

Exploring International Master's Students' Perceptions on the Use of Generative AI tools for Academic Writing in Finland

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Author:

Sfia Karnabi

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Author: Sfia Karnabi

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Abstract

This thesis explores how international Master's students in Finland view their use or non-use of generative AI (genAI) tools for academic writing and how they perceive the benefits and drawbacks of this use. By specifically focusing on international Master's students enrolled in social sciences programs at a university in Finland, this study contributes to research on students' perspectives on the use of genAI tools in higher education. Semi-structured interviews with users and non-users of genAI tools were analyzed using reflexive thematic analysis, which enabled the identification of key patterns in participants' perceptions. Drawing on Zimmerman's model of self-regulated learning, the analysis also examined how students' perspectives on the use of genAI tools relate to their self-regulation for academic writing. A key finding of this study is that, contrary to common assumptions about students' primary use of genAI tools to save time, all participants emphasized the importance of using these tools critically. Instead of consistently saving time, they reported to often reallocate or even invest additional time to verify and refine AI-generated content. Furthermore, students' views and practices were found to be highly context-dependent, influenced not only by peers' behaviours and university guidelines on AI use but also by their perceptions of teachers' attitudes toward the use of genAI tools. The findings of this study offer several pedagogical implications for higher education institutions and teachers regarding students' use of genAI tools. More specifically, they suggest that clearer communication about university guidelines on AI use and more open, constructive dialogue between teachers and students are needed to support more informed and transparent use of genAI tools.

Key words: generative AI tools (genAI tools), higher education, academic writing, international Master's students, self-regulated learning, Finland, students' perspectives.

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1 Introduction

“We stand on the cusp of an educational revolution”

(Salah et al., 2024, p. 2)

In recent years, artificial intelligence (AI) has become one of the most discussed and rapidly developing technologies worldwide, impacting key aspects of individuals' lives, including communication, work, and education (Faraon et al., 2025; Limna et al., 2022). Google CEO Sundar Pichai stated that AI is as revolutionary as the advent of fire or electricity, and Bill Gates stressed that it's as fundamental as the invention of the internet, the computer, and the mobile phone (Clifford, 2018; Gates, 2023). With more than 120 million monthly active users within just a few months after its launch in November 2022, ChatGPT became one of the fastest-growing applications in history (Rudolph et al., 2023). Generative AI (genAI) tools, such as ChatGPT, which are advanced AI tools capable of generating text, have become accessible to individuals all over the world, including students in higher education (Labadze et al., 2023; Rahaman et al., 2023).

The rapid adoption of ChatGPT as one of the first widely used genAI tools led to widespread and ongoing discussions across educational institutions, policymakers, scholars, and the general public about its implications for learning and education (Faraon et al., 2025; Fu et al., 2024; Stokel-Walker, 2023). Some have described ChatGPT as “the most important development since the invention of the printing press or the splitting of the atom” (McKendrick, 2023), and others emphasized that genAI tools are “transforming the landscape of learning and teaching much like the advent of writing” (Eybers, 2024, p. 14). While most agreed on the disruptive potential of genAI tools, particularly in higher education, perspectives on whether these tools represent a threat or a valuable learning tool differed (Labadze et al., 2023; Stojanov et al., 2024; Stokel-Walker, 2023). Critics have expressed concerns about increased academic dishonesty and reduced learning, while others have compared genAI tools to earlier technologies, such as computers, which were also initially viewed critically before becoming widely used by students to support their learning (Yin, 2024). Alongside these discussions, the use of genAI tools began to influence students' academic writing practices as students have increasingly used them as support for brainstorming, structuring, editing, or refining their texts (Kim et al., 2024).

The need for research on the use of genAI tools in higher education became evident, leading to a rapid growth in studies across disciplines and global contexts since the end of 2022 (Schei et al., 2024). This expanding research explores the benefits and challenges associated with the use of genAI tools, including perspectives of students and faculty as well as its implications for teaching, learning, and assessment (Charman & Tan, 2024; Cotton et al., 2024; Delello et al., 2023; Kallunki et al., 2024). Commonly reported benefits of using genAI tools include saving time, improved productivity, and support for personalized learning, while concerns relate to academic integrity, plagiarism, data privacy, and transparency (Cotton et al., 2024; Schei et al., 2024; Simkute et al., 2025; Suonpää et al., 2024). Several studies have also focused on how the use of genAI tools may affect students' critical thinking and the development of academic writing skills (Apriani et al., 2024; Sardi et al., 2025; Song & Song, 2023).

Nevertheless, despite the increasing amount of literature in this field, many researchers emphasize the importance of up-to-date and context-specific research to understand students' perceptions and experiences regarding the use of genAI tools for academic writing (Schei et al., 2024; Stojanov, 2023). Since genAI tools and their capabilities are developing rapidly, continuous research is needed to ensure that study findings and pedagogical approaches consider the evolving functions of these tools and students' changing perspectives (Labadze et al., 2023).

Furthermore, while existing research has examined students' perceptions of genAI tools, only a few studies have explored the connection between students' views on using genAI tools and their self-regulated learning (SRL) processes. Many prior studies have applied technology adoption models to investigate students' perspectives on using genAI tools in higher education (Faraon et al., 2025; Holland & Ciachir, 2024; Korchak et al., 2025; Lopez & Qamber, 2022), whereas the role of SRL in understanding students' views on using genAI tools has been examined less frequently (Sardi et al., 2025). Responding to this limited focus, the present study explores how international Master's students in Finland perceive their use or non-use of genAI tools for academic writing and how these perceptions influence SRL processes. In this way, this study aims to contribute to insights into how students view the use of genAI tools for academic writing and to the geographical and contextual diversity of existing research by focusing on international Master's students in Finland. While research on students' perspectives on the use of genAI tools has been conducted worldwide, most studies are from Asia, and especially in Finland, such research remains limited, particularly

conducted in English with international Master's students (Sardi et al., 2025; Schei et al., 2024).

Finland's approach to integrating digital technologies, including AI, into higher education creates an environment in which the use of genAI tools is encouraged and supported (Suonpää et al., 2024). More specifically, Finland's aim to become a global "leader in the application of artificial intelligence" (Ministry of Economic Affairs and Employment, 2019a, p. 3) makes it a noteworthy context for examining international students' perspectives on the use of genAI tools. Existing research on students' perceptions of using genAI tools in higher education in Finland has primarily focused on undergraduate students in business or technical disciplines, often using survey methods (Faraon et al., 2025; Launonen et al., 2024; Suonpää et al., 2024; Tan et al., 2023). In contrast, the following study focuses on international Master's students in social sciences programs to explore the perspectives of a student group that has received less attention. By including participants who use and choose not to use genAI tools, this study covers a diverse range of students' attitudes and practices. Furthermore, the use of semi-structured qualitative interviews allows for an in-depth exploration of international students' perspectives within the Finnish context.

This thesis consists of seven chapters, including this introduction (*Chapter 1*). The next chapter (*Chapter 2*) provides the theoretical background of this study by clarifying the meaning of genAI tools and academic writing, reviewing related research, and presenting Zimmerman's model of self-regulated learning, which will be used as an analytical framework. *Chapter 3* situates this study in the Finnish context by describing the national responses to students' use of genAI tools in higher education, the specific guidelines on the use of AI at the university of participants, as well as relevant international and European guidelines on the use of AI in education. The methodology of this study is outlined in *Chapter 4*, including the research approach, research questions, participants, procedures for data collection and analysis, as well as ethical considerations and strategies to ensure trustworthiness. In *Chapter 5*, the results of this study are presented, which are then discussed in *Chapter 6* in relation to the three key phases of SRL and existing literature. Chapter 6 also addresses the study's limitations, suggests directions for future research, and highlights the practical implications of the findings. *Chapter 7* provides the conclusion of this research.

2 Theoretical Background

This chapter provides the theoretical background for this study. As this study focuses on students' perspectives on the use of genAI tools for academic writing, the meanings of genAI tools and academic writing are first clarified. Subsequently, the rationale for this research is described by reviewing related research and explaining the reasons for this study.

Zimmerman's (2000) model of SRL is then introduced as the basis for its later discussion in relation to the study's findings.

2.1 Generative AI tools

AI, in general, can be described as “computing systems that are able to engage in human-like processes such as learning, adapting, synthesizing, self-correction, and use of data for complex processing tasks” (Popenici & Kerr, 2017, p. 2). Since its first formal introduction in 1956, AI has continuously evolved, which has led to the development of generative AI (genAI) (Popenici & Kerr, 2017). As a subfield of AI, genAI “focuses on producing new content, such as text, images, audio, and video, by analyzing and learning from existing data patterns” (Faraon et al., 2025, p. 2). More specifically, genAI tools are end-user applications that use genAI models to generate new content in response to users' prompts or rather users' requests (Lee et al., 2025; Lim et al., 2023). GenAI tools have gained widespread popularity following the public release of ChatGPT in 2022 and continue to improve in their capabilities (Mishra & Anthony, 2024).

