (Gioia et al., 2012). As the research progressed, it transitioned towards a more abductive approach, combining the inductive and deductive (Andersen, 1998). This allowed for an iteration between theory and data to develop explanations for the observations and to understand the factors driving certain concepts (Bell et al., 2019). Thus, as new themes emerged throughout the interview process, relevant literature was analyzed accordingly to understand what was going on in the empirics (Taylor et al., 2002; Flick, 2009).

3.1.3 Context

Context is crucial in understanding behaviors and values, which can only be fully comprehended within each specific situation (Bell et al., 2019). Higher education was chosen as the overarching context for this study because it aims to equip students for their future professions, which entails understanding and developing one's identity and self-perception. This study focuses on three prominent HEIs in Stockholm, Sweden, with a specific focus on students in the fields of business and economics, namely the Stockholm School of Economics (SSE), Stockholm University (SU), and the Royal Institute of Technology (KTH).

To develop a deeper understanding of the context, the authors had extensive discussions with professors specializing in identity research and digitalization and principles from three institutions (See Appendix E). Professors and faculty members discussed students' identity formation, the impact of GenAI chatbots, and institutions' role in shaping this context. The candid elaborations helped broaden the authors' comprehension and understanding of relevant theories, facilitating an iterative process between data and theory (Bell et al., 2019; Ahrne & Svensson, 2015; Taylor et al., 2002; Flick, 2009).

3.1.4 Data Collection

This study utilized data collected from both a pilot study and a main study, as further described in section 3.2. The pilot study was conducted with graduate students from the three HEIs, to understand their intrapersonal experience using GenAI chatbots (See Appendix A). The interviews provided valuable insights into areas for further exploration and which individuals to include in the subsequent main study. Consequently, first-year students were included in the main study, as the pilot study subjects expressed concern for this group regarding the use of GenAI chatbots. To provide a comprehensive view of the subject matter, the findings were then combined with the expertise of professors in the fields of identity research and AI technologies.

Data from both studies was gathered via semi-structured, in-depth interviews. This method was chosen to gain insight into the subjects' perspectives, and to unfold nuanced meanings underlying their experiences in order to answer the research question (Daft, 1983). Further, semi-structured interviews, based on an interview guide, allow for codable answers, while still receiving rich, detailed answers (Bell et al., 2019). To capture contextual nuances and reduce the risk of misinterpretations, the interviews were recorded with the subject's permission and supplemented with notes from the authors. To ensure accuracy, the authors reviewed transcriptions alongside their notes immediately after each interview (Ahrne & Svensson, 2015). Microsoft Word or Microsoft Teams were utilized for transcription as they offer transcription functions and allow for additional insights that may have been missed during the interviews to be included.

To ensure genuine perspectives, the researchers did not reveal the interview's purpose. Instead, participants were informed that the interviews would explore their study habits. The authors allowed participants to bring up their experience with GenAI chatbots naturally. This prevented any preconceived notions from influencing the interviewees' answers. See section 3.2.2.2 for an in-depth understanding of the interview design.

3.2. Research Process

The research process was completed in two phases: a pilot study and a main study, visually shown in Figure 4 below.
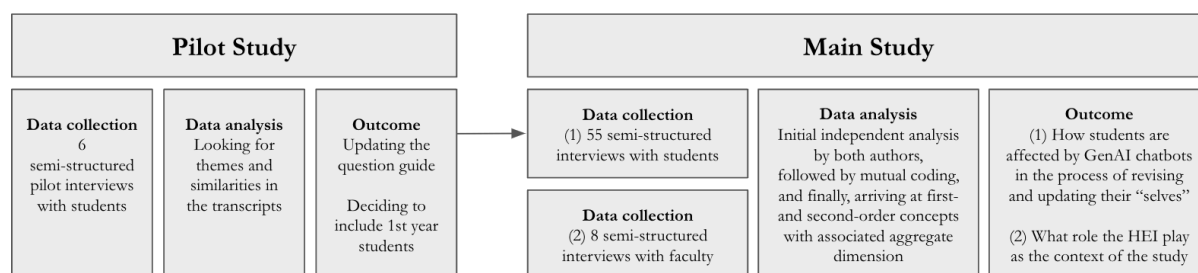
Figure 4. The Research Process

3.2.1 Pilot Study

In preparation for the main study, a pilot study was conducted to identify key focus areas. The pilot study involved six semi-structured interviews that utilized open-ended questions. The primary goal of the pilot study was to evaluate the prevalence of the phenomena within the specific context being studied (Bell et al., 2019). The interviews were conducted over a six-day period in September 2023 and lasted between 20 and 35 minutes (See Appendix A). The themes covered in the interviews pertained to participants' experience and usage of GenAI chatbots, as well as their identity and self-perception (See Appendix B). Participants chosen for the pilot interviews were all in their final year of studies, allowing for comparison between periods with and without access to chatbots during their educational journey. Following the pilot study, the authors refined the interview guide by eliminating questions that caused discomfort and modified the questions that caused confusion among respondents, to enhance their clarity (Bell et al., 2019).

Pilot interviews revealed that using GenAI chatbots indeed seems to affect students' sense of self, causing tensions between personal values and social norms and sometimes leading to actions against their beliefs. Performance was questioned for some students but enhanced for others.

3.2.2. Main Study

Subsequent to the pilot study, the main study was conducted, drawing upon the insights and discoveries from the preliminary phase. Below is a discussion of the study's interview sample, followed by the interview design, and finally, the data analysis.

3.2.2.1 Interview Sample

In deciding on the interview sample for the main study, priori-purposive sampling was used. Purposive sampling is widely acknowledged as the most predominant method in qualitative research. It entails selecting interview subjects based on criteria that align with the research goals, which in priori purposive sampling is established in the initial stage of the research (Bell et al., 2019). For the interview sample, students in their third to fifth year, as well as first-year students, were chosen to provide a comprehensive representation of academic experiences. To ensure a variety of perspectives and to generalize the findings beyond a single institution, students were sampled from three different HEIs in Stockholm, Sweden. Similar programs of study within the business and economics disciplines were selected to create a comparable sample.

The authors did not pre-determine a specific number of interviews to conduct. Instead, the aim was to gather a balanced sample between the three HEIs, as well as relying on theoretical saturation to guide the number of interviews (Bell et al., 2019). This approach ensured that interviews continued until all areas were thoroughly explored, and new data no longer offered new insights or dimensions into an emerging theory or categories (Bell et al., 2019). This approach guaranteed that the saturation point had been reached. Despite patterns emerging early on, the authors continued to conduct interviews to ensure no new themes were seen (Crouch & McKenzie, 2006).

The main study included a total of 55 interviewees with students. Also, to further understand the context, the authors conducted interviews with faculty at the HEIs (See Appendix E). Figure 5 below presents the representation of student interviewees from the three institutions, as well as the gender distribution of the study. Approximately ten third- to fifth-year students and seven first-year students from each HEI were interviewed. A full list of information about the complete interview sample can be found in Appendix C. They were all identified through the author's social networks and mainly contacted through LinkedIn.
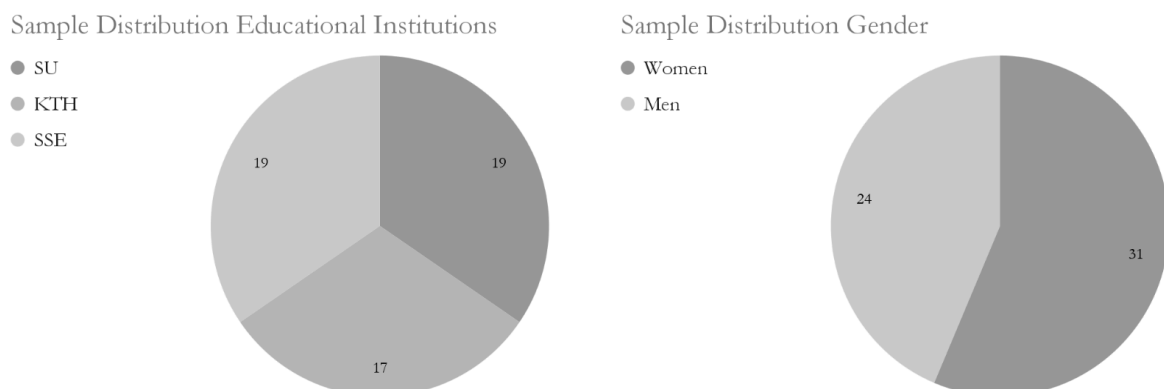
Figure 5. Main Study Sample Distribution Between HEIs and Gender

3.2.2.2 Interview Design

The interviews were conducted using a semi-structured approach, with open-ended questions, to ensure an opportunity to realize different perspectives and genuine experiences with the GenAI chatbots (Bell et al., 2019; Daft, 1983). Some questions were also tailored to accommodate each interviewee's unique experience with the technology, their personal perceptions of it, and their feelings toward it. This ensured a fit between the questions and the interviewee's experiences.

The length of the interviews varied between 21 to 43 minutes, with the shorter ones being explained by the subjects' little to no experience with GenAI chatbots. The authors did not impose any time constraints on the interviews, allowing interviewees to share their experiences in full detail. By not being time-restricted, the authors could delve deeper into the recurring themes that emerged. Further, the authors tailored their questions and asked relevant follow-up

questions based on each interviewee's interactions with the technology, personal experiences, and associated emotions. Each interview, however, adhered to the key themes outlined in the interview guide (Appendix D) to maintain focus on the subject matter without unintentionally influencing the interviewee. At the conclusion of each interview, the participants were given the opportunity to share any additional thoughts or ideas related to the subject that had not been addressed. This approach not only ensured that no vital information was left out but also enabled new insights and interesting themes to occur (Bell et al., 2019).

Throughout the interview, it was necessary to actively listen to the interview responses, in order to ask follow-up questions and gain a better understanding of how the interviewees interpreted certain situations. The authors made sure to pay attention and consider any information that was contradictory or inconsistent, and when necessary, the authors asked for additional explanations to get a more comprehensive understanding. Further, the authors also paid attention to non-verbal cues, such as body language and reactions, to better understand the responses and the underlying meanings behind them (Bell et al., 2019). The authors made sure to maintain objectivity during the interviews by dividing the tasks between them (Mills et al., 2010). One asked the questions, while the other took notes and looked for non-verbal cues (Saunders et al., 2020). However, to prevent any potential bias, the authors rotated our roles for each interviewee.

In the research process, interviews were conducted either in-person or remotely through Microsoft Teams. As the interviewees were at various locations and between lectures, the authors aimed to ensure flexibility by conducting interviews with students from SU and KTH digitally, while most of the interviews with SSE students were held in person. In-person interviews were always preferred, as they gave a better understanding of the interviewees' body language and non-verbal cues (Bell et al., 2019). However, all online meetings were video interviews, which, compared to in-person interviews, have been shown as marginally insufficient (Irani, 2019).

To ensure the interviewees' comfort, interviews were conducted both in Swedish and English based on their language preferences. As most of the students at SSE study in English, most interviews were held in that language. However, some first-year students chose to speak in Swedish to feel more comfortable while responding to the questions. The authors sought to gather a transparent view of their experiences and emotions regarding GenAI, which made it crucial to allow the interviewees to express themselves freely. English interviews totaled 25, while 30 interviews were conducted in Swedish. The authors were considerate of the difficulties that arise while conducting interviews in Swedish, particularly during translation (Felderman & Hielb, 2020).

All participants were assured anonymity prior to beginning the interviews, as the data could be seen as sensitive given the ambiguous field of what is right or wrong when using GenAI chatbots in a study context. Only the year of study, gender, and HEI would be disclosed. This was, according to the authors, essential in order to ensure candid conversations and for participants to be comfortable speaking about their experiences and attitudes. Additionally, participants were asked to fill out a consent form (Appendix F) for the authors to record and/or transcribe each

conversation through Microsoft Teams. This was done to ensure accuracy in capturing all spoken words, and to reinforce that all transcripts would be treated with confidentiality to uphold ethical standards (Bell et al., 2019).

The data analysis process started with both authors independently going through the transcriptions and the notes from the interviews, to comprehend the data and correct any potential mistakes caused by the transcribing software. The authors further independently coded the transcripts before discussing and resolving any disparities in their interpretations. This approach enabled the authors to reach a mutual agreement on the chosen codes, thus promoting a shared understanding of the data (Bell et al., 2019). The coding was done in a spreadsheet, where each mark was complemented with the corresponding quote (See Appendix H).

The initial coding and mutual understanding of the data facilitated the next step in the data analysis process. To further sort and make sense of the data, the authors employed the Gioia et al. (2012) methodology, specifically designed for abductive research. To start with, first-order concepts were identified based on the similarities and dissimilarities in what interviewees conveyed during the interviews. Thus, this implies looking at the meaning structure (Gioia et al., 2012) and reading between the lines to uncover what subjects really mean. Next, second-order themes were developed by iterating between theory and the first-order concepts identified, to make further sense of how students' self-perceptions are affected by GenAI chatbots in the process of revising and updating their "selves". Finally, aggregate dimensions were arrived at by clustering the themes, in order to broader explain how they are affected. Figure 6 illustrates an example of this framework. The whole framework can be found in section 4.2.
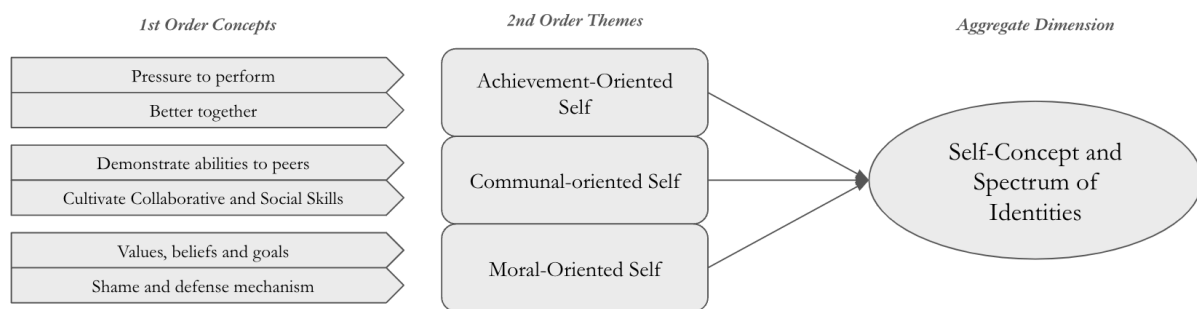
Figure 6. Example of Data Analysis Structure Based on Gioia et al.'s 2012 Framework

The authors searched for outliers in addition to emerging themes and similarities in the data analysis process. This helped to understand tensions and inconsistencies in the data and strengthen the analysis, as subjects did not always belong to one group. Some people belonged to several, were located in between, or even switched between groups or classifications.

3.3. Quality and Trustworthiness of Study

3.3.1 Quality Considerations

Prior to each interview, subjects were assured that their identities would remain confidential in order to encourage truthful responses. Instead, students are referred to individual numbers (students from the pilot study include a *P*), which correspond to the order of their interviews (Appendix A & Appendix C). The interviewed faculty members are referred to in alphabetical letters. Furthermore, the authors of the thesis provided a brief explanation to all interview subjects of how the data would be managed and utilized. Every student was required to provide consent by answering: (1) if they were comfortable with the interview being recorded and transcribed, and (2) if their quotes could be used in the thesis (if only associated with their HEI, program, and gender). Further, all interview subjects were also given a consent form to sign (Appendix F).

3.3.2 Trustworthiness

Unlike quantitative research, there is no consensus on how to evaluate the quality of qualitative research (Bell et al., 2019). However, Guba & Lincoln (1994) propose an alternative approach to the reliability and validity measures used in quantitative research, which assesses the quality of this thesis. The authors suggest considering trustworthiness, as further discussed by Bell et al. (2019). This involves considering credibility, transferability, dependability, and confirmability in a careful manner.

First, to ensure the credibility of the thesis, the authors employed member checking to validate the data interpretation. The authors shared the findings with one student from each sample subgroup to ensure that they were accurate and interpreted correctly. However, each faculty member interviewed was member-checked if any of their quotes were used. To further ensure the credibility of the interpretations, the authors sought experts' opinions in the relevant areas of this research. Additionally, to reduce any potential bias, the authors, who represent the Stockholm School of Economics, conducted interviews with students from two additional academic institutions (SU and KTH). This step enhances the credibility of the transferability of our findings. Given that author bias can influence qualitative research, this measure is crucial (Ahrne & Svensson, 2015). Lastly, the authors contacted the students whenever necessary to seek relevant follow-up information while interpreting and analyzing the data.

Second, although this study primarily focuses on studies within business and economics, the findings could have implications for other academic fields across Sweden. While practices in other academic fields may be similar, it is crucial to recognize that qualitative research is highly context-dependent, which could create limitations in terms of transferability. However, several interviewees in this study shared work-related experiences that suggest similar sentiments may be present in other organizations outside of the academic context. Nonetheless, it is worth noting that various factors, such as specific identities and roles within these organizations, may influence these experiences.

Third, dependability is a crucial aspect of this research, ensuring the process is accurately documented and recorded from start to finish (Guba & Lincoln, 1994). In this thesis, the authors provide a detailed description of the research methodology in this chapter and attach the appendices for reference. The commitment to dependability is evident through reviewing complete interview transcripts and analysis of findings with professors and experts.

Lastly, to ensure the utmost confirmability of this study, both authors were present during all interviews to prevent personal opinions or values from influencing the results. Furthermore, each author independently analyzed the data and then conducted a joint analysis to eliminate any potential bias or subjectivity throughout the process. Such rigorous measures aimed at strengthening the overall quality and trustworthiness of this study.

3.3.3 Ethical considerations

Throughout the process, it was essential to uphold ethical considerations, especially since using GenAI chatbots in a study context is a morally ambiguous area. The data involved could be sensitive, so it was crucial to highlight this and disclose it during every interview. This approach empowered study participants to express their views and usage patterns openly and truthfully. To ensure transparency, all subjects were asked to sign a consent form before participating. The consent form clearly outlined that only their HEI, year of study, gender, and subject of specialization would be mentioned in the thesis; this applies to both students and faculty. This was done to ensure that only necessary and relevant demographic information was included in the research, enabling a comprehensive understanding of the intended research area and question.

4. Empirical Results

The following chapter presents the empirical results from the interviews conducted within this study. The chapter starts with (1) a brief introduction of the context, followed by (2) a review of the findings, and, finally, (3) a summary of the empirical results is presented.

4.1 Context

The three chosen HEIs share the view of playing a crucial role in imparting education and honing the skills of their students to prepare them for diverse professions in decision-making positions. However, eight interviews conducted by the authors with key stakeholders, including principals, professors, and researchers from each HEI (Appendix E), revealed the absence of a definitive strategy to navigate the evolving landscape of GenAI in academia. Program Director E highlights that there is too little knowledge about it in a study context, that can guide the HEI in this area. Nevertheless, the consensus among the HEIs was that GenAI cannot be ignored, and its incorporation in higher education is inevitable. Principal H even drew a parallel to the book "Acceptance" from the 1930s, emphasizing the importance of acknowledging the present reality and mastering it in order to achieve success. Although uncertain about the specific skills required and the long-term implications of this technology on student competence, learning, and self-perception, the faculty members interviewed emphasized the significance of comprehending the supplementary skills that students should acquire.

As per the views of the interviewed identity professors, the concept of identity can be regarded as a wrestling game, particularly in the educational context, as pointed out by Professor A. It is a process of exploring who one is and who one aspires to be and can be challenging and ambiguous, requiring individuals to navigate back and forth in their pursuit of self-understanding. In the midst of technological advancements, the relationship between oneself and material objects, such as computers, plays a significant role in shaping one's identity. Additionally, as per Professor B's perspective, education can be seen as a period of transition where an individual is in a state of uncertainty before embarking on their professional journey. Professor B emphasizes the significance of identifying one's role in society and the job market during this phase. However, it can be challenging to find the answer to this question, particularly in the current scenario where one may feel like they are starting from scratch in terms of understanding their self-image, strengths, and weaknesses in relation to the usage of GenAI. Professor C also echoes a similar sentiment that finding one's place in the professional world can be challenging. Even when one is trained in a particular kind of education, ambivalence is central when figuring out what to become, and identification is an essential aspect of navigating this world.

"The utilization of these tools is not the issue per se. Rather, there are organizational and psychological challenges that create pressure on the school's role – to support the students." – Professor D

4.2 Interviews

This section presents the results of 61 interviews conducted with students, along with selected quotes that substantiate and highlight the findings (for a full representation of data and additional quotes, see Appendix H & I). The research findings suggest that the usage of GenAI is similar

across the three organizations, with little variation. Additionally, there are only a few disparities between different years of enrollment. However, gender differences exist, and they will be discussed in more detail later. The following sections will provide a more detailed presentation of the interview results, following the authors' data analysis structure, which is based on Gioia et al.'s (2012) framework, illustrated in Figure 7 below.
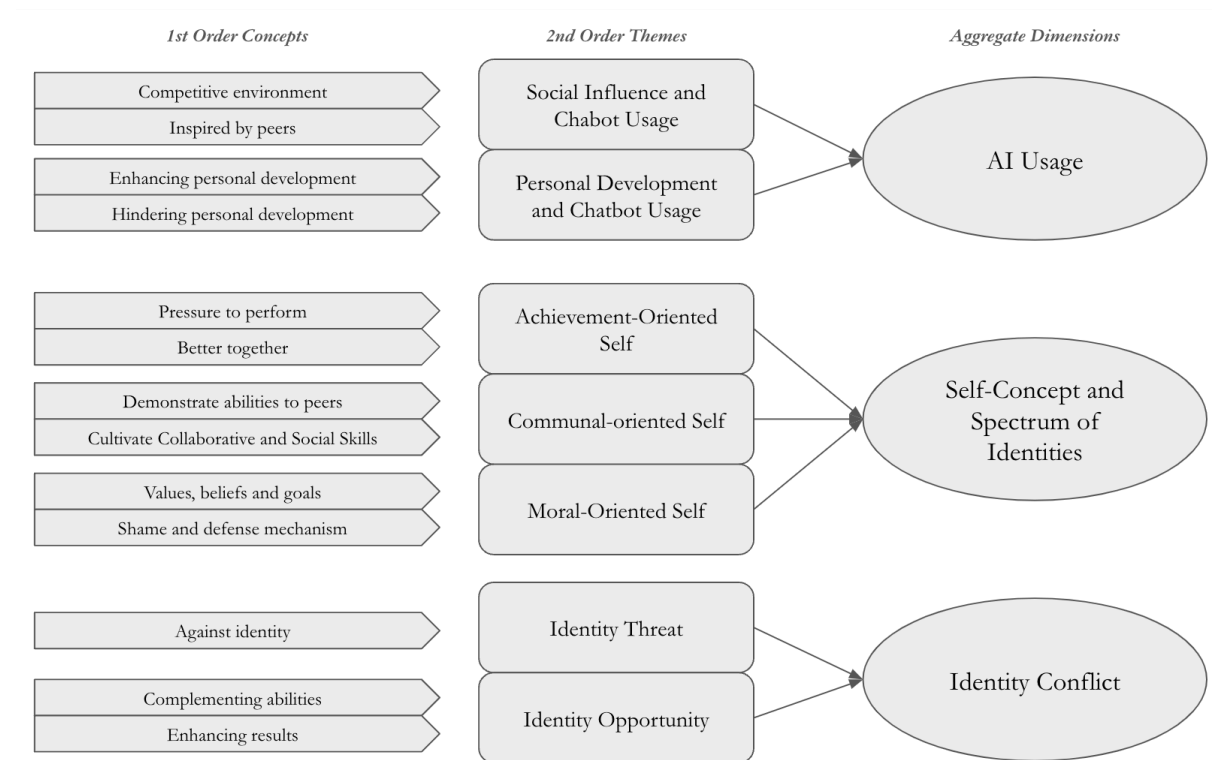
Figure 7. Data Analysis Structure Based on Gioia et al.'s 2012 Framework

4.2.1 AI Usage

This study found that the majority of students interviewed, 57 out of 61, incorporated GenAI chatbots, particularly ChatGPT, into their studies. Their primary use of chatbots was to improve grammar and fluency, generate new ideas and perspectives, and offer comprehensive improvements. Only four first-year students reported no usage, citing either a lack of use case or expressing it as an unconscious choice. Of the 57 users, 55 reported exponential usage, meaning more use cases unfolding once adopting the tool. Finally, the study indicates that students' use of AI is influenced by (1) their social surroundings and (2) personal experiences and beliefs about whether it can aid or impede their progress.

Competitive Environment

Social influence is a crucial factor in students' adoption of GenAI chatbots in their studies. Many students adopted the technology due to the competitive environment, where using the tools is seen as an advantage and helps maintain the same standards as their peers.

"If people in the class use it, I will be urged to use it. I want to have the same prerequisites as everyone else, of course." – P3

"A student trying to do it the right way [not using ChatGPT] will probably get a lower grade relative to everyone else that is probably using it." – 28

Competition further intensifies with the usage of chatbots, as it evens out the prerequisites but still raises the bar. While it gives students the opportunity to excel in areas they previously lacked skills, such as academic writing, it also makes previously skilled writers question their abilities as the gap in writing proficiency narrows.

"If a person sees themselves as unique, in being good at writing as an example, that strength is diminished due to the competition that is triggered by the use of ChatGPT. Now, everyone can be relatively good at it."– 39

"I would say that I have always been a good writer, but now, with ChatGPT, I don't know anymore as everyone is good at writing."– 31

Students further indicated that proficiency in GenAI tools is a valuable skill in the professional world and fear negative consequences on their personal development and opportunities if they do not adopt them.

"You feel like you are forced into using [ChatGPT], if you're not using it, you're gonna end up worse than everybody else." – 25

"Either you're on board, or you've fallen off the ship, floating around at sea, and are forgotten forever. It's important to understand what [ChatGPT] means and how it works. You'll fall behind in the future if you don't start using it." – 43

Further, this became even clearer when looking at students not influenced by peers or feeling pressured to perform well. Hence, social influence contributes to pressure among students who want to perform well, but it's not universal among all students in this study.

"To be honest, not at all [important to me to perform well]. I have never been a grade person (...) I don't know about how the others are doing it, but I am for sure using ChatGPT for these kinds of tasks!" – 30

"The pressure comes from external sources, like classmates. Many of them achieve high grades, which adds to the overall pressure for me (...) It's like a child, you know, if everyone else is doing it, I also want to do it." – 31

Inspired by Peers

The usage of GenAI chatbots in the academic environment was further influenced by peers as students shared best practices and introduced the tool to non-users in group projects or smaller groups.

"Everyone in the class is aware that AI is being used, and we openly share and demonstrate how to utilize it. We exchange specific phrases to avoid making it sound like AI, enhancing our communication. I'm completely transparent with my friends about using it." – 22

"A girl in my class recently did a group project with me. She had no experience using [ChatGPT] and asked another person in our group, who was experienced, to teach her everything. This girl is a high achiever, but she realized that reading from beginning to end wasn't working for her anymore due to time constraints." – 21

Further, social influence has both positive and negative effects. On one hand, it can motivate people to adapt to new behaviors, as seen above, when students start sharing best practices. On the other hand, it can also discourage individuals from using them too much. Therefore, the social influence is twofold, depending on the context and individuals involved.

"My friend has been somewhat negative about it, and that has influenced my thinking too, but that is in my best interest, I think. I don't want to rely on it too much." – 3

"I can feel a bit concerned that AI might be used in group assignments, because I would like to be sure of everyone in the group performing well and independently. I don't want others in the group to use ChatGPT, because of the risk for plagiarism." – 45

4.2.1.2 Personal Development and Chatbot Usage

When investigating the students' use of GenAI chatbots in relation to their perception of personal development, two groups emerged. Some viewed frequent usage of such tools as beneficial, while others viewed it as detrimental to their personal growth and capabilities.

Enhancing Personal Development

36 out of 61 students in this study found chatbots to be a helpful tool for their learning process. They used chatbots as a "study buddy" or personal supervisor to gain further explanations whenever they encountered difficulties or failed to grasp a concept. This suggests that chatbots can enhance the learning process by providing immediate and personalized support. Moreover, chatbots offer a flexible and accessible learning experience as they can be accessed from any location and at any time.

"I absolutely believe that [ChatGPT] can enhance the process, providing quick answers to your questions. (...) Being able to ask it and get an exact answer immediately is very useful, sort of as having a study buddy. If done traditionally, you might have to wait a day [for an explanation]." – 54

"I believe [ChatGPT] can definitely enhance [the learning process]. The advantage is that you can tweak the presentation to understand, ask for explanations in a different way, or find comparisons, or a dynamic explanation of something. I absolutely think you can tailor what suits your learning process best." – 42

Hindering Personal Development

Individuals who perceive chatbots as a hindrance express concerns about their personal growth, fearing that these technologies may impede their ability to gain knowledge and develop skills. They expressed that they may also become lazier due to reduced motivation to engage in self-directed learning as chatbots do all the work for them. This leads to a lack of immersive engagement with the content, preventing them from acquiring knowledge and developing skills.

"I don't immerse myself in things in the same way. Maybe spending less time understanding things because AI can make it so much easier, which means you might not gain the same well-rounded knowledge, which could be negative." – 29

"I would say I'm not as motivated anymore to really learn from original sources. I was too lazy to pick up the original research paper on Porter's Five Forces, so I just let GPT explain it. It negatively impacts the traditional learning, research-based learning, which this school stands for." – 23

According to the students, relying too heavily on GenAI can lead to a lack of effort and motivation, indicating a tendency toward laziness. 52 out of 61 students felt that they had experienced laziness in relation to their studies when having access to chatbots. With prolonged use, individuals may become overly reliant on these chatbots, impeding their learning and development. Some students even avoided using chatbots in many cases, fearing dependence on it and hindering their own critical knowledge and skills.