They are based on machine learning, specifically deep learning models such as large language models (LLMs), which are trained on large data collected from articles, books, or simply the internet (Labadze et al., 2023; Lee et al., 2025). LLMs are built on advanced natural language processing (NLP) techniques, which enable computers to evaluate, refine, translate, or generate human natural language (AlZu'bi et al., 2024; Delello et al., 2023). By statistically analyzing and learning patterns from large amounts of data, for instance, common word sequences and sentence structures, these models can reproduce them and generate text that looks like human writing (Lim et al., 2023; Wayne et al., 2023). Nevertheless, although genAI tools can produce grammatically accurate text in different languages, lengths, and styles, they do not understand the meaning of what they generate (Dergaa et al., 2023; Heaven, 2024; Kozachek, 2023). Their outputs only reflect statistical probabilities, which are based on their training data, which means that genAI tools cannot invent entirely new ideas, and the

accuracy of their outputs is not reliable, as they are sometimes inaccurate or biased (Lim et al., 2023; Schellaert et al., 2023; Wayne et al., 2023). Since bias is deeply rooted in society and thus, embedded within the data these models are trained on, genAI tools reflect these biases and can reproduce or perpetuate existing social biases (Mahamadou & Trotsyuk, 2024; O'Connor & Liu, 2024). Moreover, given that genAI tools continuously learn and optimize themselves, they not only reproduce the biases embedded in their training data but can also adopt new biases gained through user interactions (Menon & Shilpa, 2023; O'Connor & Liu, 2024).

Despite these potential biases or inaccuracies in the outputs of genAI tools, many students view the use of these tools as beneficial (Holland & Ciachir, 2024; Labadze et al., 2023). By providing explanations, summaries, full-text drafts, feedback, or by refining written texts, these tools can support students in different stages of their academic writing (Delello et al., 2023; Labadze et al., 2023). This is why, since the release of ChatGPT, the popularity and emergence of other genAI tools such as Google Gemini, Microsoft Copilot, or Claude has increased (Lim et al., 2023; Mishra & Anthony, 2024).

While genAI tools can produce various types of content, including images, audio, or video, this study focuses specifically on students' use of genAI writing tools in an academic context, which support the creation and refinement of written text. These include AI chatbots like ChatGPT and Gemini, which evaluate, refine, and generate text through dialogue, as well as writing assistants such as QuillBot and DeepL Write, which mainly reformulate or improve written text (Lim et al., 2023). For simplicity, the term genAI tools will be used throughout this thesis to refer specifically to genAI writing tools, excluding tools designed primarily for generating non-textual content such as images or code (e.g., DALL-E or GitHub Copilot that create images or code).

2.2 Academic writing

As this study explores students' views on their use of genAI tools for academic writing, the following section explains the meaning of academic writing, its importance in higher education, and how the use of genAI tools can influence students' academic writing.

Writing can be very different depending on its genre, style, context, purpose, writer, and intended readers (Kim et al., 2024). Strongman (2013) clarifies that writing is about communicating through words, and academic writing, in particular, requires the careful

selection of words to bring across complex ideas. It is a formal form of communication used in scholarly contexts such as academic publications and universities (Aljoundi & Tappe, 2024). Across study fields, including technical disciplines and especially within social sciences, students have to write academic texts such as essays, learning diaries, or their thesis as forms of assessment (Akkaya & Aydın, 2018; Laato et al., 2023; Weimann-Sandig, 2023). Academic writing is a core component of higher education because it enables students to develop and demonstrate critical thinking, communicate complex ideas, and articulate their own positions regarding a specific subject (Bouzar et al., 2024; Kim et al., 2024). It promotes deeper engagement with course content, fosters students' disciplinary understanding, and helps to learn how to construct and share knowledge (August & Trostle, 2018; Kim et al., 2024). By enabling students to put their thoughts into words, making them visible, and developing, refining, and expressing their ideas, academic writing is closely connected to thinking and reflects students' ideas and thoughts (Akkaya & Aydın, 2018; Aljoundi & Tappe, 2024).

Academic writing is characterized by clarity, coherence, and conciseness as well as linguistic and factual accuracy (Akkaya & Aydın, 2018; Kim et al., 2024). It typically follows established standards, such as logical structures, formal and objective tone, and the use of credible sources and referencing systems (Akkaya & Aydın, 2018; Aljoundi & Tappe, 2024). Moreover, it often contains field-specific vocabulary and discipline-related formats (Aljoundi & Tappe, 2024; Kim et al., 2024). Therefore, academic writing is a complex activity that involves cognitive, metacognitive, and research skills to set goals, identify credible sources, self-regulate, and express ideas with appropriate vocabulary and style (Akkaya & Aydın, 2018; Dillon et al., 2024; Kim et al., 2024). It consists of several interconnected stages, such as planning and drafting, reading and analysing relevant literature, as well as reviewing and revising written texts (Akkaya & Aydın, 2018; Aljoundi & Tappe, 2024; Dillon et al., 2024). Ethical considerations and practices, such as ensuring integrity, avoiding plagiarism, and properly acknowledging contributions, are also part of this formal type of writing (Akkaya & Aydın, 2018).

In line with these characteristics, academic writing in the context of this research refers not only to the act of writing, but also to related activities like planning, researching, reading, and evaluating information.

The demands of academic writing, including its formal, impersonal style and reliance on research-based evidence, make it challenging, especially for non-native English students who not only have to write academically but also do so in a language with different vocabulary, grammar, and writing norms (Aljoundi & Tappe, 2024; Burgess & Pallant, 2013). Many international students who have learned academic writing in their native language need to gain additional skills to meet the expectations of English academic writing (Burgess & Pallant, 2013). Differences in academic writing across languages and cultures can make it particularly difficult for international students to express their thoughts effectively (Kim et al., 2024) and are also the reason why academic writing is sometimes perceived as “*learning a new language in itself*”, as described by one participant (P6) in this study.

Due to the challenges of academic writing, students have started to increasingly use genAI tools as support for their academic writing (Kim et al., 2024). GenAI tools are perceived as particularly valuable for international and non-native English students, as they can help overcome language barriers and facilitate the production of academic texts in English (Kim et al., 2024). The personalized assistance of genAI tools is especially beneficial since students’ extent of and type of support varies based on their linguistic background, literacy skills, prior knowledge, and attitudes toward academic writing (Kim et al., 2024). By providing assistance throughout the academic writing process, from generating ideas and structuring content to editing and proofreading, these tools can support students where needed and can help compensate for skill deficiencies (Kim et al., 2024; Lee et al., 2025). They can function as on-demand proofreaders, improve grammar, spelling, and style when human feedback is unavailable, and assist with tasks such as translation and summarization (Bouzar et al., 2024; Kim et al., 2024). Research indicates that genAI tools’ assistance can improve students’ writing productivity and proficiency (Apriani et al., 2024; Lee et al., 2025). However, concerns have also been raised about students’ overreliance on these tools and their potential to negatively affect students’ writing abilities and long-term skill development (Bouzar et al., 2024; Lee et al., 2025). By bypassing certain stages of the writing process, students may miss opportunities for critical thinking and sustained learning (Lee et al., 2025). A further concern is the increasing similarity of written texts across universities and beyond, as a result of the growing use of AI-generated text, which tends to lack individual style and voice (Laato et al., 2023). Given these risks, scholars emphasize that genAI tools should only be used to support but not replace students’ academic writing and that their outputs have to be critically evaluated to ensure accuracy, reliability, and ethical integrity (Bouzar et al., 2024).

2.3 Related research and the present study

Since academic writing is a core competency in higher education and the use of genAI tools is increasingly influencing students' academic writing, research investigating students' views on the use of genAI tools has been growing (Labadze et al., 2023; Schei et al., 2024). In Finland, however, studies that focus specifically on students' perspectives on the use of genAI tools in higher education remain limited. Early investigations by Vartiainen et al. (2024) and Kallunki et al. (2024) explored teacher educators' and university staff perceptions on genAI tools.

While these studies provide valuable insights into institutional perspectives, they do not directly encompass students' views on the use of genAI tools. Existing research in Finland examining students' views on the use of genAI tools has primarily focused on undergraduate students in business or technical disciplines. For instance, Suonpää et al. (2024) explored the perceptions of Bachelor of Business Administration (BBA) students, including Finnish and international students, during the autumn semester of 2023. Similarly, Launonen et al. (2024) conducted a mixed-methods study at the same time period involving mostly first-year bachelor's students from business, management, engineering, and natural sciences. Since these studies were conducted approximately only a year after the release of ChatGPT and primarily focused on undergraduate students in business and engineering disciplines, their relevance is limited, especially for understanding the experiences of social sciences Master's students. Comparative cross-national surveys by Tan et al. (2023) and Charman & Tan (2024) involving students from Finland, the USA, Cambodia, Ghana, and Nigeria have provided further insights that help contextualize Finnish students' views on the use of ChatGPT in spring 2023 and 2024. However, these studies focused again primarily on undergraduate business students. Likewise, in Faraon et al.'s (2025) comparative survey with students from five Nordic countries (Finland, Sweden, Denmark, Norway, Iceland) and the USA, bachelor's students formed the majority of participants. Therefore, although these studies offer valuable quantitative data, they do not provide in-depth qualitative insights into Master's students' perspectives on the use of genAI tools for academic writing. This study aims to address this gap by focusing on international Master's students studying social sciences in Finland and their views on the use of genAI tools for academic writing.