"When I'm writing, I often run my text through ChatGPT because I know it's going to sound better once it's been improved by AI. I don't really make an effort to write nice sentences from the start because I trust that AI will enhance them later." – P1

"In most of the group projects we use it [ChatGPT], but I try not to use it too much. When I use it, I feel that it is an easy way out; it is better to do it myself. I worry about how it impacts my learning and development." – 20

4.2.2 Self-Concept and Spectrum of Identities

The study identified three prevalent identities among students in this context: the achievement-oriented self, the communal-oriented self, and the moral-oriented self. Students emphasized their academic achievements, collaboration with peers, and personal moral values as part of their identity and self-perception. The subsequent sections will elaborate on how each identity was prevalent in the study.

4.2.2.1 Achievement -Oriented Self

Pressure to Perform

Students feel pressured to perform well, meet high expectations, and earn good grades to secure a successful career in the future. Self-esteem is closely tied to this, and students often disclose their stress in reaching high grades, with the explanation of wanting to feel proud and good about themselves, as well as to increase the opportunities to secure a successful job after graduation.

"The school has expectations of me, so there is pressure from the surroundings. Then, I've always had a lot of pressure on myself as well, but because I have the typical Older Sister- or Good Girl Syndrome, I believe there's a desire to be really good at everything I do. I think this makes it important for me to perform well, especially in school." – 2

"I want proof that I am good at something, and that is why I feel pressure to perform. If it is a course that I am not interested in, in general, I still want to feel good about myself. It is an underlying pressure, wanting to perform to know that I am good." – 17

Better Together

Most students who used GenAI chatbots as an enhancing tool feel that they perform better when using it, as it complements their own strengths. They also believe that the outcome is perceived as better when chatbots have been employed. As a result, chatbots are seen as tools that could help students enhance their overall performance and obtain higher grades.

"I have been self-aware of my English writing and realized through school that I am not the best at writing in English, and this is one of the reasons why I find ChatGPT valuable. To write more formal sentences and get a better vocabulary. (...) The outcome becomes better; all my assignments have gone through GPT a couple of times." – 30

"I think you could get a better grade if you combine your own knowledge together with ChatGPT." – 1

4.2.2.2 Communal-Oriented Self

Demonstrate Abilities to Peers

During interviews, it was evident that many students in competitive school environments rely on chatbots to validate their work, thoughts, or ideas before presenting them to others. This trend is driven by the desire to satisfy one's social surroundings and showcase their abilities to peers.

"Before saying something in class, I often double-check it with ChatGPT. I don't want to sound stupid." – 18

"What if I am the dumbest in the group, I often think, and then I turn to ChatGPT." – 50

The empirics suggests that in social group settings, such as lectures or group assignments, there is an increasing sense of self-doubt and pressure to perform well in front of peers. Students feel that performing well in a group project is more important than in an individual assignment, and there is a desire to avoid displaying weaker abilities than those of their peers. In fact, one student disclosed using chatbots in order to be taken seriously as a credible source in a group project.

"If you are in a group project – we have a lot of group projects – then I think it's more important to perform as an individual within a group rather than in an individual assignment. You are affecting others, more important to perform then." – 10

"You want to feel good about yourself. But it's also, I believe, because the program I'm enrolled in at KTH has many students aiming for high grades, and that influences you because you don't want to be perceived as less ambitious than others or at least not the least ambitious." – 31

"When saying, "I asked chatGPT" then people listen, but if it is just coming from my own mind, then it just flows through their ears. It is not super fun." – 19

Cultivate Collaborative and Social Skills

It was further shown that it is important to cultivate strong collaborative and social skills, be a supportive peer, and meet social expectations by participating in school and extracurricular activities. This implies that being proficient in individual tasks is not enough, but that it is necessary to also actively foster positive interpersonal relationships with peers. By being a supportive friend or classmate, students can contribute to their social circle, creating a nurturing environment in order to secure a foundation for a valuable network for the future.

"I guess I would say the benefits that come when you're done, especially studying at this school compared to any other school, is a lot of connections and network." – 4

"If I am able to be open about my usage [of ChatGPT] depends on what people I am in a project with. Not everyone likes it." – 16

Students mentioned that chatbot usage was influenced by the collective perception of the technology within the school context. Some were hesitant to show their usage in front of peers during group projects, fearing being viewed as a cheater or unambitious. Others felt pressured to

use the technology despite their negative perception of it, due to social pressure from their project group.

"I'm afraid when being in a group work, I will be perceived as a cheater or as unambitious, if I use ChatGPT, because I would not do the parts myself." – 54

"When the members in my group often insisted on using ChatGPT, eventually I just covered my eyes and ears and let them do it. To me, it didn't feel like the right thing." – 55

4.2.2.3 Moral-Oriented Self
Values, Beliefs, and Goals
Students' personal qualities, such as their values, beliefs, and goals, are emphasized as important by the students in this study. Reflecting on these aspects can help individuals reaffirm their priorities and stay true to themselves while also finding ways to grow and develop. This was often compared to the students' academic track records, including the previous processes of achieving certain goals, that thus have been seen as successful. This implies that their usage of generative chatbots comes with reflection upon their values, beliefs, and goals, and whether their usage aligns with these or not.

"I enjoy learning the traditional way, and given this, I don't use ChatGPT that often. It feels wrong to me, I have a fear of doing wrong." – 55

"Well, I think one should read for themselves, there is a reason for it, not to use these tools as a substitute. (...) But many say that I, who read so much, should use [ChatGPT], but I'm afraid I'll miss out on learnings, even if it would be faster." – 47

Using GenAI chatbots was found to free up time for more meaningful activities that aligned with personal goals. Students used chatbots to handle less critical tasks, allowing them to allocate more time and attention to tasks they personally deemed a higher priority. This strategic use optimized time management and enhanced overall productivity, indicating that using chatbots is useful for prioritizing tasks and achieving goals.

"When I can summarize the articles quickly, I have more time for other tasks (…) or, other things I enjoy, like social things." – 26

" The time it saves is so massive that it doesn't make sense just to use your own brain power. If you have a high workload then you can prioritize your time to spend your own brain power on the most important tasks, versus more simpler ones that are a 'GPT-territory'." – 10

Shame and Defense Mechanisms
The empirics reveal that some students feel ashamed or defensive about their usage of generative chatbots when it conflict with their personal values and goals. Particularly, women in this study

expressed that using chatbots goes against their moral values. Students are ashamed to admit their usage of GenAI, and may not disclose the full extent of their usage during interviews. This implies that there is a stigmatization around the usage of generative chatbots in the academic context perceived by these students.

"It deteriorates one's self-image with the intellectual commitment and you feel a bit ashamed and think, 'Here I am again with AI' (...) I don't want anyone to look over my shoulder and see me using it." – 21

"It's almost embarrassing to admit [that I use ChatGPT]..." – 32

Further, some individuals express discomfort with using chatbots in academic settings, as they perceive it to be against their moral values and beliefs. Consequently, some individuals were using the verbal cue "we" when referring to their usage, suggesting a desire to shift the burden of guilt onto a group, rather than accepting individual responsibility for their actions.

*"Yes, it has happened once that we tried ChatGPT *giggling*, but then we used ChatGPT like this to get help while studying." – 37*

"Yeah, we have used it to rephrase text, we've used it for that, but we have never copied it directly, but instead verified that the text is okay." – 14

As stated, there were two prevalent opinions about using GenAI chatbots; some felt ashamed to discuss it, while others defended it. The first group, mostly women, felt ashamed and believed that using AI negatively affected their self-perception and performance. They also feared being seen as cheaters. The second group, mostly men, defended their use of AI and tried to justify it by arguing that it was not cheating and was similar to seeking advice from a friend. Following the same discussion, the first group viewed their final work as a collaborative result of efforts between themselves and AI if the tool had been employed in the project. In contrast, the group who defended their usage tended to view it as only their own.

"I mean, do you think it is wrong? It's not like cheating; I write the prompts and there is really no difference from asking a friend, right?" – 28

"It's definitely a collaboration effort. You want to think that it is your own, but it is a collaboration. Perhaps a 60-40 split; 60% to GPT and 40% to me." – 32

4.2.3 Identity Conflict

Empirics reveal that students struggle to balance the three dominant identities mentioned in section 4.2.2. Consequently, trade-offs were often required, leading to internal conflicts when reconciling their self-concept in relation to the use of chatbots. Any disturbance in this balance between identities can result in conflicts, with some perceiving it as a threat and others as an opportunity for growth.

4.2.3.1 Identity Threat

Against Identity

The empirics prevail that individuals tend to avoid utilizing chatbots out of fear of becoming too reliant on them. This fear is rooted in the belief that relying on chatbots hinders the development of one's critical thinking skills and the concern that using them may lead to being perceived as an inadequate student who does not follow guidelines. Despite these apprehensions, many students still choose to use chatbots, which can create internal conflict during the process of reconciling their actions with their identity. As a result, negative emotions may arise, causing individuals to question their abilities and behavior, ultimately viewing the use of chatbots as a threat to their sense of self.

> *"However, I felt like 'Wow, I'm so bad'. When I used it, I didn't feel like I lived up to the expectations I had been given. I didn't have a sense of pride in my essay. It's a relief that it's over, went quick, and it turned out good, but I feel bad for not having done it myself." – 13*

> *"Before, I knew I was a good writer, but now, I question my own abilities as I have an urge to always use AI. I compare myself with it, like I could never produce this myself, it is making me feel worse about myself." – 17*

The empirics indicate that female students within this study may perceive GenAI in academic settings as a threat to their personal identity, more often than male students. This implies a gender divide within the study, and potential discomfort among women when integrating chatbots into their academic experience, further implying tension within the academic environment.

4.2.3.2 Identity Opportunity

Complementing Abilities

Students who did not perceive their use of chatbots as threatening their identity saw them as an opportunity to grow and develop. It was shown that chatbots can help individuals enhance their abilities and complement their skills, allowing them to progress within a company or industry even if they lack the necessary qualifications or experience. Similarly, chatbots can also assist individuals in performing well in areas where they may lack certain skills. By providing a more adaptable skill set, chatbots can open up a wider range of opportunities for those who view them as an opportunity rather than a threat. Thus, students who have disbelief in their abilities, find comfort and opportunities with ChatGPT

> *"I have no finance degree, but still, I somehow have a part-time job in finance. Thanks to the access to ChatGPT, I can now pursue a job I have previously dreamed about. It is almost insane, and I am definitely smarter together with ChatGPT." – 42*

> *"I have never been a good writer; I'm just glad that there's something that can do it for me. When writing longer texts, it's nice. It makes me feel better, and the output is better." – 16*

Students express that chatbots can improve their academic outcomes, leading to higher grades when incorporated into academic tasks. Using GenAI in this context can also create potential synergies, boosting the outcome. However, some prioritize the end result over the learning process, placing more importance on delivering a successful outcome than valuing the journey of acquiring knowledge.

"To be honest, I only care about the outcome. If it is better, then I will use [ChatGPT]." – 30

"If I can find a way to get the work done in a faster manner then of course you should use it [ChatGPT], I think." – 10

4.3 Summary of Empirics

The three HEIs acknowledge the importance of preparing students for diverse professions in decision-making positions but lack a definitive strategy to navigate the evolving landscape of GenAI in academia. However, the interviewed faculty members emphasized the need to comprehend supplementary skills that students should acquire while acknowledging the challenges in identifying one's role in society and the job market during this phase.

The results of the interviews suggest that there is little variation in the use of GenAI chatbots across the three HEIs studied. Most interviewees integrate GenAI chatbots, specifically ChatGPT, into their study routines with varying frequency. Social influence from peers and the competitive academic environment plays a significant role in the adoption and usage of chatbots, and how students perceive their use as either helpful or detrimental to personal development. Additionally, students may struggle to balance their different identities in the academic context, resulting in internal conflicts and trade-offs. These identities include the achievement-oriented self, the communal-oriented self, and the moral-oriented self, each emphasizing different aspects of academic performance, collaboration, and personal values. The results delve into potential identity conflicts that could arise when using chatbots in academic settings. It sheds light on disruptions to the balance between different identities, with some students viewing chatbots as a threat while others see them as an opportunity to their "selves".

5. Analysis and Discussion

The analysis delves into the three categories of "selves" found in this study: achievement-oriented, communal-oriented, and moral-oriented. Each category is associated with two motivations: identity threat and identity opportunity. We examine how each motivation can have a spillover effect, where a threat can become an opportunity or vice versa. Finally, the chapter concludes with a discussion around the opposition and alignment of "selves" and the role of the context.

The subsequent data analysis and discussion will follow the structure outlined in Figure 8.

	Achievement-Oriented Self	Communal-Oriented Self	Moral-Oriented Self
Analysis	• Threat to Achievement-Oriented Self • Opportunity for Achievement-Oriented Self	• Threat to Communal-Oriented Self • Opportunity for Communal-Oriented Self	• Threat to Moral-Oriented Self • Opportunity for Moral-Oriented Self
	Spillover Effects		

Discussion	**Tensions and Cohesion Between Selves**	
	When Being "One" Prohibits "Another"	When Being "One" Supports "Another"
	The Role of the Context	

Figure 8. Structure of Data Analysis and Discussion

5.1 Data Analysis

5.1.1 Achievement-Oriented Self

This aspect of identity relates to academic achievements and how individuals perceive themselves. Many feel pressure to perform well and believe they perform better with the help of GenAI technologies like chatbots. In the empirics, it is evident that individuals are strongly influenced by a desire to excel, and they view these technologies as a means to enhance their abilities and be recognized as high-achieving students. This contributes to the performance-based identity theory (Walker & Caprar, 2020), where an individual's performance becomes a fundamental aspect of their identity. Performance-based identities are often present among individuals in organizations where performance is highly emphasized. However, the empirical evidence also shows that using chatbots is seen as both an identity threat and an identity opportunity for the students' achievement-oriented self.

In the empirics, many students are expressing discomfort with using chatbots in their academic pursuits. The usage of such technology is viewed as potentially undermining their sense of being high-achieving students, where "high-achieving" means pursuing the studies independently, leading many to avoid it altogether, as highlighted by student 20 in section 4.2.1.2. With the recent launch of these technologies and a lack of clear usage guidelines from academic institutions, students are left in an ambiguous situation. This, coupled with research by Walker and Caprar (2020), suggests that, when a student's external environment fails to validate an individual's performance-based identity, it can be seen as a threat to their identity, given that performance is closely tied to it. In higher education, success is measured by grades, degrees, and feedback from professors and peers, as stated in 2.1.1.2. Therefore, if peers take a negative stance toward GenAI technologies while the student is using it to enhance their academic achievements, using it can be seen as a threat to their performance-based identity, if their external environment does not validate it.

The empirical evidence reveals that the use of GenAI chatbots can cause individuals to feel threatened, leading to two reactions: either justifying their usage or distancing themselves from it altogether (section 4.2.2.3). The latter is observed when individuals are seen to experience negative feelings when using chatbots, given the impact it has on their identity. This contributes to Caza et al.'s (2018) argument that subjects' identity work intensifies in the face of a threat or an ambiguous situation – as students express taking actions to establish a stable sense of self when threatened. The empirics observe that individuals who tie their self-worth to their performance may face an uncertain situation when working on group projects with the assistance of chatbots, particularly when their peers do not disclose whether they are also using chatbots. The possible use of chatbots by other students within the group exacerbated their negative feelings, and they felt a loss of control while striving to achieve their desired level of success (section 4.2.1.1). This mainly stemmed from the possibility of being accused of plagiarism. This is in line with Burke (2007), as it goes against their personal meaning of what it *means* to be a student.

Upon analyzing the empirics, it appears that there is a difference in perception between the genders regarding how they view the finalized work when chatbots have been deployed. Most of the men in this study view it as solely their own work, by arguing they wrote the prompts, as stated by student 28 in section 4.2.2.3. On the other hand, the women in this study tend to view the final work as a collaborative effort with the chatbot (student 32, section 4.2.2.3). The difference between the genders is further evident in the case of subject 2 (section 4.2.2.1), where she refers to the "Good Girl Syndrome", thus internalizing external cues about how women "should" behave to be perceived as high-achieving students. This highlights the potential of women to perceive chatbots as a threat to their achievement-oriented selves. As per Brown and Coupland (2015) and Grey (1998), negative thoughts or feelings around an identity threat can challenge an individual's preferred identity role. In this case, that identity is of a "good" student.

There is a constructive competitive environment within the three institutions, as expressed by students 39 and 31 (section 4.2.1.1). The competition is further exacerbated by the perception that using chatbots can lead to higher grades than those who do not utilize them, as highlighted by student 28 (section 4.2.1.1). In this context, there is a constant comparison between students

based on their academic achievements, leading to a fear of falling behind one's peers. The pressure to perform at a high level, coupled with intense competition, can further contribute to the threat posed to the achievement-oriented self of the individuals in this study. This further strengthens Brown and Coupland's (2015) argument that identities are constantly under threat by the judgment of others.

5.1.1.2 Opportunities to Achievement-Oriented Self

The empirical evidence shows that while some individuals may perceive chatbots as a threat to their achievement-oriented self, they can also serve as an opportunity for personal growth and development. This concept contributes to Bataille & Vough's (2022) argument that an identity threat can, in some cases, also present an opportunity for individuals; in this setting to reach higher levels of academic achievements, further validating students' performance-based identities. In addition to their existing skill set, GenAI chatbots can assist students in reaching their desired levels of academic success, as student 1 (section 4.2.2.1) reported significant improvements in their academic performance and grades due to utilizing GenAI technologies.

The achievement-oriented self is not solely focused on academic accomplishments such as grades and recognition from professors and peers. Rather, it also seeks to secure a prosperous career in the future. Because of this, GenAI chatbots provide opportunities for these individuals that go beyond the academic context. Using chatbots could potentially increase a student's confidence in reaching for a specific career path, thus expanding the possibilities of who they can become and how to get there. The future desired job, can, in line with Bataille and Vough (2022), be viewed as a positive state, which leads to the subject's attention being expanded and flexibility being sparked. For instance, student 42 (section 4.2.3.2) is now pursuing a part-time job in finance without any major or prior experience in finance. With a grateful tone of voice, he told the authors of this thesis that he would not be able to do this job without the continuous assistance of chatbots. Hence, GenAI chatbots have the potential to unleash individuals' beliefs in their potential. This also contributes to the research of Ashforth and Schinoff (2016), where a desired future identity can guide an individual's behavior. This opportunity is not limited to this case but can be seen in many others within the study (see Appendix H), resulting in greater use of chatbots and greater flexibility in adjusting the study process. Empirics reflect students indicating an exponential use of chatbots when seen as an opportunity for their achievements.

Parallels can also be drawn and contributed to Ibarra's research (2015), which defines two distinct psychological profiles. One of these groups was labeled "chameleons," referring to individuals who possess a natural ability to adapt to any situation when necessary, similar to what is shown in the empirics of this study. These chameleons view chatbots as an opportunity for personal growth and development by adjusting their study habits and behavior to excel in their academic pursuits with the assistance of these chatbots – without feeling like a fake or an imposter. However, these chameleons are sometimes perceived by others as lacking a sense of morality, which is reflected in the concerns of student 45 (section 4.2.1.1) This student expressed concern that her peers may utilize chatbots in their group project, as she deemed it to be "wrong." The opposite view of being a chameleon, according to Ibarra (2015), is "true-to-self," and the empirical evidence shows that some individuals prefer to adhere to familiar processes and comfortable practices, as evidenced in the study by student 55 (section 4.2.2.3). However, it is

important to recognize that specific actions may have spillover effects that could impact other facets of one's self-concept, necessitating further analysis.

5.1.2 Communal-Oriented Self

This particular aspect of identity emphasizes the desire to demonstrate one's abilities to peers and to be a supportive collaborator who meets social expectations. People want to showcase their skills, knowledge, and accomplishments to others and receive recognition. As a result, they place a high value on how they are perceived by others (Ashforth & Mael, 1989). Through the analysis of the empirical results, it becomes evident that the use of generative chatbots has a significant impact on the students' identities in terms of their communal-oriented self. This further contributes to Brown and Coupland (2015), who highlight that identities are constantly under threat from the judgment of others.

5.1.2.1 Threats to Communal-Oriented Self

As per Brown and Coupland (2015), the pressure of how others perceive us can be overwhelming, particularly when students compare themselves to their peers, as evidenced in the case of student 31 (section 4.2.1.1). This is in line with the research of Ibarra (2015), who argues that it can be challenging for individuals to navigate situations where they must balance their own authenticity with conforming to the norms set by their peers. Moreover, in alignment with the insights of Brewer and Gardner (1996), the empirics underscores the importance of relationships with peers in defining an individual's identity. The use of chatbots in academic studies can pose a threat to one's communal-oriented self in three ways. First, if a student uses chatbots and their peers do not, it may be viewed as cheating or taking an easy way out (student 54, section 4.2.2.2). Second, if students choose not to use chatbots, their peers may question this decision and impact their sense of belonging to the group (student 55, section 4.2.2.2). Last, if a student's use of chatbots does not align with the organizational identity, it may also threaten their communal-oriented self (student 23, section 4.2.1.2).

5.1.2.2 Opportunities to Communal-Oriented Self

However, as previously noted, using chatbots can improve academic performance, boosting an individual's communal-oriented self and helping them feel as capable as, or even superior to, their peers (student 28, section 4.2.1.1). This presents an opportunity for them to strengthen their communal-oriented self, which may boost students' perception of how others view them (Ashford & Mael, 1989). This was especially prevalent in the empirics when student 50 (section 4.2.2.2) explained that her chatbot usage helps in making others perceive her as a good student – as she could always validate her thoughts before expressing her ideas. This was similar to the case that student 18 (section 4.2.2.2) highlighted, that before speaking in class, she always validated what she was about to say with a chatbot. Thus, using the GenAI chatbot was an opportunity for their communal-oriented selves. Furthermore, student 16 (section 4.2.3.2) perceived the tool as an effective way to improve his writing skills, which, in turn, could enhance his essays' perception among teachers and peers. Therefore, by emphasizing the interpersonal and collective relationships within the network provided by HEIs, students can cultivate a sense of community and foster opportunities for the communal-oriented self by utilizing the tool (Tajfel & Turner, 1979).

5.1.3 Moral-Oriented Self

This particular aspect of identity emphasizes adhering to the identity content that an individual holds (Strohiminger & Nichols, 2014; Stets & Carter, 2011; Eriksson, 1964) and lifts the scenarios where shame and defense are seen within the empirics, which points as a conflict toward the values, beliefs, and goals of an individual. Chatbots are seen to either pose a threat or an opportunity to individuals' moral-oriented self, depending on what each individual emphasizes as important in an academic context, as well as what moral traits are building up the core self (Eriksson, 1964). Empirics show that for some students (e.g., 20, section 4.2.1.2), it was to develop and learn new things continuously, whereas, for others, it was to have enough time to spend on friends, family, and interests (e.g., 26, section 4.2.2.3).

5.1.3.1 Threats to Moral-Oriented Self

For some students, the pursuit of knowledge and the learning process are highly valued, however, using chatbots has been shown to induce a sense of laziness and reduce motivation to tackle intellectual challenges (e.g., student 23, section 4.2.1.2). This can negatively impact learning outcomes, as some students may learn less when relying on these technologies, or as student 20 (section 4.2.1.2) puts it, taking the "easy way out". Ultimately, this threatens their development and, thereby, their moral-oriented self by acting against their values and beliefs (Petriglieri, 2011). In some cases, students expressed that they have been using GenAI chatbots despite it causing negative feelings as they act against their own inner values and morals. This has, in turn, further fueled the anxiety as they feel that they are doing something wrong, not only to themselves but also to the HEI they identify with. This is seen in the case of student 55 (section 4.2.2.3), as she expresses her fear of doing wrong, further strengthening the threat to her moral-oriented self. In addition, student 13 (section 4.2.3.1) highlights the enjoyment of learning while also raising her concerns about the chatbot taking away such things, as well as her sense of pride. The threat to the moral-oriented self was further evident in the case of student 14 and 37 (section 4.2.2.3), who always referred to their use of chatbots in their academic contexts as a collective decision, thus not taking ownership of it. This was done using terms such as "we" throughout the interviews when referring to chatbots.

For some students, the fact that they were acting against their moral values and beliefs became evident to the authors as students highlighted that they were ashamed of their usage of GenAI chatbots. This was the case for student 21 (section 4.2.2.3), where she feared someone "catching" her while using the chatbot. Further, another behavior indicating that students were acting against their moral-oriented self was the fact that some students became defensive when talking about their usage and defended it – seeking external validation to confirm the legitimacy of using the tools, as seen in the empirics by student 28 (section 4.2.2.3). A possible connection can be drawn to Greenwald (1980), who suggests that individuals tend to perceive and describe themselves as the source of positive outcomes, whereas they are more hesitant to take responsibility for negative outcomes. The fact that students were ashamed and defensive of their usage when it went against their moral-oriented self sheds light on how individuals in this study manage their self-perception.

5.1.3.2 Opportunities to Moral-Oriented Self

One possible explanation for why some students did not feel that the usage of chatbots was wrong is that instead of emphasizing the *process* of learning and development, these students emphasized the actual *outcome* – to get a good grade or the graduation diploma without putting cognitive effort into how it was being achieved (student 30, section 4.2.1.1 and 4.2.3.2). This contributes to Thunborg et al. (2016), highlighting the instrumental student who adopts whatever technique available that could make the process faster and more efficient. In this case, if an individual aims to secure their ideal career after pursuing higher education, chatbots can present a valuable tool to help them achieve their objectives. This is evidenced in the empirics for student 42 (section 4.2.3.2), who expresses an increased self-confidence in his abilities. The difference between perceiving chatbots as a threat or an opportunity, thus seems to lie in the priorities of the moral traits of an individual. In the latter, students prioritize their moral traits outside the HEI. Hence, using the tools to unleash more time for other, higher-valued, activities created opportunities for their moral traits, thus nurturing their moral-oriented self. This shows that the variations in behavior and intentions can be linked to an individual's self-worth and goals, based on their perceived importance, which aligns with the perspective of Pelham and Swan (1989).

5.1.4 Spillover Effects

As previously established, an individual's self-concept comprises multiple identities (van Knippenberg et al., 2004), and any changes made to one identity can create a need for change in another identity if a conflict arises between them (Bataille & Vough, 2022). However, the empirics do not only show that a conflict occurs when there are conflicting demands; it also shows that while something can be appraised as a threat to one aspect of one's identity, that is, one "self", it can simultaneously be appraised as an opportunity for another self. This tension between different identities arises due to differences in demands, values, and beliefs, something we refer to as spillover effects – when an opportunity for one identity threatens another (or vice versa). Some motivations were seen to have larger spillover effects than others, and these will be analyzed in the sections below. For a full illustration of the spillover effects, see Figure 9 below.

Opportunity	Threat	Spillover Seen in Subject*
Achievement-Oriented Self	Communal-Oriented Self	16, 37, 32, 47, 50, 54
Achievement-Oriented Self	Moral-Oriented Self	13, 1, 3, 6, 7, 14, 15, 18, 19, 20, P2
Communal-Oriented Self	Achievement-Oriented Self	45, 6, 13, 35
Communal-Oriented Self	Moral-Oriented Self	19, 20, 55, 23, 45, 18, 54, 7, 37, 14
Moral-Oriented Self	Achievement-Oriented Self	47, 55, 21, P4, 12
Moral-Oriented Self	Communal-Oriented Self	43, 47, 55, 8, 38

* See Appendix H & I for disclosure of coding and additional quotes

Figure 9. Table of Spillover Effects Observed in the Empirics

When an opportunity for the Achievement-Oriented Self threatens the Communal-Oriented Self
Some students view chatbots as a valuable resource that can enhance, for instance, their writing skills and, ultimately, improve their academic performance. However, it is not always socially accepted to utilize them in the academic context. This is seen in the case of student 16 (sections 4.2.3.2 and 4.2.2.2), as he used chatbots to enhance academic performance while also only revealing his usage when it is socially accepted by his peers, in order to match his behavior with his social surroundings (Tajfel & Turner, 1979).

When an opportunity for the Achievement-Oriented Self threatens the Moral-Oriented Self
On the one hand, chatbots can facilitate faster and superior outcomes, which is a great opportunity for those under pressure to perform. On the other hand, it can diminish the pride in the final product, threatening one's moral-oriented self. This was observed in student 13 (section 4.2.3.1), who employed chatbots to complete academic assignments. Although the tool helped her save time for other duties, it also diminished her feeling of achievement. She sensed that the work was not done entirely by her in the "correct" manner, and thus did not attain the same level of satisfaction that she would have had if she had accomplished it independently. This suggests that while chatbots pose an opportunity for the achievement-oriented self, they can also have unintended consequences that may impact one's sense of self-worth and personal values, i.e., a threat to the moral-oriented self which is in line with Eriksson (1964) and Petriglieri (2011).

When an opportunity for the Communal-Oriented Self threatens the Achievement-Oriented Self
Some students perceived that using GenAI chatbots in group projects might reduce their individual contributions to the project. In this case, the student may see the opportunity to work collaboratively and contribute to a communal goal as a potential threat to their individual performance and sense of achievement (student 13, section 4.2.3.1). Additionally, if the student

perceives that their peers are not contributing equally or are relying heavily on the chatbot's assistance, it may also pose a threat to their achievement-oriented self (student 45, section 4.2.1.1). This contributes to Walker and Caprar (2020), as the students may feel they are not being recognized for their individual efforts and contributions, undermining their sense of achievement.

When an opportunity for the Communal-Oriented Self threatens the Moral-Oriented Self
Chatbots can provide an opportunity for skill demonstration and peer validation, but they may simultaneously create a sense of not having fully completed the work oneself, in line with one's morals. This spillover is seen in the case of student 55 (section 4.2.2.2 and 4.2.2.3), who acknowledges that her use of the chatbot was only an action triggered by the group pressure (Tajfel & Turner, 1979), as they insisted they would use it in their group project. However, she acted against her own morals and values as she enjoyed learning and doing things in the traditional way. This is in line with Eriksson's (1964) research, as one's moral traits and authentic self usually guide one's behavior, and acting against those may, therefore, pose a threat to the moral-oriented self (Petriglieri, 2011). Further, student 55's reasoning aligns with Ibarra's (2015) argument that "true-to-selfers" tend to stick to familiar processes. However, the act of covering her eyes and ears when her peers were using it in the project sheds light on cognitive-affective ambivalence highlighted by Conner and Sparks (2002), where thoughts and feelings conflict and the ambiguous situation challenges one's sense of self. A parallel further observed in the empirical data involves student 20 (section 4.2.1.2). In this case, using chatbots presents an opportunity for the community-oriented self to demonstrate skills but creates a dilemma as it contradicts her passion for continual learning and growth. Finally, this spillover effect is evident in student 19 (section 4.2.2.2), who reports that her peers seem to pay greater attention to her when she utilizes GenAI chatbots. However, despite this observation, she expresses reluctance to rely on this tool due to her personal values of continuous learning and development.