Moreover, this research aims to analyze how students' perspectives on their use or non-use of genAI tools relate to SRL processes. While SRL has long been recognised as an important skill in higher education, its relevance has grown in recent years due to the shift toward more autonomous, technology-mediated learning (Kleimola et al., 2025; Sauchelli et al., 2024).

Especially in Finnish higher education, where national educational policies strongly promote student and teacher autonomy, SRL is particularly important and considered a central component of academic success (Niemi et al., 2018; Virtanen, 2019). Students' high level of autonomy at Finnish universities aligns with broader national cultural values, where independence and self-direction are strongly valued and supported (Niemi et al., 2018). However, this high level of autonomy can also be challenging, especially for international students from different educational systems that require less self-regulation and in which external deadlines and teacher-directed learning are more prominent (Virtanen, 2019). Since SRL is a skill that can be developed and supported (Panadero, 2017), the growing use of genAI tools raises questions about how the use of these tools might support or hinder students' SRL (Wu & Chiu, 2025).

Despite the relevance of SRL in Finnish higher education, there appears to be no empirical research in Finland that connects students' views on their use of genAI tools to their SRL practices, and internationally, such studies remain limited. Existing research has often applied general technology adoption frameworks – such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), or their extensions – to examine students' perspectives on the use of genAI tools (Faraon et al., 2025; Holland & Ciachir, 2024; Korchak et al., 2025; Lopez & Qamber, 2022). However, fewer studies have adopted SRL as a central analytical framework (Sardi et al., 2025). Although some recent research has begun to explore the connection between the use of genAI tools and SRL, many of these studies focus on theories or methods, such as Molenaar et al.'s (2023) study on how AI can be used to measure SRL. Empirical studies about SRL and students' use of genAI tools, such as Wang's (2024) research on Japanese university students' self-regulated use of AI tools for English academic writing, remain rare, especially in Finland. Although the systematic review by Sardi et al. (2025) indicates that a majority of recent studies report a positive influence of genAI tools on SRL – “mainly through personalised learning, metacognitive support, and adaptive feedback” (p. 94) – these analyses largely rely on quantitative data and lack direct insights into student experiences. This study seeks to address these gaps by exploring how international Master's students in Finland view their use or non-use of genAI tools for academic writing and by analyzing how these perspectives relate to SRL processes.

2.4 Model of self-regulated learning

This study draws on Zimmerman's cyclical model of self-regulated learning (SRL) as a theoretical framework to explore how international Master student view their use of genAI tools for academic writing (Zimmerman, 2000; Zimmerman & Moylan, 2009). According to Zimmerman (2000), SRL refers to the active and strategic process through which learners plan, monitor, and evaluate their learning. As a widely recognised theory, SRL encompasses cognitive, metacognitive, motivational, and behavioral aspects that help explain how learners regulate their learning (Panadero, 2017). In higher education, students need these self-regulatory skills particularly because tasks like academic writing typically require high levels of autonomy and self-regulation (Hammann, 2005; Kleimola et al., 2025).

Among the various models of SRL, Zimmerman's cyclical phase model is one of the most influential and empirically supported frameworks (Panadero, 2017). It conceptualises learning as a dynamic, self-directed process involving three cyclical phases: forethought, performance, and self-reflection, as depicted in Figure 1 (Zimmerman & Moylan, 2009).

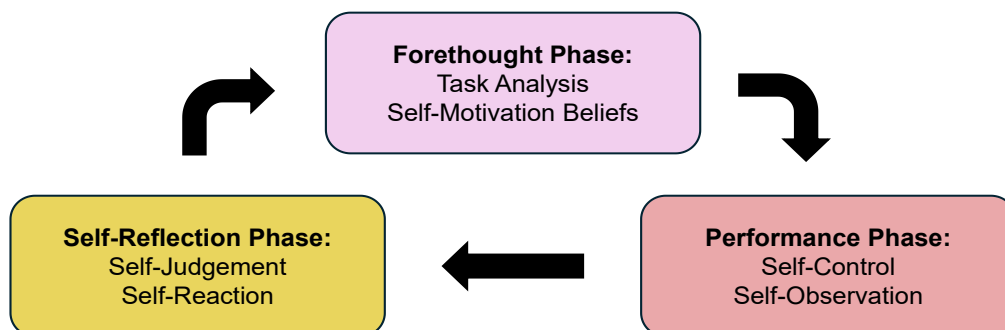


Figure 1. Cyclical phase model of Self-Regulated Learning. Adapted from Zimmerman and Moylan (2009).

The *forethought phase* involves analysing the task ahead, which includes setting personal goals and planning strategies to complete the task. Students think about their motivational beliefs by considering their interest in the task, the outcomes they expect, and their confidence in their ability to complete the task (Zimmerman & Moylan, 2009). Subsequently, during the *performance phase*, students use their planned strategies, maintain self-control, and engage in metacognitive monitoring. This includes behaviors such as time management, seeking help when needed, and adjusting strategies in response to task demands (Zimmerman & Moylan,

2009). Finally, in the *self-reflection phase*, learners evaluate their performance and outcomes, and these reflections influence their future forethought phase (Zimmerman & Moylan, 2009).

In addition to conceptualizing these three cyclical phases, Zimmerman's (2000) model highlights that self-regulation does not occur in isolation but rather develops through the dynamic interaction of personal, behavioural, and environmental factors. This perspective is relevant for this study, which also takes into account how contextual factors, such as university guidelines on the use of AI, influence students' views on the use of genAI tools for academic writing and their SRL.

Since Zimmerman's cyclical phase model is clear, well-supported by research, and can be flexibly applied to complex learning tasks such as academic writing, it was chosen as the framework for this study (Panadero, 2017; Zimmerman & Moylan, 2009). By clearly distinguishing between forethought, performance, and self-reflection phases, the model facilitates a structured analysis of students' academic writing processes and their perceptions of the use of genAI tools at each stage. Moreover, its integration of motivational and contextual influences offers a comprehensive perspective for analysing how students' views on the use of genAI tools relate to their SRL processes.

3 The Finnish Context

As this study was conducted in Finland, it is important to consider the contextual factors that may influence how students view and use genAI tools. Therefore, the following chapter describes the national, international and university-specific guidelines on the use of AI in education that are relevant in the Finnish context.

3.1 Responses to the use of genAI tools in Finnish higher education

Since the public release of ChatGPT in 2022, universities around the world have had to decide how to deal with students' use of genAI tools for academic writing (Lim et al., 2023). In contrast to some countries, which first reacted with a ban on the use of ChatGPT (Labadze et al., 2023; Rudolph et al., 2023), Finnish universities chose to support its responsible use instead of prohibiting it (Kallunki et al., 2024; Suonpää et al., 2024).

This approach aligned with Finland's aim to become a global "AI leader and trendsetter" (Suonpää et al., 2024, p. 3072). This goal was announced in May 2017 by Finland's then Minister of Economic Affairs, who assigned an expert group to develop a national AI program, which included the publication of guiding policy reports (Ministry of Economic Affairs and Employment, 2019b). The first policy report from 2017 on *Finland's Age of Artificial Intelligence - Turning Finland into a leading country in the application of artificial intelligence* described strategies with which Finland could "enter into a successful age of artificial intelligence" (Ministry of Economic Affairs and Employment, 2017, p. 3). A follow-up report published in 2018 further detailed the skills and competencies expected to be in demand as AI technologies evolve (Koski & Husso, 2018; Suonpää et al., 2024). It also encouraged more flexible study structures and adapted teaching methods to help prepare the educational system for the future use of AI (Koski & Husso, 2018; Suonpää et al., 2024). The final report published in 2019 summarized Finland's progress in adopting AI across different sectors and presented further actions that should be taken to prepare the country for a future with AI (Ministry of Economic Affairs and Employment, 2019a). These three reports and associated initiatives demonstrate that Finland was one of the first countries that introduced a national AI program and has systematically prepared for the age of AI with clear goals and concrete measures covering the public sector, many industries, and the education system (Ministry of Economic Affairs and Employment, 2019a). Considering this background and that Finland had already stated in its 2017 policy report that it would "speed up and simplify

the adoption of artificial intelligence” (Ministry of Economic Affairs and Employment, 2017, p. 8), it could have been expected that Finnish universities would react openly rather than restrictively to students’ adoption of genAI tools.