When an opportunity to the Moral-Oriented Self threatens the Achievement-Oriented Self
While not adopting the use of chatbots can allow students to act in line with their moral values, it can also harm their productivity compared to peers utilizing the tool, consequently, diminishing their achievements. In the case of student 47 (section 4.2.2.3), it was observed that she consistently opted to read and understand all information presented, driven by her passion for learning. However, this student also acknowledged the time limitations she faced in her studies and recognized how chatbots were seen to help her peers become more efficient and possibly improve performance, as one could cope with more material in a shorter period of time. Choosing to refrain from using AI may, therefore, be seen as an opportunity for her to uphold her moral values and stay authentic (Eriksson, 1964; Hart et al, 1998), but it may also pose a significant threat to her achievement-oriented self.

When an opportunity for the Moral-Oriented Self threatens the Communal-Oriented Self
Sticking to the traditional ways of learning, by nurturing one's moral-oriented and authentic self, may simultaneously threaten one's communal-oriented self. Students emphasized the importance of utilizing modern tools to remain competitive and avoid lagging behind peers (e.g. student 43, section 4.2.1.1). However, those who choose to adhere to traditional methods based on moral values (e.g. students 47 and 55, section 4.2.2.3) may face criticism from others who view them as

inflexible and old-school. As a result, maintaining a sense of authenticity and integrity through traditional learning methods can potentially conflict with the desire to fit in with a group, through being an undesirable in-group member (Brewer & Gardner, 1996; Tajfel & Turner, 1979). Thus, as Ibarra (2015) suggests, balancing one's authentic self with group expectations and norms can present obstacles.

5.2 General Discussion

5.2.1 Tensions and Cohesion Between Selves

Through the empirics and above analysis, it is found that the introduction of GenAI chatbots in an academic setting triggers students to re-visit their identities by reflecting upon their various selves. This is because individuals seek to make sense of who they are and what they stand for in a given situation, prompting the simultaneous activation of the values, norms, and beliefs inherent in their different identities. If the balance between the multiple identities inherent in the student is threatened, that is, if they do not align with each other, it may create internal conflicts. As established before, any experience or feeling that somehow challenges one's identity can be an identity threat (Petriglieri, 2011). However, such identity-implicating experiences can also be appraised as a challenge, signaling an opportunity for growth and gain rather than harm (Bataille & Vough, 2022).

However, it seems that the complexity of identity does not end there. Because of the different demands and values associated with the different identities, something being appraised as a threat to one identity is shown to be appraised as an opportunity to another identity. This phenomenon is what we refer to as a *spillover effect*. These spillover effects add another layer of difficulty to the process of reconciling one's identities and figuring out where to stand (Sveningsson & Alvesson, 2003), as well as who to become (Anteby et al., 2016; Brown, 2021), putting students in an ambiguous and ambivalent situation. However, it is important to note that the values and demands of an individual's multiple identities are not always conflicting. In fact, sometimes, they are aligned, leading to cohesion rather than tensions between the individual's multiple identities. The key difference is whether being "one" supports "another", or if being "one" prohibits "another".

5.2.1.1 Identity Tension – When Being "One" Prohibits "Another"

As noted in section 5.1, managing the multiplicity of identities can be challenging for students. This suggests that finding a balance between these different "selves" often requires individuals to make tough decisions about their actions, even if those decisions go against their other intentions. Consequently, students may choose to utilize, or not utilize, generative chatbots in their academic pursuits in a way that favors one "self" over another. This means acting against the values associated with another "self", which further creates a sense of ambivalence as one is forced to navigate conflicting values and priorities. Here, acting in line with one prohibits another.

Through the empirics, several identity work strategies used by students have been identified to handle the potential threats posed by GenAI chatbots to their identities. One such strategy

involves disengaging with the chatbots when identity tensions arise. This approach is achieved by disidentifying with the identity that is perceived to be conflicting with the situation at hand (Bataille & Vough, 2022). For instance, this is seen in student 13 (section 4.2.3.1), who chooses to refrain from following her moral values, thus disidenitifying with her moral-oriented self, in order to adhere to her achievement-oriented self. Both adhering to her morals and satisfying her pressure to perform would not be possible in the context of utilizing chatbots in her assignments. Hence, in this case, being "one" prohibits "another". Another case was observed, involving student 55 (section 4.2.2.2), who decided to go along with the group's desires even though she believed it went against her own moral compass. Once again, the student is disengaging with her moral-oriented self, in favor of her communal-oriented self.

In both examples discussed above, the moral-oriented self seems to be the one to suffer in the case where being "one" prohibits "another". This indicates that, in the specific context of this study, the moral-oriented self seems to be the one least valued, or considered lowest in the hierarchy of the three. Notably, women in this study tend to dominate similar cases, where the moral-oriented self is prohibited. This can lead to a divergence in the self-perception, creating tensions in the overall dynamics of the study environment. Moreover, students who view chatbots as a threat to their identity may experience decreased performance and self-esteem, as highlighted by Petriglieri (2011). The over-representation of women expressing these feelings is both specifically interesting and important for several reasons. First, it aligns with the theory of imposter syndrome, as described by Ibarra (2015), that going against our personal values and desires can make us feel like we are pretending to be someone we are not – thus making us feel like imposters. Further research has shown that women report greater imposter syndrome than men (Cowie et al., 2018), which is further strengthened by this study and its specific context. Second, parallels could be drawn to the theory of backlash effects for women. The theory is underpinned by the notion that gender stereotypes have a stronger hold on women compared to men, resulting in a narrower range of acceptable behaviors for women (Rudman & Glick, 1999). In this study, it would mean that the norms and inherent beliefs of women regarding what is right and wrong (Burke, 2007) could possibly be different from the ones associated with the other gender. While the primary focus of this study may not revolve around gender-related aspects, it does bring to light the need for further research in this area. It is crucial to comprehend the tensions that emerge regarding identity implications in order to better equip and encourage students to become decision-makers, as Principal H has emphasized.

5.2.1.2 Identity Cohesion – When Being "One" Supports "Another"

When the utilization was seen to create an opportunity rather than a threat, chatbots were seen to both complement students and enhance their results. It was seen to help these students to improve their academic achievements, demonstrate their abilities to peers, as well as help them to follow their personal goals, which for instance could be pursuing their dream career. Instead of being seen as a hindrance to their personal development, identity cohesion was instead associated with an opportunity for personal growth. Rather than rejecting or denying their conflicting identities as seen in the above section, these students chose to enhance and solidify the aspects of their identities that were not in conflict, by actively reinforcing and expanding their relevance in various contexts. The actual outcome was prioritized over the process to success, as student 30 (section 4.2.1.1 and 4.2.3.2) has pointed out. In line with Petriglieri's (2011) concept of a positive

state, chatbots were found to bridge the gap between the actual and ideal self – having a fluid identity that is flexible, adaptable, and can change over time. For the individual, it creates flexibility and an opportunity to be adaptable to the future and what the job market needs, while for others who have a more rigid structure, it becomes more of a threat – which further contributes to Ibarra's (2015) notion of chameleons and true-to-selfers.

The implications of appraising an experience as a threat to one's "selves" and self-perception, versus as an opportunity, will have significantly different responses. The positive state associated with appraising an experience as an identity opportunity, is seen to provide students with a more open mind, flourishing creativity and flexibility, as well as a higher self-esteem in order to take on challenges more easily and fearlessly. This imbalance between the two appraising groups will fuel the discrepancy among the tensions in the overall educational environment, where some people may take one leap forward while others may take a step back.

5.2.2 The Role of The Context

All of these tensions, wrestling games, discrepancies, and consequences are already happening in these prominent HEIs, to the people who will lead and foster the society in the years to come. It is often assumed that young people are expected to be proficient in adapting to new technologies and innovations with ease. However, this process may not always be enjoyable, as the empirics show, and can potentially trigger negative emotions, leading individuals to behave in ways that might contradict their personal values. As expressed by student 32, "It feels a bit sad that it is often better than me, but being a child of my time, I have to welcome this". The impact of context on students' processes of revising and updating their "selves", coupled with the ambiguous presence of GenAI chatbots, must be recognized to foster a tension-free environment. Understanding the ongoing phenomena is the first crucial step toward the reduction of these present tensions.

6. Conclusion

In this concluding chapter, we will (1) answer the research question posed in section 1.3 and (2) present an updated theoretical framework. Additionally, we will (3) discuss the theoretical contributions and (4) practical implications of our study. Finally, we will (5) acknowledge the study's limitations and (6) suggest areas for future research by highlighting unanswered questions in this field.

6.1 How Students' Self-Perceptions are Affected by GenAI Chatbots in the Process of Revising and Updating Their "Selves"

Students are affected by their usage of GenAI chatbots in the process of revising and updating their "selves"; however, *how* they are affected, and *what* the consequences are, differ. The use of chatbots can affect the process of revising and updating one's "selves" in a way that can engender both tensions and cohesions between their multiple selves, giving rise to either an identity threat or an opportunity, as well as spillover effects. This phenomenon occurs due to the necessary trade-offs that must be made to reconcile the different "selves" that are prevalent for students within the context of higher education, each with its unique set of identity content, which is the demands, values, and beliefs of the individual.

The thesis' identified outcome is twofold. First, the use of GenAI chatbots in an academic context is perceived as an uncertainty-producing event, given its ambiguity and lack of guidelines for correct behavior. This, in turn, triggers a range of appraisals for the three different "selves"; the achievement-, the communal-, and the moral-oriented. For the different "selves", it can be perceived either as a threat or an opportunity, indicating either potential harm or growth to the value, meanings, or enactment of that identity. When being appraised as a threat, trade-offs to the identities' values, meanings, or enactments are required, which give rise to tensions in the individual's self-concept, which can result in a worsened self-perception, as being "one" then prohibits "another". Second, when the use of chatbots is being appraised as an identity opportunity, no trade-offs for any of the three "selves" are required, as the values, meaning, and enactments are aligned. Thus being "one" supports "another", and cohesion, rather than tensions, occur. As a result, the individual is provided an opportunity for growth and improvement, resulting in an improved self-perception.

Consequently, these motivations – identity threats and opportunities – are able to spill over; where a threat to one identity can become an opportunity for another, and vice versa. This further triggers students to engage in the process of identity work by revising and updating their different "selves", in order to reconcile the imbalance. We further conclude that the swift introduction and adoption of GenAI chatbots in higher education, coupled with a lack of clear guidelines from the HEIs, puts students in an ambiguous situation, prompting the process of revising and updating their "selves" in order to make sense of themselves and what they stand for in this new era of academic context. Therefore, the ongoing process of identity work that is evident in this study, mirrors the unpredictable winds in a garden, prompting students to consistently reassess their skills and goals, much like the rearrangement of the flowers and plants.

6.2 Adapted Theoretical Framework

The empirical findings call for an updated framework that reflects its main discoveries, distinct from the theoretical framework presented in section 2.3. This adapted framework (Figure 10) highlights three unique "selves" identified, and their interactions: the Achievement-Oriented Self, Communal-Oriented Self, and Moral-Oriented Self, which are particularly relevant in an academic setting. Each of these "selves" involves threat, opportunity, and spillover, representative of the role, collective, and personal identities, but tailored to this specific context. The balancing of the content of these triggers identity work. This updating and revising of the different "selves" involves the evaluation of chatbots as either a threat or an opportunity for that particular self, as well as potential spillovers for the other selves, and the act of trying to reconcile them. As a result, the appraisal can either lead to tensions or cohesion, which are included in A_2, C_2, and M_2, which represent the updated identity content resulting from the identity work (Bataille & Vough, 2022). This, in turn, affects self-perception, which ultimately feeds into the future use of GenAI chatbots in academic pursuits. Therefore, each of these components interacts and has cyclical relationships – where students go back and forth between perceptions – as illustrated by the continuous arrows. This highlights the recursive process of identity work, which further contributes to Ashforth & Mael's (1989) notion that identity is a dynamic process of *becoming*, rather than *being*.
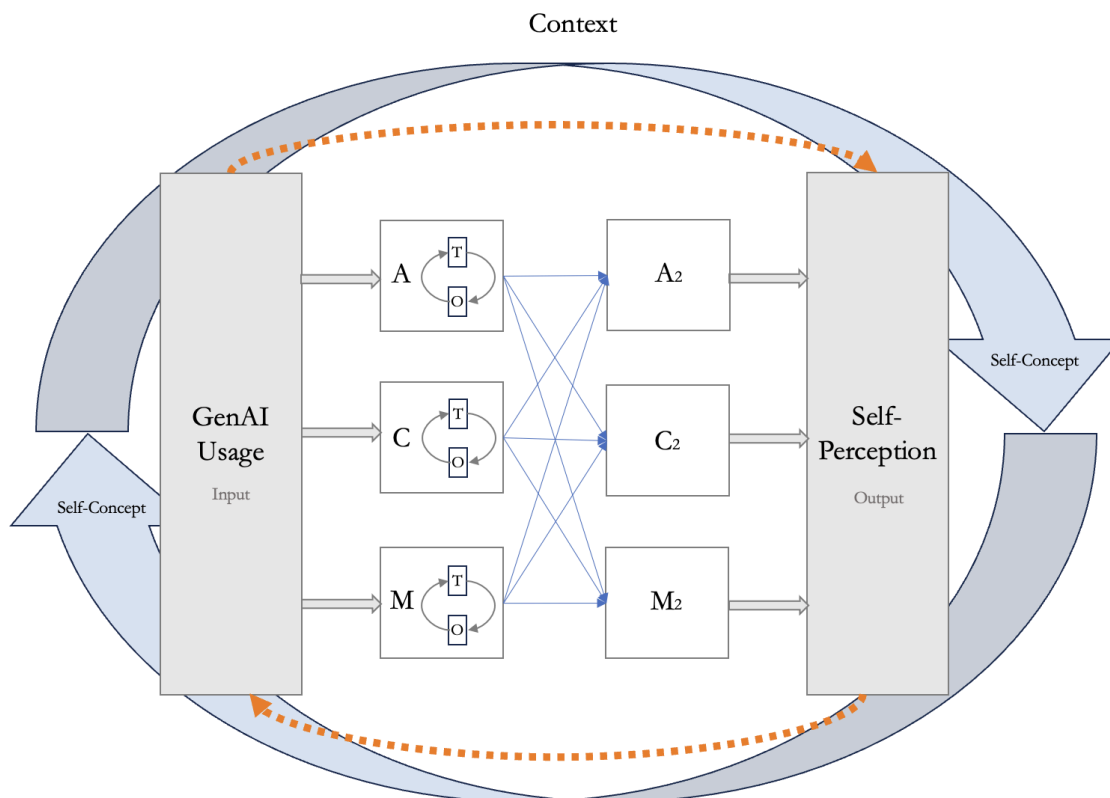
Figure 10. Adapted Theoretical Framework

6.3 Theoretical Contributions

By exploring how students' self-perceptions are affected by GenAI chatbots in the process of revising and updating their "selves", this study adds to existing theory streams in three ways. First, we contribute to the extensive field of identity research by adding to the understanding of the complex interplay of various factors that contribute to an individual's identity construction (Boudreau et al., 2014). By examining the factor of this ambiguous situation in an academic setting, we provide a better understanding of how individuals make sense of themselves in specific contexts. Second, we explore how generative chatbots can pose either a threat or an opportunity to individuals in an academic context, and how these motivations can spill over between the different "selves" of an individual, thus contributing to the existing literature on identity threats and opportunities. Specifically, we add to the arguments put forth by Bataille and Vough (2022), that an identity threat can also be appraised as a challenge, signaling an opportunity for gain and growth. We do this by stating that something can be appraised as an opportunity and a threat *simultaneously*, by targeting different "selves" that an individual holds. Last, we delve into the unexplored field of the intersection between AI and identity work, connecting the technologies with how they impact our identities (Nach & Lejune, 2009; Selenko et al., 2022). We do this by enhancing the understanding of how students' self-perceptions are affected by GenAI chatbots and how they engage in subsequent identity work. Despite the reluctance of management and organizational scholars to investigate this intersection, we address it by emphasizing the contextual, dynamic, and recurring nature of identity work among students and its correlation with GenAI chatbots.

6.4 Practical Implications

The study provides valuable insights for HEIs, shedding light on how students engage in identity work using GenAI chatbots and how this process affects their self-perception. As these institutions aim to prepare their students to become future professionals and leaders, it is crucial to comprehend the implications of new technologies that create new avenues for learning. This is especially important given the potential threats that this research has highlighted, which could impact students' self-perception and increase self-doubt. As Petriligini (2011) has demonstrated, a reduction in self-esteem can lead to less motivation to take on leadership roles. Therefore, it is essential for institutions to be aware of these implications and take steps to mitigate any negative effects on their students' self-perception. Although this thesis does not aim to explore strategies for mitigating such challenges, it does provide an initial understanding of the cognitive processes at play in students' minds when interacting with these GenAI chatbots – when being a part of the collective while also aligning with their personal beliefs and educational objectives.

In light of the existing ambiguity surrounding this technology, identity threats are becoming more prevalent. As students' self-doubt increases, it can hinder their development, making it crucial to gain a deeper understanding of the issue and take appropriate action. As previously mentioned, there is currently no clear solution for how to manage or oversee the implementation of GenAI technology in an academic environment. While it may not be feasible to restrict students from using this technology, it is likely that many students will choose to use it, given the expected demand from potential future employers. Additionally, the empirics show that the use of GenAI

can lead to improved learning outcomes and increased accessibility to knowledge. Therefore, it is important for institutions to carefully consider how they can best support and guide students in their use of GenAI tools – to support and develop their students, in the process of becoming future professionals and develop a stable sense of "selves".

6.5 Limitations

This study's findings are subject to certain limitations, which are worth noting. First, it is important to mention that while the delimitation to focus on three prominent HEIs in Stockholm, Sweden, enables a deep and nuanced picture, the results obtained therein may not be generalizable to other study domains, universities, or countries, and may vary across contexts. Second, the area of identity research and identity work is a rather abstract field, as it deals with processes occurring within the students being studied. As a result, the outcome of the research largely depends on the individuals involved in the study, as well as making it somewhat difficult for outside observers to fully grasp and explain (Alvesson, 2010). Last, the term "AI" has become a popular buzzword, used frequently in different contexts. This popularity may have influenced the students participating in this study, potentially leading them to provide more positive responses than their genuine experiences and opinions, as they could be attributed to the pressure of conforming to the popular opinions of others. Furthermore, the academic context in which the interviews were conducted may have also impacted students' responses, as being in an academic setting can reinforce certain beliefs and expectations.

6.6 Future Research

Given GenAI chatbots' recent emergence and widespread adoption in academia, both HEI and politicians are advocating for a deeper understanding of how to best support and meet the expectations of students and employers. While this study is limited to Stockholm, Sweden, as well as the Business and/or Economics programs, additional variables need to be added and incorporated to uncover more relationships in this setting as well as to gain a greater understanding, as well as investigate the phenomena in other organizational contexts. Additionally, it is important to note that this thesis has only scratched the surface of the gender inequalities, self-confidence and self-esteem that exist within this study. In order to fully comprehend the complex tensions and consequences on students, further research is necessary. Also, while this thesis does not disclose how learning is impacted more than showing how motivation is affected which may lead to a decrease/increase in intellectual engagement, further research is needed. Finally, as this thesis only seeks to understand how the process of identity work unfolds in the usage of GenAI chatbots, future research is needed to understand how to strengthen students and, if and how, HEI may need to update academic agendas in order to prepare their students.

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8. Appendices

8.1 Appendix A: Interview Subjects (Pilot Study)

Student	Year of Study	Program	HEI	Gender	Interview Language	Interview Format	Duration	Date
P1	5	Business & Management	SSE	Male	English	In-person	25 min	07-09-2023
P2	5	Business Administration	SU	Female	Swedish	Microsoft Teams	23 min	07-09-2023
P3	5	Industrial Economics	KTH	Male	Swedish	Microsoft Teams	35 min	07-09-2023
P4	5	Accounting & Financial Valuation	SSE	Female	English	In-person	20 min	07-09-2023
P5	5	Finance	SSE	Male	English	Microsoft Teams	22 min	11-09-2023
P6	5	Business & Management	SSE	Female	English	Microsoft Teams	21 min	12-09-2023

8.2 Appendix B: Question Guide (Pilot Study)

- *Name, Year of Study, Program, School, Gender*
- *Ask if OK to record the interview, and consent form*
- *No names will be mentioned in the thesis*

Background
- What do you enjoy the most with studying?
- How would you describe your greatest skill when it comes to studying?
- Is it important for you to perform well? If so, why, when, and in what aspects?
- Do you feel pressure to perform? Is it internal or external?

Study and Preparations
- Could you explain the process of how you study and prepare for classes?
- What tools do you use?
- What technology do you use?
- Can you explain how you use technology in your preparations or studies?
- (If/when they bring up) Do you know how/if your peers are using GenAI technologies?

Everyday life
- What is your overall attitude towards AI technologies?
- What tasks do you use GenAI for in your daily life?
  - AI in general? Generative AI/ Chatbots?

Learnings and Development
- Do you think that GenAI enhances your ability to learn and acquire new knowledge, or does it hinder it?
- Do you believe GenAI technologies, such as chatbots, have improved your intellectual growth or self-perception?
- Do you believe that the increased use of chatbots may lead to intellectual laziness? Or intellectual enhancement?
- Do you believe that the use of chatbots affects your sense of autonomy in pursuing intellectual challenges or tasks?
- Do you feel that the use of GenAI has affected your motivation to engage in independent learning?

Feelings and Experience
- Have you ever encountered situations where GenAI chatbots have provided you with an answer that has challenged your existing knowledge?
- Have you encountered a situation where GenAI is superior?
- How did it make you feel about your own knowledge and ability?
- Next time you encounter a similar situation, do you think about your previous experience with the use of GenAI?
- Have you ever experienced feelings of dependency on GenAI for information or decision-making?
- How do these feelings relate to your self-perception as an intellectually capable individual?
- If you are unable to use it, how would it make you feel?
- When using GenAI chatbots in a school project, how do you view the final work? Does it feel that it is your work or your work together with chatbots?

Other
- Is there anything else you want to add?

8.3 Appendix C: Interview Subjects (Main Study)

Student	Year of Study	Program	HEI	Gender	Interview Language	Interview Format	Duration	Date
1	3	Business Administration	SU	Female	Swedish	Microsoft Teams	33 min	18-09-2023
2	4	Business Administration	SU	Female	Swedish	Microsoft Teams	27 min	18-09-2023
3	3	International Business and Politics	SU	Female	Swedish	Microsoft Teams	29 min	19-09-2023
4	1	Retail Management	SSE	Male	English	In-person	22 min	19-09-2023
5	1	Business & Economics	SSE	Male	English	In-person	22 min	19-09-2023
6	1	Business & Economics	SSE	Male	English	In-person	26 min	19-09-2023
7	1	Retail Management	SSE	Female	Swedish	In-person	20 min	19-09-2023
8	1	Business Administration	SU	Male	Swedish	Microsoft Teams	27 min	19-09-2023
9	1	Retail Management	SSE	Male	English	In-person	39 min	20-09-2023
10	1	Retail Management	SSE	Male	English	In-person	36 min	20-09-2023
11	1	Business & Economics	SSE	Female	English	In-person	26 min	20-09-2023
12	1	Retail Management	SSE	Female	English	In-person	24 min	20-09-2023
13	4	International Marketing and Management	SU	Female	Swedish	Microsoft Teams	43 min	20-09-2023
14	1	Business & Economics	SSE	Female	English	In-person	43 min	21-09-2023
15	1	Retail Management	SSE	Male	English	In-person	21 min	22-09-2023
16	1	Business Administration	SU	Male	Swedish	Microsoft Teams	26 min	22-09-2023

17	5	Environmental Economics and Management	SU	Female	English	Microsoft Teams	23 min	22-09-2023
18	5	Business & Management	SSE	Female	English	In-person	21 min	25-09-2023
19	4	International Business	SSE	Female	English	In-person	30 min	25-09-2023
20	4	International Business	SSE	Female	English	In-person	26 min	27-09-2023
21	4	Business & Management	SSE	Female	English	In-person	35 min	27-09-2023
22	3	Business Administration	SU	Female	English	In-person	34 min	28-09-2023
23	5	Business & Management	SSE	Female	English	In-person	30 min	28-09-2023
24	5	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	36 min	29-09-2023
25	5	Industrial Economics	KTH	Male	English	Microsoft Teams	26 min	29-09-2023
26	4	Finance	SSE	Male	English	Microsoft Teams	37 min	29-09-2023
27	3	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	30 min	02-10-2023
28	3	Industrial Economics	KTH	Male	English	In-person	27 min	02-10-2023
29	4	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	30 min	03-10-2023
30	5	Business Administration	SU	Male	English	Microsoft Teams	23 min	03-10-2023
31	4	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	22 min	04-10-2023
32	5	Business Administration	SU	Female	Swedish	Microsoft Teams	24 min	04-10-2023
33	3	Industrial Economics	KTH	Male	English	In-person	43 min	04-10-2023
34	3	Business Administration	SU	Male	Swedish	In-person	23 min	05-10-2023
35	3	Business Administration	SU	Male	Swedish	Microsoft Teams	30 min	05-10-2023
36	1	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	24 min	09-10-2023
37	1	Business Administration	SU	Female	Swedish	Microsoft Teams	24 min	11-10-2023

38	5	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	28 min	12-10-2023
39	5	Business Administration	SU	Male	Swedish	Microsoft Teams	21 min	17-10-2023
40	1	Industrial Economics	KTH	Male	Swedish	Microsoft Teams	25 min	18-10-2023
41	3	Business Administration	SU	Male	Swedish	Microsoft Teams	24 min	23-10-2023
42	3	Business Administration	SU	Male	Swedish	Microsoft Teams	23 min	23-10-2023
43	5	Business & Management	SSE	Male	English	In-person	26 min	24-10-2023
44	5	Industrial Economics	KTH	Male	Swedish	Microsoft Teams	24 min	24-10-2023
45	1	Business Administration	SU	Female	Swedish	Microsoft Teams	31 min	26-10-2023
46	1	Business Administration	SU	Female	Swedish	Microsoft Teams	21 min	26-10-2023
47	1	Business Administration	SU	Female	Swedish	Microsoft Teams	25 min	27-10-2023
48	5	Business & Management	SSE	Male	English	Microsoft Teams	28 min	30-10-2023
49	1	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	27 min	30-10-2023
50	1	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	39 min	30-10-2023
51	5	Business & Management	SSE	Male	English	Microsoft Teams	37 min	31-10-2023
52	5	Industrial Economics	KTH	Male	Swedish	Microsoft Teams	27 min	01-11-2023
53	1	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	26 min	01-11-2023
54	1	Industrial Economics	KTH	Female	Swedish	Microsoft Teams	24 min	01-11-2023
55	5	Business & Management	SSE	Female	English	Microsoft Teams	32 min	03-11-2023

8.4 Appendix D: Question Guide (Main Study)

- *Name, Year of Study, Program, School, Gender*
- *Ask if OK to record the interview, and consent form*
- *No names will be mentioned in the thesis*

Background
- What do you believe is expected from you when being a student at your school?
- What do you enjoy the most with studying?
- How would you describe yourself?
- How would you describe your greatest skill when it comes to studying?
- Is it important for you to perform well? If so, why, when, and in what aspects?
- Do you feel pressure to perform? Why? Where does it come from?

Study and Preparations
- Could you explain the process of how you study/prepare for classes?
- What tools do you use?
- What technology do you use?
- Can you explain *how* you use technology in your prep/study?
  - If using AI, do you discuss the use of it with peers

AI in everyday life
- What is your overall attitude towards AI technologies?
- Do you use AI outside of school?
  - How and for what tasks do you use it for?
  - If relevant, ask more about the peers' usage

Learnings and Development
- What are your thoughts about AI as a tool for learning and acquiring new knowledge?
  - Do you believe it enhances or hinders it?
- What are your thoughts about the use of AI and its potential impact on intellectual engagement?
  - Could it enhance your engagement or make you more lazy?
- What are your thoughts about AI and your motivation in tackling a challenging task on your own?

Feelings and Experience
- Have you encountered situations where AI is superior to your own knowledge and skills?
- Can you describe the situation/s
- How did that make you feel?
- What did you think?
- What comes to mind when you encounter a task that you've previously addressed with the assistance of AI?
- How do you go about solving it this time?
- How would you feel if you were not allowed/not able to use it this time?
- Have you ever experienced feelings of dependency on AI for information or in decision-making?
- Can you describe the task/situation
- How do these feelings relate to your self-perception as an intellectually capable individual?
- What are your feelings or thoughts regarding the outcome when AI has been employed in a project you've worked on?
- Do you consider the work to be primarily your own or a collaborative effort with AI?
- What are your considerations regarding the potential impact of AI on your future career?

Other
- Is there anything else you would like to add?