In addition to Finland’s national educational goals, the country's overall approach to education helps explain Finnish universities' accepting response toward students’ use of genAI tools. Finland’s educational system generally emphasizes the use of formative assessments, which prioritize students’ learning processes over final products such as essays or exams (Finnish National Board of Education, 2016; Vartiainen et al., 2024). The development of key competencies like metacognition, critical thinking, creativity, and self-regulated learning is the primary focus in Finnish curricula. (Vartiainen et al., 2024). Since genAI tools cannot replace these skills, Finnish teachers tend to perceive their use less as a threat and more as a complementary resource that could support students’ learning processes (Kallunki et al., 2024; Suonpää et al., 2024; Vartiainen et al., 2024). This perspective partly explains why, unlike in many other countries, where genAI tools were initially mainly associated with concerns about cheating (Cotton et al., 2024), Finnish teachers are more inclined to recognize the potential of these tools to support learning and assessment practices (Kallunki et al., 2024; Suonpää et al., 2024; Vartiainen et al., 2024). Overall, recent studies show that while opinions of Finnish teachers vary, there is a clear tendency to see genAI tools as useful additions to teaching and learning if they are used critically and transparently (Kallunki et al., 2024; Suonpää et al., 2024).

The generally accepting attitude of Finnish universities and teachers in particular, towards the integration of genAI tools in higher education, is also strengthened by the high degree of teacher autonomy, which is a key characteristic of the Finnish education system (Niemi et al., 2018). This includes a high level of autonomy for decisions about their teaching methods and guidelines, specifying, for example, which tools students are allowed to use in their assessments (Vartiainen et al., 2024). Consequently, there is no need for national or institution-wide bans on students’ use of genAI tools because teachers are instead trusted to decide individually how these tools should be used in their own courses. Considering that not all teachers share the same accepting view on the use of genAI tools, this autonomy allows more critical or cautious teachers to restrict the use of genAI tools if they feel it does not align with their course goals or values (Kallunki et al., 2024; Vartiainen et al., 2024).

Beyond teachers' general accepting attitude toward the use of genAI tools in higher education, university students in Finland have also responded to the rise of genAI tools with openness and curiosity (Suonpää et al., 2024; Tan et al., 2023). Already in early 2023, a study conducted at the University of Eastern Finland found that 91% of students were aware of ChatGPT (Tan et al., 2023). This was the highest level of awareness among all countries included in the comparison (USA, Cambodia, Nigeria, and Ghana), and nearly half of the Finnish students reported using it regularly for study-related tasks (Tan et al., 2023). In late 2023, another study at a university of applied sciences in Finland (including Finnish, EU, and non-EU students) reported that 80% of students had already used genAI tools in their studies (Suonpää et al., 2024). In a second survey with a different group of students, conducted at the end of selected courses where genAI use was actively encouraged, nearly all respondents (98%) reported having used genAI tools in course-related tasks (Suonpää et al., 2024). These studies suggest that students in Finland generally show openness and acceptance toward the use of genAI tools in higher education, reflecting the broader accepting attitude within the Finnish educational environment (Suonpää et al., 2024; Tan et al., 2023).

3.2 International and European guidelines on the use of AI in education

While Finland was one of the first countries with a national AI program since 2017, the country's approach has also been influenced by broader international ethical and policy frameworks, which have been developed to prepare for and respond to the increasing relevance of AI in society and education.

At the global level, UNESCO – the United Nations Educational, Scientific and Cultural Organization – has provided international guidance on the ethical use of AI in education by publishing several reports, such as an early key report in 2021 (on *AI and education: Guidance for policymakers*), which encouraged the integration of AI in education to enhance teaching and learning processes (Miao & Holmes, 2021). UNESCO's 2021 *Recommendation on the Ethics of Artificial Intelligence* further outlines ten fundamental principles centered around human rights that should guide the development and use of AI tools (UNESCO, 2022). These principles include fairness, proportionality, safety, transparency, data protection, accountability, human oversight, AI literacy, and sustainability (UNESCO, 2022). Finland and all other 192 UNESCO member states agreed to support this recommendation, which also stated that countries should promote the education of AI literacy and support students' development of essential learning skills, including critical and creative thinking (UNESCO,

2022). The report emphasizes that AI tools should be seen as supports for learning, but not as substitutes for cognitive development or independent thinking (UNESCO, 2022). UNESCO's additional report on *Guidance for generative AI in education and research* in 2023, which focuses on genAI, similarly outlines concrete steps for governments and educational institutions to ensure the responsible integration and institutional preparedness for the use of genAI tools in education (Wayne et al., 2023). UNESCO's international recommendations align with Finland's educational values and views on the role of AI in education.

In Europe, the European Union assigned a High-Level Expert Group on AI (HLEG), which published the *Ethics Guidelines for Trustworthy AI* in 2019, proposing seven non-binding ethical principles, including fairness, technical safety, transparency, accountability, human agency and oversight, as well as societal and environmental well-being (HLEG, 2019). These principles laid the foundation for the European Union's *Artificial Intelligence Act* (EU AI Act) and share similarities with UNESCO's human rights-centered principles (HLEG, 2019; Artificial Intelligence Act, 2024). The EU AI Act (Artificial Intelligence Act, 2024), which was adopted by the European Union in June 2024, represents "the world's first comprehensive AI law" (European Parliament, 2025, p. 1). Consequently, it is legally binding for all EU member states, including Finland. The regulation acknowledges the broad and transformative benefits of AI technologies for all sectors of society and also recognizes the risks they present (Artificial Intelligence Act, 2024). It aims to position the EU as a global leader in the adoption of trustworthy AI while also ensuring a high level of protection for public interest in regards to safety and fundamental rights (Artificial Intelligence Act, 2024).

Therefore, the AI Act is based on "a risk-based AI classification system" (European Parliament, 2025, p. 2), under which legal obligations and requirements depend on the level of risk different AI systems pose (Artificial Intelligence Act, 2024). The four levels of risk are: unacceptable, high, limited, and minimal risk (European Commission, 2025).

Unacceptable risk systems, for example, systems involving social scoring or manipulative techniques, are prohibited (European Commission, 2025). High-risk AI systems with the potential to harm individuals' well-being, security, or basic rights, like AI applications used in robotic surgery or automated exam grading, are only allowed if they meet strict regulatory requirements (European Commission, 2025). Limited risk AI systems are those that have a lack of transparency and are thus subject to specific disclosure requirements (European Commission, 2025). Lastly, minimal or no risk systems, for instance, spam filters or AI video

games, represent most of the current AI systems and are not specifically regulated (European Commission, 2025).

Most genAI tools, such as ChatGPT, are categorized as limited risk AI systems and have specific transparency and copyright-related obligations (European Commission, 2025; European Parliament, 2025). This means that users must be clearly informed that they are interacting with AI, that content has been produced by AI, and providers must prevent the generation of illegal content (European Commission, 2025; European Parliament, 2025). In addition, the AI Act highlights copyright issues related to genAI tools, mentioning that their development relies on large volumes of data, which could fall under copyright protections, and that using such material generally needs the permission from the relevant rightsholders (Artificial Intelligence Act, 2024).

The regulation also emphasizes the importance of AI literacy and encourages member states and institutions to promote the knowledge and skills needed to use AI systems responsibly (Artificial Intelligence Act, 2024). Not only the AI Act's emphasis on AI literacy, but also its overall focus on the responsible use of genAI tools align with Finland's national approach and UNESCO's international recommendations. Since Finland is an EU member state, the AI Act adds a binding legal framework to the country's national policy and reinforces the principles Finland had already adopted. The AI Act started to apply on August 1, 2024, and will be implemented gradually until August 2026 (European Commission, 2025).

Taken together, UNESCO's international recommendations, the EU AI Act, and Finland's national policy all emphasize a human-centered, transparent, and responsible use of AI tools that support learning, protect rights, and prepare students and institutions for a future with AI. This regulatory and ethical context is particularly relevant for education and this study, because the values and rules of students' environment influence how they engage with and view the use of genAI tools (Vartiainen et al., 2024, p. 2).

3.3 Guidelines on the use of AI at the university of this study's participants

In addition to these national and international regulations, universities in Finland also had to respond to the increasing use of genAI tools by publishing institution-specific guidelines. While each university has developed its own guidelines on the use of AI for teaching, studying, and research, they all have in common that they do not completely prohibit the use of AI tools but rather encourage their responsible and transparent use. Hence, they align with

the nationally accepting approach toward the use of AI tools in society and provide more concrete guidance for students on when and how to use these tools. These concrete guidelines may influence students' perspectives on their use of genAI tools for academic writing particularly. Therefore, the AI use guidelines of the university where the study's participants were enrolled are summarized below.