8.5 Appendix E: List of Professors and Experts Interviewed & Discussion Themes

Subject	HEI	Role	Subject of Specialization of Interest For This Thesis	Interview Format	Duration	Date
A	SSE	Professor	Identity Theory and Identity Work	In-person	72 min	26-10-2023
B	SSE	Assistant Professor & Docent	Identity Theory and Identity Work	Microsoft Teams	45 min	27-10-2023
C	SU	Professor	Identity Theory and Pedagogy	Microsoft Teams	56 min	20-11-2023
D	SSE	Assistant Professor	Digital Technology and Organizational Strategy	In-person	67 min	20-11-2023
E	KTH	Program Director	Educational Planning, Implementation and Coordination	Microsoft Teams	46 min	23-11-2023
F	KTH	Vice President	Educational Planning, Implementation and Coordination	In-person	58 min	23-11-2023
G	SU	Vice President	Educational Planning, Implementation and Coordination	Microsoft Teams	32 min	24-11-2023
H	SSE	President	Educational Leadership, Planning and Fundraising	In-person	44 min	29-11-2023

Discussion Themes*
- Implications for the HEIs as organizations by the introduction (or non-introduction) of GenAI chatbots
- Behavioral consequenses on students by AI adoption
- Transformation of students roles
- Relevant skills in the AI era
- Personal opinion on AI in education

* Questions/Follow-up questions were tailored to the specific area of specialization and/or role of the interviewed faculty member

8.6 Appendix F: Consent Form

Standard text and consent to participation student's survey / interview

The student's project. As an integral part of the educational program at the Stockholm School of Economics, enrolled students complete an individual thesis. This work is sometimes based upon surveys and interviews connected to the subject. Participation is naturally entirely voluntary, and this text is intended to provide you with necessary information about that may concern your participation in the study or interview. You can at any time withdraw your consent and your data will thereafter be permanently erased.
Confidentiality. Anything you say or state in the survey or to the interviewers will be held strictly confidential and will only be made available to supervisors, tutors and the course management team.
Secured storage of data. All data will be stored and processed safely by the SSE and will be permanently deleted when the projected is completed.
No personal data will be published. The thesis written by the students will not contain any information that may identify you as participant to the survey or interview subject.
Your rights under GDPR. You are welcome to visit https://www.hhs.se/en/about-us/data-protection/ in order read more and obtain information on your rights related to personal data.

Project title	Year and semester
Identity Work and Generative AI Chatbots, Master Thesis	**2023, Fall**
Aim of the study	
To explore how the use of generative AI chatbots affect student's individual self-perception in an academic context	
Students responsible for the study or interview	
Karin Östberg (50650) & Wilma Augustsson (50529)	
Supervisors and department at SSE	Supervisor e-mail address
Wiley Wakeman, Department of Management and Organization	**wiley.wakeman@hhs.se**
Type of personal data about you to be processed	
Educational institution, year of study (students), gender (students), subject of specialization/role. No names will be stated.	

I have taken part of the information provided above and consent to take part in this study:

Name	Place and date

➔ [Button]: Continue

No thank you I do not consent to take part of this study -> [Button]: Cancel

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8.7 Appendix G: Data Analysis Structure

Competitive environment	Social Influence and Chabot Usage	
Inspired by peers		AI Usage
Enhancing personal development	Personal Development	
Hindering personal development		

Pressure to perform	Achievement-Oriented Self	
Better together		Self-Concept and Spectrum of Identities
Demonstrate abilities to peers	Communal-oriented Self	
Cultivate Collaborative and Social Skills		
Values, beliefs and goals	Moral-Oriented Self	
Shame and defense mechanism		

Against identity	Identity Threat	
		Identity Conflict
Complementing abilities	Identity Opportunity	
Enhancing results		

8.8 Appendix H: Data Coding

The original Excel file that contains the associated quotes for each mark can be made available upon request.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Values Social Aspect of Studying				*			*								
Values Flexibility Aspect of Studying						*		*			*				
Values Knowledge Aspect of Studying	*	*	*		*				*		*	*	*	*	*
Internal Pressure to Perform	*		*	*	*				*	*	*	*			
External Pressure to Perform	*	*				*	*	*				*	*	*	
AI Usage Affected Peers (Social Influence)	*		*	*			*	*	*	*	*	*	*	*	
AI Usage Not Affected by Peers		*			*	*									*
Positive Attitude Towards AI	*	*		*	*				*	*	*			*	*
Negative Attitude Towards AI			*				*	*	*				*	*	
AI Improves Learning	*	*		*	*	*		*	*		*				*
AI Hinders Learning			*				*			*		*	*	*	
AI Enhances Engagement					*									*	
AI Hinders Engagement (Makes One Lazy)	*	*	*	*			*	*	*	*	*	*	*		*
AI Enhances Motivation			*				*							*	*
AI Hinders Motivation	*	*		*	*			*	*	*	*	*	*		
Positive Feelings on AI Being Superior		*		*	*	*			*	*	*			*	*
Negative Feelings on AI Being Superior	*		*					*				*	*		
Exponential Use of AI	*	*	*	*			*	*	*	*	*		*	*	*
No Exponentional Use of AI					*	*						*			
Negative Emotions When AI Not Allowed	*		*			n/a		*			*	*	n/a	*	*
Neutral Emotions When AI Not Allowed		*		*	*	n/a	*		*	*			n/a		
Comfortable Without AI		*	*	*	*	*	*		*	*		*		*	
Not Comfortable Without AI	*							*			*		*		*
Feelings of Dependency	*		*									*		*	*
No Feelings of Dependency		*		*	*	*	*	*	*	*		*		*	
Final Outcome is My Own	*		*	*				*		*			*	*	*
Final Outcome is Collaboration		*			*	*	*		*			*	*		
Defensive/Defendig Usage AI				*				*	*	*		*			*
Better Together With AI	*			*							*	*	*	*	*
Usage Not In Line With Identity	*		*			*	*	*	*		*	*	*	*	*
Female	*	*	*				*					*	*	*	
Male				*	*	*		*	*	*					*
SU Last Year	*	*	*												
SU First Year								*					*		
SSE Last Year															
SSE First Year				*	*	*	*		*		*	*		*	*
KTH Last Year															
KTH First Year												*			
Uses Chatbots in Studies	*	*	*	*	*		*	*	*	*	*		*	*	*

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Values Social Aspect of Studying			*					*		*					
Values Flexibility Aspect of Studying	*				*				*						*
Values Knowledge Aspect of Studying		*		*		*	*				*	*	*	*	
Internal Pressure to Perform	*	*			*	*	*		*	*	*	*	*		
External Pressure to Perform			*	*				*						*	
AI Usage Affected Peers (Social Influence)	*	*	*	*	*	*	*		*	*	*	*	*	*	*
AI Usage Not Affected by Peers								*							
Positive Attitude Towards AI	*	*	*	*			*	*	*		*	*	*		*
Negative Attitude Towards AI					*	*				*				*	
AI Improves Learning		*	*	*		*	*	*			*		*		*
AI Hinders Learning	*				*				*	*		*		*	
AI Enhances Engagement			*				*				*				*
AI Hinders Engagement (Makes One Lazy)	*	*		*	*	*		*	*	*		*	*	*	
AI Enhances Motivation			*				*		*		*		*		
AI Hinders Motivation	*	*		*	*	*		*		*		*		*	*
Positive Feelings on AI Being Superior	*		*	*			*	*			*	*	*	*	*
Negative Feelings on AI Being Superior		*		*	*				*	*					
Exponentional Use of AI	*	*	*	*	*	*	*	*		*		*	*	*	*
No Exponentioanl Use of AI									*		*				
Negative Emotions When AI Not Allowed	*	*	*	*	*	*	*	*		*	*	*		*	
Neutral Emotions When AI Not Allowed										*			*		*
Comfortable Without AI	*			*				*	*	*	*		*		*
Not Comfortable Without AI		*	*		*	*	*					*		*	
Feelings of Dependency		*	*		*	*	*	*				*		*	
No Feelings of Dependency	*			*					*	*	*		*		*
Final Outcome is My Own	*	*	*				*	*	*	*	*		*		*
Final Outcome is Collaboration				*	*	*						*		*	
Defensive/Defendig Usage AI	*		*		*			*		*	*		*		
Better Together With AI	*	*	*	*		*	*	*		*	*	*	*		*
Usage Not In Line With Identity			*	*	*	*		*							
Female		*	*	*	*	*	*	*	*			*		*	
Male	*										*	*	*		*
SU Last Year		*					*								*
SU First Year	*														
SSE Last Year			*	*	*	*		*				*		*	
SSE First Year															
KTH Last Year									*	*		*	*	*	
KTH First Year															
Uses Chatbots in Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Values Social Aspect of Studying				*										*	
Values Flexibility Aspect of Studying						*	*	*	*		*	*			
Values Knowledge Aspect of Studying	*	*	*		*	*				*			*		*
Internal Pressure to Perform		*	*	*		*		*	*	*		*	*	*	*
External Pressure to Perform	*	*			*	*	*	*		*	*				*
AI Usage Affected Peers (Social Influence)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
AI Usage Not Affected by Peers															*
Positive Attitude Towards AI	*	*	*	*	*	*		*	*	*	*	*	*		*
Negative Attitude Towards AI							*							*	
AI Improves Learning			*	*				*	*	*	*	*		*	
AI Hinders Learning	*	*			*	*	*						*		*
AI Enhances Engagement	*		*												
AI Hinders Engagement (Makes One Lazy)		*		*	*	*	*	*	*	*	*	*	*	*	*
AI Enhances Motivation	*		*	*					*	*	*	*			*
AI Hinders Motivation		*			*	*	*	*					*	*	
Positive Feelings on AI Being Superior			*	*					*	*	*	*	*	*	
Negative Feelings on AI Being Superior	*	*			*	*	*	*							*
Exponentional Use of AI	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
No Exponentioanl Use of AI															
Negative Emotions When AI Not Allowed	*	*	*	*		*	*	*	*	*	*	*	*	*	*
Neutral Emotions When AI Not Allowed					*										
Comfortable Without AI	*				*	*		*	*		*	*	*	*	*
Not Comfortable Without AI		*	*	*			*			*					
Feelings of Dependency		*	*	*			*			*					
No Feelings of Dependency	*				*	*		*	*		*	*	*	*	*
Final Outcome is My Own	*		*	*	*	*		*	*		*	*	*	*	*
Final Outcome is Collaboration		*					*			*					
Defensive/Defendig Usage AI				*			*			*	*	*	*	*	
Better Together With AI		*		*	*		*	*	*	*	*		*		
Usage Not In Line With Identity		*			*	*	*	*					*		*	*
Female	*	*				*	*	*							*
Male			*	*	*				*	*	*	*	*	*	
SU Last Year		*		*	*				*		*	*			
SU First Year							*								*
SSE Last Year													*		
SSE First Year															
KTH Last Year	*		*					*						*	
KTH First Year						*				*					
Uses Chatbots in Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	46	47	48	49	50	51	52	53	54	55	P1	P2	P3	P4	P5	P6
Values Social Aspect of Studying							*						*			
Values Flexibility Aspect of Studying	*			*	*		*									
Values Knowledge Aspect of Studying		*	*			*		*	*		*	*		*	*	*
Internal Pressure to Perform	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
External Pressure to Perform	*								*		*					
AI Usage Affected Peers (Social Influence)			*	*	*	*	*	*	*	*	*	*	*	*	*	*
AI Usage Not Affected by Peers	*	*														
Positive Attitude Towards AI	*	*	*	*		*	*	*				*	*	*	*	*
Negative Attitude Towards AI				*					*	*						
AI Improves Learning	*			*		*	*	*	*		*			*	*	*
AI Hinders Learning		*	*		*				*			*	*			
AI Enhances Engagement															*	
AI Hinders Engagement (Makes One Lazy)	*	*	*	*	*	*	*	*	*	*	*	*	*	*		*
AI Enhances Motivation	*	*	*	*											*	
AI Hinders Motivation				*	*	*	*	*	*	*	*	*	*	*		*
Positive Feelings on AI Being Superior	*		*	*	*	*	*	*			*		*	*	*	
Negative Feelings on AI Being Superior		*						*	*				*			*
Exponentional Use of AI	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*
No Exponentioanl Use of AI				*												
Negative Emotions When AI Not Allowed	n/a	n/a	*	*	n/a	*	*		*		*			*	*	*
Neutral Emotions When AI Not Allowed	n/a	n/a			n/a		*		*				*	*		
Comfortable Without AI	*	*		*	*	*		*	*	*	*	*	*	*	*	
Not Comfortable Without AI			*				*									*
Feelings of Dependency			*				*					*			*	*
No Feelings of Dependency	*	*		*	*	*		*	*	*		*	*	*		
Final Outcome is My Own			*			*	*					*		*		*
Final Outcome is Collaboration	*	*		*	*			*	*	*		*		*		*
Defensive/Defendig Usage AI			*			*	*						*			
Better Together With AI			*	*		*	*	*	*		*	*	*		*	*
Usage Not In Line With Identity		*		*	*			*	*	*		*		*		
Female	*	*		*	*			*	*	*		*		*		*
Male			*			*	*				*		*		*	
SU Last Year													*			
SU First Year	*	*														
SSE Last Year			*			*			*	*				*	*	*
SSE First Year																
KTH Last Year							*						*			
KTH First Year				*	*			*	*							
Uses Chatbots in Studies			*	*		*	*	*	*	*	*	*	*	*	*	*

8.9 Appendix I: Additional Quotes

Themes & Subcategories	Additional Quotes from data structuring
AI usage **Competitive Environment** (Triggers adaption)	*"If people in the class use it, I will be urged to use it. I want to have the same preconditions as everyone else, of course."* *− 58* *"When I know that everyone else is using [ChatGPT], then not having access to it would stress me out" − 18* *"If I know everyone else is using [ChatGPT] and they're getting a good result, then I would definitely use it myself as well, because you don't want to be the only one not doing it" − 10* *"A student trying to do it the right way [not using ChatGPT] will probably get a lower grade relative to everyone else that is probably using it" − 28* *"You feel like you are forced into using it, if you're not using it you're gonna end up worse than everybody else. If you are not using it you are going to be surpassed by others, that's why you are forced into using it." − 25* *"If people in the class use it, I will be urged to use it. I want to have the same prerequisites as everyone else, of course." − P3* *"I wouldn't have known about it or how to use it as much if my friends didn't use it" - 11* *"I think some use it, maybe 50%. Haven't talked much about it; we're not discussing it, but 50-60% use it, so a large part of it does. They can do it, but if my friends start talking about it, if 80% use it, then I might feel pressured to use it too." - 50* *"I see myself comparing myself to others in this. You do not talk about chatgpt with friends outside university, but here, It comes up way more often. I know a lot of other students use chatgpt, lifehack, talking about if we are allowed, are we allowed to put the whole text into chatgpt to rewrite it, it is till our own information somehow, last year, a lot of people were using it, getting an overview or summarise, rewrite sentences." - 14* *"But now people have shown me how to rewrite text, get information quicker. will of course adapt to using it, but am a causious person, dont want to drive into it right away because i dont want ot loose my own strategies" - 12* *"like if everything else does it kind of like a child, you know, like if everyone else does it, then I also want to do it. Because I mean, I'm being compared with my peers." -P2*