The university's AI use guidelines for this study's participants allow the use of genAI tools, as long as they are used responsibly and transparently, recognizing that prohibiting their use is not constructive, partly because the detection of AI use is limited. Moreover, they acknowledge the future relevance of AI tools in professional life and therefore encourage students to use these tools. The guidelines specify how genAI tools can be used, for example, as support for discovering ideas, searching for information, exploring academic literature, or assisting in writing. However, the guidelines also clearly state that the use of genAI tools must not replace the student's own thinking or learning, and clarify that AI tools are not a source or an author. Students are reminded that they remain responsible for the accuracy of the text they produce, appropriate referencing, and data protection. In line with this, students are also instructed not to enter unpublished data, research materials, or personal information into AI tools, because it may be unclear where this data ends up or how it is used. The document refers to Finnish and EU-level data protection and research integrity guidelines and emphasizes the importance of respecting copyright. Students are expected to transparently disclose how they used AI tools, including their use for proofreading.

Furthermore, the guidelines recommend that teachers design assignments that focus on critical thinking, creativity, self-reflection, and application, not only to enhance learning, but also because these skills can hardly be replaced by AI tools. While the university provides general guidelines and recommendations, it also gives faculties and teachers the possibility to adapt these guidelines. This means that different faculties might have their own specific guidelines, and teachers can decide individually if and how genAI tools may be used. Thereby, the guidelines provide structure and clarity but also flexibility.

Overall, the university's guidelines are future-oriented and supportive rather than restrictive. Instead of prohibiting the use of genAI tools, they encourage their responsible and transparent use to prepare students for a future in which AI will be increasingly relevant. With this approach, the university's guidelines are in accordance with Finnish national strategies and

international guidelines, which all aim to promote AI literacy and the ethical integration of genAI tools into education.

4 Methodology

The following chapter presents the research approach and questions, as well as the participants of this study. Moreover, it reports how the research data was collected and analysed, and describes the ethical considerations and measures taken to ensure the trustworthiness of this study.

4.1 Research approach and research questions

For this study, a qualitative research approach was chosen because it is particularly suited to explore participants' subjective experiences, behaviors, and perceptions, as well as the relationships between them (Fraenkel et al., 2011; Merriam & Tisdell, 2015). Since students' perspectives on their use of genAI tools are not only influenced by their attitudes but also by their behaviors, this approach aligns closely with the study's objective to understand how international Master's students view the use of genAI tools for academic writing. As Van Maanen (1979) specifies, qualitative research seeks "to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world" (p. 520). Given that students' use of genAI tools in higher education is a rapidly growing phenomenon, qualitative methods provide insights into how students reflect on their current practices. Rather than trying to predict future developments, qualitative research focuses on participants' present perspectives (Merriam & Tisdell, 2015). Accordingly, and considering that the future implications of genAI tools remain uncertain for now, this study explores how international Master's students in Finland view their current use or non-use of genAI tools for academic writing and how they perceive the benefits and drawbacks of using these tools. More specifically, this study is guided by the following two research questions:

1. How do international Master's students in Finland view their use or non-use of genAI tools for academic writing?
2. How do international Master's students in Finland perceive the benefits and drawbacks of the use of genAI tools for academic writing?

Research question 1 is formulated broadly as exploring students' views on their use or non-use of genAI tools for academic writing, to also include students' perceptions of relevant

contextual factors – such as their university’s guidelines on AI use, as well as social and situational factors – that might influence their views on the use of genAI tools.

4.2 Participants

The sample for this study consisted of 11 international Master’s students enrolled in diverse social sciences programs, including educational sciences, at a university in Finland during the spring semester of 2025. The participants were selected by convenience sampling, a method chosen for its practicality and accessibility. Although convenience sampling is categorized as a non-probability sampling method, it is also considered “partially purposeful” (Dörnyei & Csizér, 2011, p. 81), as participants are selected by certain criteria that are relevant to the research objectives. For this study, the inclusion criteria for participants were that they should be international Master’s students enrolled in a social sciences program at a university in Finland. This requirement was clearly outlined in the invitation email sent to potential participants.

Participants were selected from social sciences programs because students in these fields typically have to complete frequent and diverse writing tasks, such as essays, reports, or learning diaries. During the interviews, all participants confirmed that written assignments like essays were the most common form of assessment in their Master’s studies, which underscored their particular relevance for this research. Additionally, this study focused on international students because they often study in English as a non-native language, which may increase their tendency to use genAI tools as support for their academic writing. All participants confirmed that English was not their native language. While the sample included students from different study years (first year, second year, and beyond), this aspect was not a focus of the analysis.

4.3 Data collection

The research data were collected through semi-structured interviews. They were chosen as data collection method because they are particularly well-suited for exploring participants’ individual perspectives, beliefs, and experiences that cannot be directly observed (Patton, 2015). This approach provided consistency across interviews and flexibility to follow up on participants’ unique insights by asking more in-depth questions tailored to their spontaneous responses (Galletta & Cross, 2013). It also enabled both depth and comparability between the responses and supported the exploration of the study’s two research questions: (1) how

students view their use of genAI tools for academic writing, and (2) how they perceive the benefits and drawbacks of this use.

A total of 11 interviews were conducted in March 2025 – eight in person at the university and three online via the university's Zoom platform, as preferred by the interviewees. The interviews lasted between 18 and 75 minutes, with an average duration of approximately 34 minutes. Despite differences in length, shorter interviews often included similarly detailed responses; for example, both a 26-minute and an 18-minute interview resulted in 5.5 transcript pages. Table 2 summarizes the interview durations and transcript lengths. The variation in interview duration and how it may relate to the content of the interviews is discussed in more detail in Section 5.1.3.

Table 1. Participants' Interview Duration and Transcript Pages

Participants	Interview Duration	Transcript Pages
P1	26m 26s	5.5
P2	33m 39s	9.5
P3	31m 56s	6
P4	25m 51s	6
P5	33m 11s	6
P6	18m 27s	5.5
P7	1h 15m 34s	13.5
P8	39m 08s	8.5
P9	24m 08s	6
P10 ¹	44m 27s	8.5
P11	21m 04s	5.5
Total	6h 13m 51s	80.5 pages

All interviews were conducted in English, which was a non-native language for both the researcher and participants. While no major communication difficulties were observed, it is acknowledged that English proficiency may have influenced how comfortably participants expressed themselves. Moreover, it may have affected who chose to participate, as some potential participants preferred not to be interviewed due to language-related concerns.

¹ P10's total interview duration included two short follow-up recordings (2m 26s and 6m 40s) conducted immediately after the main interview. These segments added 1.5 transcript pages, bringing the total to 8.5 pages.

Design of the Interview Guide

The interview guide (see Appendix 1) reflected a variety of question types, broadly following the typology described by Patton (2015). These included background questions, experience- and behavior-oriented questions, opinion- and value-based questions, feeling-related questions (e.g., confidence and comfort with academic writing in English), and one knowledge question (regarding participants' awareness of university AI-use guidelines). This combination enabled factual and reflective responses, facilitating a comprehensive exploration of how students engage with genAI tools for academic writing and how they perceive the potential benefits and drawbacks of this use.

Interviews began with background questions about participants' academic year, language background, and typical forms of assessment. Subsequently, the interview guide included two distinct sets of open-ended main questions: one for participants who had used genAI tools for academic writing in the past six months, and another for those who had not. This distinction ensured that users and non-users of genAI tools could be interviewed in alignment with the research objectives. A six-month reference period was used to ensure that discussions focused on recent and relevant experiences with genAI tools, considering their rapid development, and to minimize potential recall difficulties or bias. The final background question ("Have you used any genAI tools in the last six months for academic writing, e.g., for writing on your thesis or an assignment like an essay or a report?") served as a branching point to determine which set of main questions to follow.

For recent users of genAI tools, questions focused on usage patterns such as which tools were used, how often, for what purposes (e.g., generating ideas, outlining, proofreading), and how AI-generated content was revised. These behaviour-focused questions were complemented by questions about motivations for genAI tool use and perceived impacts of this use on academic writing skills, confidence, and critical thinking. Participants who had not used genAI tools in the past six months were asked about any past experiences with these tools, their reasons for avoiding or discontinuing use, and their views on how not using or using genAI tools might affect academic writing and learning. Follow-up questions were posed throughout the interviews to clarify responses, explore specific points in more detail, and gain deeper insights into participants' perspectives. The inclusion of both users and non-users allowed for a broader and more comparative understanding of attitudes and behaviors across different user

types. All interviews were concluded with a set of closing questions that were the same for all participants.

Refinement and Adaptation of the Interview Guide

Before conducting the main interviews, the guide was refined through three pilot interviews with international Master's students – two from non-social science fields and one recent social sciences graduate. These pilot interviews helped identify overly closed, confusing, or repetitive questions and led to improvements in the clarity, sequencing, and openness of the guide. The third pilot also confirmed that the planned interview duration was appropriate. These interviews were not included in the final dataset but contributed to the development of the final interview guide.