AI usage **Competitive Environment** (Raises the bar)	*"If a person sees themselves as unique, in being good at writing as an example, that strength is diminished due to the competition that is triggered by the use of ChatGPT. Now, everyone can be relatively good at it"– 39* *"I would say that I have always been a good writer, but now, with ChatGPT, I don't know anymore as everyone is good at writing" – 31* *"If I know everyone else is using and they're getting a good result, then I would definitely use it myself as well, because you don't want to be the only one not doing it" - 13* *"If people in the class use it, I will be urged to use it. I want to have the same preconditions as everyone else, of course" - P3*
AI usage **Competitive Environment** (Risk of falling behind)	*"You feel like you are forced into using [ChatGPT], if you're not using it, you're gonna end up worse than everybody else." – 25* *"Either you're on board, or you've fallen off the ship, floating around at sea, and are forgotten forever. It's important to understand what [ChatGPT] means and how it works. You'll fall behind in the future if you don't start using it" – 43* *"But if I refuses to use it and it gets more integrated in society, it would have a negative impact on me. I need to keep up with the future involvement of AI it would be only good." - 12* *"If I know everyone else is using and they're getting a good result, then I would definitely use it myself as well, because you don't want to be the only one not doing it" -10*
AI usage **Competitive Environment** (When feeling no pressure)	*"To be honest, not at all [important to me to perform well]. I have never been a grade person (...) I don't know about how the others are doing it, but I am for sure using ChatGPT for these kinds of tasks!" – 30* *"The pressure comes from external sources, like classmates. Many of them achieve high grades, which adds to the overall pressure for me (...) It's like a child, you know, if everyone else is doing I also want to do it." – 31*
AI usage ***Inspired by peers*** (Sharing practices)	*"Everyone in the class is aware that AI is being used, and we openly share and demonstrate how to utilize it. We exchange specific phrases to avoid making it sound like AI, enhancing our communication. I'm completely transparent with my friends about using it." – 22* *"A girl in my class recently did a group project with me. She had no experience using [ChatGPT] and asked another person in our group, who was experienced, to teach her everything. This girl is a high achiever, but she realized that reading from beginning to end wasn't working for her anymore due to time constraints." – 21*

	"We all discuss our usage very openly, sharing tips and strategies, discussing what's possible, and suggesting search parameters. KTH hasn't provided any information; there's no official stance, neither a yes nor a no." - 24
AI usage *Inspired by peers* (Social influence to not adopt)	*"My friend has been somewhat negative about it, and that has influenced my thinking too, but that is in my best interest, I think. I don't want to rely on it too much." – 3* *"I can feel a bit concerned that AI might be used in group assignments, because I would like to be sure of everyone in the group performing well and independently. I don't want others in the group to use ChatGPT, because of the risk for plagiarism." – 45*
AI usage **Personal development** (Enhancing)	*"I absolutely believe that it can enhance the process, providing quick answers to your questions. (...) Being able to ask it and get an exact answer immediately is very useful, sort of as having a study buddy. If done traditionally, you might have to wait a day [for an explanation]." – 54* *"I believe it can definitely enhance [the learning process]. The advantage is that you can tweak the presentation to understand, ask for explanations in a different way, or find comparisons, or a dynamic explanation of something. I absolutely think you can tailor what suits your learning process best." – 42* *"took me 10 min to fix the summary and read it, which is an advantage. would be lazy if I did not have chatgpt. if i didn't have chatgpt i wouldn't have read the article at all, now i still have the knowledge in the back of my head during class." - 14* *" it is so easy to look something up, also if there are things you are not good at, such as math, when I have chatgpt, it gives me an introduction, easy way to understand that will spark interest into a subject." - 18*
AI usage **Personal development** (Hindering)	*" (...) it's a very useful tool if you have an understanding of what you're searching for. However, if you are seeking answers to questions that you are not familiar with, and you receive a complete response without a proper understanding, blindly trusting it can result in a lost learning opportunity. As a tool or aid, absolutely, it's great, but using it for learning purposes is not good." – 32* *"I don't immerse myself in things in the same way. Maybe spending less time understanding things because AI can make it so much easier, which means you might not gain the same well-rounded knowledge, which could be negative." – 29* *"I would say I'm not as motivated anymore to really learn from original sources. I was too lazy to pick up the original research paper on Porter's Five Forces, so I just let GPT explain it. It negatively impacts the traditional learning, research-based learning, which this school stands for." – 23* *"I think you might actually learn more if you like. Take the time to perhaps ask your teacher about it, because then you might have a more developed you. (...) . I think if you have other opportunities, I think you should probably stay away from AI" - 6*

	"Don't want to rely too much on AI, you dont get the "real" knowledge. if you do desktop research you will find more of the context, subtitles etc, AI gets it for you quickly but you dont get the whole picture. You just see the answer and the little picture of it, but you don't see the whole picture and all the different alternatives." - 21
	"I don't want to come across as blindly trusting chatGPT; it's important to be more critically evaluative of sources." - 35
	"I don't know, I think one should read, there's a reason for it. If you are going to work with this, then you should be able to read it and learn it, if you like it and are passionate about what you are studying, then it shouldn't be a problem reading the lecture material and literature." - 47
	"Although it is fast, it sometimes makes me feel like I'm not thinking on my own. It's important to retain that ability, so I've been consciously trying to rely on it less." - P2
AI usage **Personal development** (Negative and positive relience)	*"When I'm writing, I often run my text through ChatGPT because I know it's going to sound better once it's been improved by AI. I don't really make an effort to write nice sentences from the start because I trust that AI will enhance them later." – P1*
	"In most of the group projects we use it [ChatGPT], but I try not to use it too much. When I use it, I feel that it is an easy way out; it is better to do it myself. I worry about how it impacts my learning and development." – 20
	"You easily lose your self-confidence in your studies and your own abilities" – 27
	"Would probably lack of self-confidence if I start using it more, because if it happens then I realize how much I depend on it, I would feel worse about myself." - 15
	"I try to stay away from it, because I know I want to use it more if i start using it" - 18
Self-Concept and Spectrum of Identities **Achievement-Oriented Self** (Pressure to perform)	*"The school has expectations of me, so there is pressure from the surroundings. Then, I've always had a lot of pressure on myself as well, but because I have the typical Older Sister- or Good Girl Syndrome, I believe there's a desire to be really good at everything I do. I think this makes it important for me to perform well, especially in school." – 2*
	"I want proof that I am good at something, and that is why I feel pressure to perform. If it is a course that I am not interested in, in general, I still want to feel good about myself. It is an underlying pressure, wanting to perform to know that I am good". – 17
	"I believe that performing well is important. I think it's a lot about a sense of pride, that is, I have high expectations of myself, which may not always be to my advantage, but I think it has also helped me a lot to actually kick it up a notch when it comes to school many times. It probably also has a lot to do with who you hang out with, in my circle of friends, there are

	many who are very good in school and ambitious, which I think rubs off on me. You become influenced by your company, in a positive way, I'd say." - 1
	" I have high expectations of myself, higher than what people around me have for me. This applies to everything, work, relationships, school." - 47
	"Yes, I would say, it's like a receipt to myself that I can." - 43
	"Yes, but it's important for my own self-esteem, so that I feel that I have learned what I have studied." - 39
	"I would say that. I have high standards for myself and want to do my absolute best." -37
Self-Concept and Spectrum of Identities **Achievement-Oriented Self** (Better in conjunction with AI)	*"I know that the grass is greener on the other side, with ChatGPT."* – 51 *"I have been self-aware of my English writing and realized through school that I am not the best at writing in English, and this is one of the reasons why I find ChatGPT valuable. To write more formal sentences and get a better vocabulary. (...) The outcome becomes better; all my assignments have gone through GPT a couple of times."* – 30 *"I think you could get a better grade if you combine your own knowledge together with ChatGPT."* – 1
Self-Concept and Spectrum of Identities **Communial-Oriented Self** (Usage triggered to demonstrate abilities to peers)	*"Before saying something in class, I often double-check it with ChatGPT. I don't want to sound stupid."* – 18 *"What if I am the dumbest in the group, I often think, and then I turn to ChatGPT."* – 50
Self-Concept and Spectrum of Identities **Communial-Oriented Self** (Perception of others)	*"If you are in a group project - we have a lot of group projects - then I think it's more important to perform as an individual within a group rather than in an individual assignment. You are affecting others, more important to perform then."* – 10 *"You want to feel good about yourself. But it's also, I believe, because the program I'm enrolled in at KTH has many students aiming for high grades, and that influences you because you don't want to be perceived as less ambitious than others or at least not the least ambitious."* –31 *"When saying, "I asked chatGPT" then people listen, but if it is just coming from my own mind, then it just flows through their ears. It is not super fun."* – 19 *"I'm afraid when being in a group work, I will be perceived as a cheater or as unambitous, if I use ChatGPT, if I would not do the parts myself"* - 54

Self-Concept and Spectrum of Identities **Communial-Oriented Self** (Cultivate Collaborative and Social Skills)	*"I guess I would say the benefits that come when you're done, especially studying at this school compared to any other school, it's a lot of connections and network." – 4* *"If I am able to be open about my usage [of ChatGPT] depends on what people I am in a project with. Not everyone likes it." – 16*
Self-Concept and Spectrum of Identities **Communial-Oriented Self** (Group Perceptions)	*"I'm afraid when being in a group work, I will be perceived as a cheater or as unambitious, if I use ChatGPT, because I would not do the parts myself." – 54* *"When the members in my group often insisted on using ChatGPT, eventually I just covered my eyes and ears and let them do it. To me, it didn't feel like the right thing." – 55* *"I have surely started to doubt my own ability, especially when being in a group project" - 1* *"I would say that I am good in writing, but I can feel pressured when I am in a group work, I compare myself to other students, which often leads me to ChatGPT" - 21*
Self-Concept and Spectrum of Identities **Moral Self** (Values, beliefs and goals)	*"I enjoy learning the traditional way, and given this, I don't use ChatGPT that often. It feels wrong to me, I have a fear of doing wrong." – 55* *"If I were to start using ChatGPT to feel like those are my texts, then I wouldn't get the same joy from submitting the work. For my own sake, I feel prouder this way, so yeah, that's why." – 45* *"It is a give-or-take thing, it would make things easier but it would also come with disadvantages. You might get a good grade, but I would know I have done something wrong." – 12* *"Well, I think one should read for themselves, there is a reason for it, not to use these tools as a substitute. (...) But many say that I, who read so much, should use [ChatGPT], but I'm afraid I'll miss out on learnings, even if it would be faster." – 47* *"I probably would have felt more satisfied if AI wasn't involved because then you might feel like you really did the work properly" - 7* *"my friends use it a lot more, i am interesting in learning what i am doing as well." - 8* *"I needed to committed way less time, easier way to get better grades. (..) But it did not feel good" - 14* *"GPT is a fast and easy way out. It doesn't feel completely right to use it when you are supposed to do it yourself" - 19*

	"I believe AI is great in some senses, but I try not to use it too much. When I use it, I feel that it is an easy way out; it is better to do it myself. I worry about how it impacts my learning and development" - 20
Self-Concept and Spectrum of Identities **Moral Self** (Optimising time management and productivity)	*"When I can summarize the articles quickly, I have more time for other tasks (…) or, other things I enjoy, like social things. "* – 26 *"I don't know if I would say dependent, but I think it would rather be described as time-saving. I know that I need to put in many hours to get a high grade in a specific course that I like. I think that AI would then be time-saving for me in the courses I didn't need to put the same effort in, so I could spend those hours on other more important courses."* – 9 *"The time it saves is so massive that it doesn't make sense just to use your own brain power. If you have a high workload then you can prioritize your time to spend your own brain power on the most important tasks, versus more simpler ones that are a "GPT-territory."* – 10 *"it's more efficient, ChatGPT is good for streamlining and gives you more time for other things."* - 48
Self-Concept and Spectrum of Identities **Moral Self** (Shame mechanism)	*"It deteriorates one's self-image with the intellectual commitment and you feel a bit ashamed and think, 'Here I am again with AI' (...) I don't want anyone to look over my shoulder and see me using it."* – 21 *"Now it's almost embarrassing to admit [that I use ChatGPT]..."* – 32
Self-Concept and Spectrum of Identities **Moral Self** (Verbal Cues)	*"Yes, it has happened once that **we** tried ChatGPT *giggling*, but then **we** used ChatGPT like this to get help while studying."* – 37 *"Yeah, **we** have used it to rephrase text, **we've** used it for that, but we have never copied it directly, but instead verified that the text is okay."* – 14
Self-Concept and Spectrum of Identities **Moral Self** (Defense Mechanism)	*"I mean, do you think it is wrong? It's not like cheating; I write the prompts and there is really no difference from asking a friend, right?"* – 28 *"usually not chatgpt, stay away from those things. AI can be seen as a way for students to cheat"* - 12
Self-Concept and Spectrum of Identities **Moral Self** (Perception of final work)	*"I wouldn't say it's AI; I would definitely say it's my own work. It's based on my own information. It's like Google, it gives you ideas. It's the same way; ChatGPT does the same, and it's the same kind of relationship."* – 51

	"It's definitely a collaboration effort. You want to think that it is your own, but it is a collaboration. Perhaps a 60-40 split; 60% to GPT and 40% to me." – 32 *"(very ashamed). Eh haha hehe, would like to say it's my own, but it depends on the extent to which I've used it. I rarely copy-paste to understand, seeking inspiration, but might miss certain parts. It's mine, but with the assistance of ChatGPT" - 42*
Identity Conflict **Identity Threat** (Against identity)	*"Although [ChatGPT] is fast, it sometimes makes me feel like I'm not thinking on my own. It's important to retain that ability, so I've been consciously trying to rely on it less." - P2* *"However, I felt like 'Wow, I'm so bad'. When I used it, I didn't feel like I lived up to the expectations I had been given. I didn't have a sense of pride in my essay. It's a relief that it's over, went quick, and it turned out good, but I feel bad for not having done it myself." – 13* *"Before, I knew I was a good writer, but now, I question my own abilities as I have an urge to always use AI. I compare myself with it, like I could never produce this myself, it is making me feel worse about myself." – 17* *"I question myself and my ability more than I did before." - 23* *"it's almost embarrassing to admit." - 32* *"Not a great feeling to know that you're not thinking for yourself, you still want to retain that ability." - 38*
Identity Conflict **Identity Opportunity** (Complementing Abilities)	*"I have no finance degree, but still, I somehow ended up working in finance. Thanks to the access to ChatGPT, I can now pursue a job I have previously dreamed about. It is almost insane, and I am definitely smarter together with ChatGPT." – 42* *"I have never been a good writer; I'm just glad that there's something that can do it for me. When writing longer texts, it's nice. It makes me feel better, and the output is better." – 16*
Identity Conflict **Identity Opportunity** (Enhancing Results)	*"To be honest, I only care about the outcome. If it is better, then I will use [ChatGPT]." – 30* *"If I can find a way to get the work done in a faster manner then of course you should use it [ChatGPT], I think" – 10* *"why should I do this myself when ChatGPT can do it much better?" – 1*

8.10 Appendix J: Use of Grammarly in Writing This Thesis

The authors of this thesis have been using GrammarlyGO for spelling and grammatical purposes throughout the process of writing, which is a plug in program with generative AI features. This tool has contributed to the quality of this thesis by enhancing the experience for the reader by reducing spelling- and grammatical errors. GrammarlyGO provides suggestions for changes to improve the structure of the text, which the authors then choose to accept or not.