During data collection, the interview guide was slightly revised to include additional questions addressing topics that emerged to be particularly relevant and analytically valuable in early interviews. They were added to ensure that potentially important perspectives would not be missed. Specifically, two new questions – on whether participants disclosed their use of genAI tools in assignments and on what they believed their teachers thought about this – were introduced after Interview 3. Another question, concerning desired university support for using genAI tools, was added after Interview 7, following a particularly insightful response to a spontaneous follow-up question. These additional questions were asked after the main questions and before the closing questions to ensure that the main flow and order of core questions remained consistent across all participants. They are listed under “Additional questions” in the interview guide in Appendix 1.

4.4 Ethical considerations

The study was conducted in line with the Finnish Data Protection Act (1050/2018) and the ethical guidelines for research in Finland. To ensure ethical research practices, participants were provided with a privacy notice (see Appendix 2) and a consent form (see Appendix 3) before participating in this study. The documents were sent to them via email in advance, allowing them sufficient time to review the information. The privacy notice included detailed information about the research objectives, procedures, data collection methods, and how their data would be protected during and after the study. Participants were informed that their participation was voluntary, that they could withdraw from the study at any time without consequences, and that their interview would be audio-recorded. At the beginning of each

interview, participants received a paper copy of the privacy notice, and the interview started only after they had signed the consent form. This procedure ensured that all participants were fully informed about the purpose of this study, their rights, and the safeguards to protect their privacy and data.

Only personal data necessary for the research was collected, such as participants' study field and whether English was their native language, to help contextualize the findings. Moreover, interviewing students from various social sciences disciplines ensured a diverse sample and reduced the likelihood that individual participants could be identified. Additional background information, such as age, country of origin, or gender, was not gathered to further minimize the risk of identification. The interview recordings were securely stored on password-protected university cloud storage (Seafile) and a local device accessible only to the researcher before they were permanently deleted after transcription. All identifiable data was pseudonymized, and all findings were reported in a way that protected participants' identities, in accordance with GDPR and the University of Turku's ethical guidelines. More details of the ethical procedures are outlined in the privacy notice and consent form provided in Appendices 2 and 3.

4.5 Data analysis

The conducted interviews were analyzed using thematic analysis, specifically Braun and Clarke's (2006, 2019, 2023) reflexive thematic analysis. This method, defined as "a method for identifying, analyzing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, p. 79), was chosen for its systematic and flexible approach, aligning with the exploratory and interpretative nature of this study.

Reflexive thematic analysis is described by (Braun & Clarke, 2019) as a process that emphasizes the researcher's active reflection and critical engagement with the collected data and the analytical process. As a non-positivist and interpretive qualitative approach, it acknowledges that the researcher's perspective influences the analysis and views subjectivity as a resource rather than a limitation (Braun & Clarke, 2023). While thematic analysis in general allows for the discovery of unexpected insights and supports in-depth analysis of complex phenomena, reflexive thematic analysis extends this focus by placing a special emphasis on the researcher's reflexivity (Braun & Clarke, 2006, 2023). This emphasis encourages the researcher to actively reflect on how their assumptions, perspectives, and

engagement with the data influence the interpretation of participants' experiences (Braun & Clarke, 2019, 2023).

The analysis followed an inductive approach, meaning that the themes were identified from the data itself rather than being driven by pre-existing theories or frameworks (Braun & Clarke, 2006). This approach allowed for the development of themes directly from participants' responses, ensuring that the analysis remained grounded in the data.

The analysis process followed Braun and Clarke's (2006) step-by-step guide, consisting of six phases: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) reporting the findings.

Although these six phases are outlined in a chronological order, the analysis process is not strictly linear but rather recursive, meaning that the researcher can move back and forth between phases as needed (Braun & Clarke, 2006).

(1) Familiarization with the data: At first, the interviews were transcribed using the European Union's Speech-to-Text tool (<https://language-tools.ec.europa.eu>). Subsequently, the researcher reviewed and edited the transcripts to ensure accuracy, clarity, and participants' anonymity. Filler words like "uhm" were omitted to enhance readability, but colloquial expressions like "yeah" were retained to preserve participants' natural flow of speech and maintain authenticity (Mayring, 2014). This approach ensured that the transcripts were easily readable and reflective of participants' natural language. During the transcription process, the researcher familiarized herself with the data and developed initial insights and reflections.

(2) Generating initial codes: All interview transcripts were systematically coded in Nvivo, a qualitative data analysis software that facilitates the management and analysis of qualitative data (Baralt, 2011). Initial codes, i.e., descriptive labels used to capture particular aspects of the data that the researcher considers meaningful or analytically relevant, were inductively identified based on sentences, phrases, or words (Braun & Clarke, 2006). In line with Braun and Clarke's (2006) advice, the coding process was intentionally broad to consider a wide range of potential patterns and to minimize the risk of overlooking important insights in later stages of the analysis.

(3) Searching for themes: Codes were grouped into potential themes based on recurring patterns and connections across the data. This phase involved identifying both semantic (explicit) themes, which focus on the surface-level meaning of the data, and latent

(interpretative) themes, with a focus on uncovering underlying assumptions and meanings (Braun & Clarke, 2006). Descriptive themes were developed to ensure that the analysis remained grounded in the actual data, and interpretative themes added depth by exploring the broader implications and contextual influences.

(4) Reviewing themes: The identified themes were reviewed and refined to ensure that they accurately reflected the data, were clearly distinguishable from one another, and provided a well-organized and coherent representation of the research data. During this process, some themes were merged or removed, and relationships between themes and sub-themes were examined to develop a clear thematic structure.

(5) Defining and naming themes: Each theme was clearly defined and given a descriptive name that captured its central meaning.

(6) Reporting the findings: The final themes are presented in the results chapter and are supported by relevant quotes from the data. This phase involved the critical reflection on the themes in relation to existing literature, which helped situate the study within a broader academic discourse and contributed to a deeper understanding of the data's implications and significance.

In line with the emphasis on researchers' reflexivity in reflexive thematic analysis according to Braun and Clarke (2019, 2023), the researcher remained reflective throughout the analysis process, acknowledging how personal background, perspectives, and interactions with the data influence interpretations. More specifically, as an international Master's student at a university in Finland studying social sciences and using genAI tools regularly for academic writing, the researcher's positionality closely aligned with that of the participants. This unavoidably influenced this study, from the selection of the research topic to the analysis and interpretation of the findings (Folkes, 2023). Rather than being seen as a source of bias, subjectivity is considered an essential component of knowledge production within reflexive thematic analysis, which recognizes the researcher's interpretative role (Braun & Clarke, 2019, 2023). Therefore, reflexivity was actively practiced throughout the research process to ensure a thoughtful and transparent analysis. To facilitate this and in line with Nowell et al.'s (2017) recommendation for conducting a trustworthy thematic analysis, a reflexive journal was maintained – before and during data collection, as well as during coding and theme development – to document the researcher's evolving thought process and decision-making. This reflexive practice helped ensure that the interpretations were grounded in the data and

that the findings were not merely descriptive but also interpretative. Instead of seeking objectivity through techniques like inter-coder agreement or member checking, an iterative approach was applied to support trustworthiness while recognizing that meaning is co-constructed through the researcher's and participants' perspectives (Braun & Clarke, 2023).

4.6 Trustworthiness

The trustworthiness of this study, which is a concept used to assess the quality of qualitative research, was ensured by considering its four key criteria: credibility, transferability, dependability, and confirmability (Guba & Lincoln, 1989).

Credibility refers to how accurately the findings reflect participants' perspectives (Guba & Lincoln, 1989). It is comparable to internal validity in quantitative research, concerning how well the findings reflect reality (Guba & Lincoln, 1989). To strengthen credibility, the researcher engaged with the data over an extended period and analyzed it systematically through multiple rounds of review. Detailed descriptions of participants' experiences were provided, including extensive direct quotations to ensure an authentic representation of their perspectives.

Transferability relates to the extent to which research findings can be applied to different contexts or settings (Guba & Lincoln, 1989). While this qualitative study does not aim for broad generalization, transferability was supported by providing detailed descriptions of participants, research context, and methodological decisions. This enables readers to assess the relevance of the findings to other contexts.

Dependability ensures that the research process is well-documented and logical (Guba & Lincoln, 1989). It emphasizes the importance of transparency, allowing readers to trace the steps taken and assess the consistency of the findings (Guba & Lincoln, 1989). To support this, the study provides a detailed description of all research steps, decisions, and interpretations, including methodological choices and analytical procedures.

Confirmability, similar to objectivity in quantitative research, guarantees that the findings are grounded in the collected data, with clear explanations of how conclusions were reached (Guba & Lincoln, 1989). Similar to dependability, confirmability is ensured through detailed descriptions and direct quotations, which aim to enable readers to follow the research process and understand how interpretations were developed from the data.

5 Results

This chapter presents the results of this study, based on reflexive thematic analysis, to address the two research questions on how international Master's students in Finland view their use or non-use of genAI tools for academic writing, and how they perceive the benefits and drawbacks of this use.

Before presenting the identified themes, three participant-related aspects are discussed for contextual background. Firstly, participants' characteristics that might influence their views on the use of genAI tools are described. Secondly, participants' categorization into engagement types is introduced, forming the basis for comparing participant perspectives throughout the thematic analysis. Thirdly, the variation in interview duration, as outlined previously in Section 4.3, is discussed in relation to participants' engagement types.

Following this contextual overview, the findings from the thematic analysis are presented. The analysis resulted in six main themes that reflect students' views on the use of genAI tools for academic writing:

- (1) Orientations toward the use of genAI tools for academic writing,
- (2) Perceived benefits of using genAI tools for academic writing,
- (3) Perceived drawbacks of using genAI tools for academic writing,
- (4) Responsible and critical engagement with genAI tools,
- (5) Contextual influences on the use of genAI tools for academic writing, and
- (6) Future perspectives on the use of genAI tools.

Each of these themes includes sub-themes, which are outlined and discussed in the sections that follow². For an overview of all themes, sub-themes, and their relationships, Figure 2 depicts the study's thematic map.

The findings are illustrated through quotes from the interviews to ensure that participants' voices remain central and to enhance the credibility and transparency of the analysis. Any clarifying additions within quotes are shown in square brackets.

² The complete list of themes, sub-themes, and codes is provided in Appendix 4.

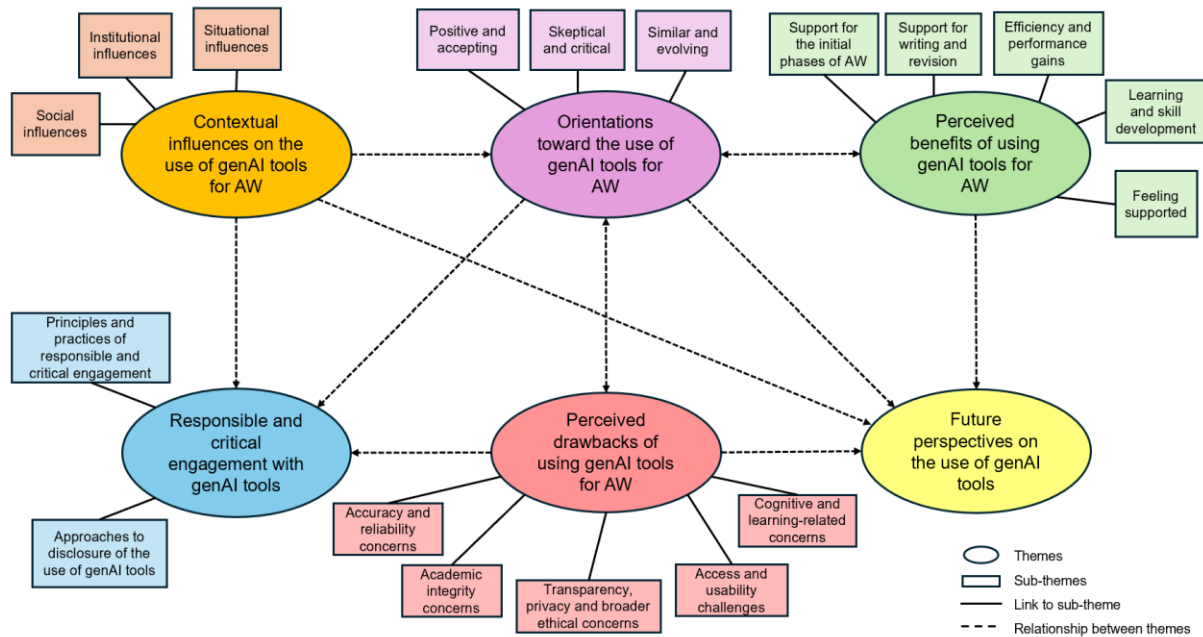


Figure 2. Thematic map with themes, sub-themes, and their relationships

5.1 Engagement characteristics of participants

To begin with, participants' characteristics, their categorization into engagement types, and the variation in interview duration will be discussed.

5.1.1 Participant characteristics

The sample included students from different study years (first year, second year and beyond), but no clear patterns emerged from this data. Therefore, to strengthen students' anonymity and due to its limited relevance to the findings, participants' individual study year is not reported. In addition to students' different study years, participants varied widely in age and English academic writing experiences, due to differences in academic backgrounds, prior degrees, and professional experiences. Although this background information was not collected, it is acknowledged that these factors may have influenced participants' perspectives and engagement with genAI tools.

Participants were categorized into three user groups: regular users ($n = 6$), occasional users ($n = 3$), and non-users ($n = 2$), as outlined in Table 1 below. This categorization was based on participants' self-reported frequency of use within the past six months, their attitudes, as well as their self-perception toward their genAI tool use for academic writing. Regular users described using genAI tools frequently, with reported usage including phrases such as

“almost every day” or *“for all assignments”*. Occasional users reported less frequent use, ranging from *“once or twice a month”* to *“once in a month or even rarely”* or only on a few occasions so far. Among the non-users, one participant (P10) stated to have never used genAI tools for academic writing, while the other (P3) reported having used them only twice, in very limited ways, to support challenging assignments. Despite this limited use, P3 strongly opposed the use of genAI tools for academic writing and self-identified as a non-user. Accordingly, P3 was categorized as a non-user and interviewed with the non-user version of the interview guide.

All participants who reported using genAI tools mentioned using ChatGPT, either exclusively or in combination with other tools. Several participants also mentioned using Grammarly. However, since Grammarly may not consistently qualify as a genAI tool, depending on whether traditional grammar-checking or newer AI features are used, it was not a focus of this study. Excluding Grammarly, four participants reported using only ChatGPT, while others mentioned the use of the following additional tools: Gemini, Microsoft Copilot, Claude, Perplexity, DeepSeek, Poe, QuillBot, Notion AI, DeepL Write, and NotebookLM. Most participants mentioned using between one and three genAI tools, with only one participant reporting the use of up to four genAI tools (in addition to Grammarly). No clear patterns were identified between the number or types of genAI tools used and participants’ individual characteristics or overall perspectives. Therefore, and to preserve anonymity in this small sample, specific tools are not attributed to individual participants.

In addition to questions about the use of genAI tools, participants were asked to reflect on how comfortable they feel with academic writing in English. This question aimed to explore whether there might be a connection between students’ self-assessed writing confidence and their tendency to use genAI tools for academic writing. The responses ranged from “somewhat uncomfortable” to “very comfortable”, with most participants describing themselves as either comfortable or very comfortable with academic writing in English. A summary of each participant’s usage frequency and reported comfort level with academic writing in English is provided in Table 1.

Table 2. Participants' Usage Frequency and Comfort with AW in English

Usage Frequency	Participant	Comfort with AW in English
Regular user	P8	Somewhat uncomfortable
	P2	Somewhat comfortable
	P4	Comfortable
	P11	Comfortable
	P5	Very comfortable
	P7	Very comfortable
Occasional user	P1	Comfortable
	P6	Comfortable
	P9	Very comfortable
Non-user	P3	Very comfortable
	P10	Very comfortable

Students' comfort level did not appear to determine their use of genAI tools. Both non-users described themselves as very comfortable with academic writing in English, and occasional users also reported feeling either comfortable or very comfortable with it. This could suggest that students who feel more comfortable with academic writing in English may be less inclined to use genAI tools regularly. However, several regular users also reported feeling very comfortable with academic writing in English, while others described lower levels of comfort. Regular users thus included a mix of students, with reported comfort levels ranging from "very comfortable" to "somewhat uncomfortable", which is why no clear pattern was identified between participants' comfort level and their use of genAI tools.

The only consistent observation is that participants who used genAI tools less frequently or not at all described themselves as comfortable or very comfortable with academic writing in English. Conversely, those who felt somewhat uncomfortable or only somewhat comfortable reported using genAI tools regularly. Nonetheless, participants' use of genAI tools appeared to be influenced by a broader set of factors.

5.1.2 Participant engagement types

While participants were initially categorized into regular users, occasional users, and non-users based on their self-reported frequency of use of genAI tools, this basic distinction was further refined during analysis. It became clear that usage frequency alone was not sufficient to capture the diversity in participants' engagement, motivations, and attitudes toward the use of genAI tools for academic writing. To support a more distinguished

interpretation of their perspectives, participants were further categorized into the following four engagement types: Embracers, Strategic Minimalists, Reserved Skeptic, and Watchful Non-User. This typology reflects not only whether and how often participants used genAI tools for academic writing, but also for what purposes they used them and how they positioned themselves to the use of genAI tools. The typology was developed inductively through familiarization with the research data and was refined by relating participants' quotes to their reported usage patterns and expressed attitudes.

Participants who reported using genAI tools for academic writing (regularly or occasionally) were categorized as *users*. In addition, they were further subdivided into *Embracers* and *Strategic Minimalists*. All participants who reported using genAI tools regularly were categorized as Embracers, except for P11. P11 was categorized as a Strategic Minimalist together with the three participants who reported using genAI tools occasionally. Most Embracers were characterized not only by using genAI tools regularly and for a broad range of purposes, but also by an 'embracing' attitude toward their use for academic writing. 'Embracing' attitude means that they expressed rather positive and enthusiastic attitudes toward the use of genAI tools, appreciating their existence and embracing their use for academic writing. In contrast, most Strategic Minimalists used genAI tools only occasionally and for more limited purposes. Moreover, and most importantly, they had a more 'strategic minimalistic' attitude toward the use of genAI tools for academic writing. 'Minimalistic' attitude refers to a more neutral or pragmatic than enthusiastic attitude toward the use of genAI tools for academic writing. The term 'Strategic' reflects their deliberate choice to use genAI tools only in a limited way. Since this study focuses on students' views on the use of genAI tools, the emphasis for students' categorization in engagement types lay on their attitudes. Therefore, P11 was categorized as a Strategic Minimalist despite their reported regular use of genAI tools because the purposes for which they used genAI tools were limited, and their attitude toward the use of genAI tools for academic writing was more neutral and pragmatic, which are both characteristics of Strategic Minimalists.

In addition to Embracers and Strategic Minimalists who represented users of genAI tools, two participants were categorized as *non-users*. As already mentioned in Section 5.1.1 on participants' characteristics, one participant (P10) among the non-users had never used genAI tools for academic writing, and the other (P3) reported having used them twice in very limited ways but still identified as a non-user. Because of these differences, not only in their usage frequency, but also in their attitudes toward the use of genAI tools for academic writing, these

two non-users were further subdivided into the *Watchful Non-User* and the *Reserved Skeptic*. P10 was categorized as the Watchful Non-User because, despite never having used genAI tools, they expressed a ‘watchful’ attitude toward the use of genAI tools. This means that they were not completely opposed to their use and knew that they would start using them in the future, but their current reluctance was more a matter of timing and perceived readiness to use genAI tools for academic writing. In their own words they stated: “*Even though I am skeptical, I'm not deadly against them. [...] I read quite a lot about AI tools*” and elaborated that “*It's not a question of will I reconsider [to use genAI tools for academic writing], it's a question [of] when I'm gonna have time to learn it*”. Therefore, this participant will be referred to as the Watchful Non-User because they were well-informed and ‘watchful’ about the developments concerning genAI tools and a non-user at the time of the interview. In contrast, P3 expressed a more discouraging stance toward the use of genAI tools and did not report any certainty or intention to use these tools in the future for academic writing. Considering that they had tried using genAI tools but remained skeptical and reserved towards their use, they were named the Reserved Skeptic.

In summary, all eleven participants were categorized into four engagement types: Embracers (n = 5) and Strategic Minimalists (n = 4) who represent users of genAI tools, and the Reserved Skeptic (n = 1) and the Watchful Non-User (n = 1) who represent non-users. The four engagement types and the corresponding participants are summarized in Table 3.

Table 3. Overview of Participants' Engagement Types

Engagement Type	Participant	User Type
Embracers	P2, P4, P5, P7, P8	User
Strategic Minimalists	P1, P6, P9, P11	
Reserved Skeptic	P3	Non-User
Watchful-Non-User	P10	

Participants' categorization into engagement types facilitates presenting the results, because it clarifies who holds which views and enables comparisons within and between the types.

When participants are quoted, their engagement type is indicated alongside their ID number to support the interpretation and comparison of their statements. Referring to participants by their engagement type also helps to identify patterns in how different user and non-user groups perceive, engage with, and reflect on the use of genAI tools for academic writing.

Therefore, this typology provides a foundation to better understand students' diverse views and practices discussed in the following.

5.1.3 Interview duration in relation to engagement types

Participants' categorisation into engagement types also helps explain the variation in interview durations, which ranged from 18 to 75 minutes, as outlined in Table 1 (see Section 4.3). While interview length does not determine the quality or depth of what participants shared, it can serve as a small indicator of their level of engagement with the topic, particularly when considered alongside their reported perspectives and attitudes toward the use of genAI tools.

The by far longest interview of one hour and 15 minutes was with P7, a regular user who was also categorised as an Embracer. The length of their interview indicates that this participant expressed strong enthusiasm for the topic and reflected extensively on their experiences. In contrast, the shortest interviews of 18 and 21 minutes – with P6 (occasional user) and P11 (regular user), who were both categorised as Strategic Minimalists, reflected their more moderate involvement with the topic. Overall, interviews with Embracers tended to be longer than those with Strategic Minimalists, suggesting a generally higher level of engagement with the topic among Embracers. The only exception was P4, who was a regular user and Embracer, but whose interview lasted only 25 minutes and was therefore shorter than that of one Strategic Minimalist. This variation in interview duration within the Embracer group (ranging from 25 to 75 minutes) highlights that, also among Embracers, the extent of their engagement with the use of genAI tools differed.

Furthermore, it is noteworthy that the second-longest interview of 44 minutes was with P10, the Watchful Non-User. This illustrates that interest in the topic is not limited to frequent users but can also stem from being well-informed and having researched the subject extensively.

Overall, the variation in interview duration broadly reflects the typology of participants' engagement types and provides contextual background for interpreting the findings. It serves as a point of orientation rather than a basis for comparison since interview length alone is not a measure of quality or insight. Several shorter interviews contained equally valuable and nuanced reflections, often articulated in a more concise and focused way.

5.2 Orientations toward the use of genAI tools for academic writing

The following sections present the themes and their corresponding sub-themes developed through the thematic analysis.

To address the first research question regarding students' views on using or not using genAI tools for academic writing, the interview data were analysed to identify participants' orientations toward the use of genAI tools for academic writing. This first theme includes three sub-themes: (1) positive and accepting, (2) skeptical and critical, and (3) similar and evolving orientations toward the use of genAI tools for academic writing. These sub-themes will be discussed in detail below.

5.2.1 Positive and accepting orientations

Participants who identified as users of genAI tools, specifically Embracers and Strategic Minimalists, generally expressed a positive and accepting attitude towards the use of genAI tools for academic writing. They commonly described them as supportive or collaborative tools that assist them with their academic writing without replacing their own thinking or effort. For instance, P4 (Embracer) compared the use of genAI tools to previously used digital tools, explaining: *"Before I also used a lot of like translating programs and different like synonym kind [...] of tools that kind of did the same work as AI but [in] a bit restricted way"*. Other Embracers and Strategic Minimalists used varied metaphors to describe their perception of genAI tools. For example, they referred to them as:

"a helper" (P1)

"another hand" (P5)

"a good add-up" (P6)

"a support system" (P7, P11)

"a consultation tool" (P7)

"an assistant" (P8)

These expressions suggest that participants saw genAI tools as additions to their academic writing process that complemented rather than replaced their own thinking and writing.

Some participants also described the tools' role as similar to that of an editor, using phrases such as:

"like editor's work" (P1)

"as editor" (P8)

One participant further described the interaction with genAI tools as “*a collaboration*” (P8, Embracer), which indicates a more interactive relationship between user and tool. Moreover, P8 and P7 (both Embracers) referred to genAI tools as “*a learning tool*”, suggesting that they were not only perceived as useful for completing academic writing tasks but also for learning and improving academic writing skills.

Overall, Embracers and Strategic Minimalists used a wide range of metaphors to express their perspectives on the functionalities of genAI tools, ranging from basic assistance to more interactive collaboration.

In addition to Embracers and Strategic Minimalists, the Watchful Non-User (P10) also shared an accepting orientation toward the use of genAI tools, despite some skepticism. Rather than rejecting them completely, they recognized their usefulness and future relevance and described their hesitation as a matter of timing and personal readiness, noting: “*I kind of know that sooner or later I will use it [AI]*”. This suggests that not using genAI tools does not always mean disapproval. It demonstrates that an accepting orientation toward genAI tools may exist even without active use and shows how varied and complex students’ attitudes can be.

5.2.2 Skeptical and critical orientations

Among the four engagement types, the Reserved Skeptic and the Watchful Non-User stood out for their more skeptical and critical attitudes toward the use of genAI tools for academic writing. They did not express complete opposition to the use of genAI tools but raised concerns about its implications for academic writing.

The Reserved Skeptic (P3) expressed a personal reluctance to use genAI tools for academic writing and also a critical view toward their use by others, stating: “*I kind of normally discourage [...] using AI and I also don't use AI*”. This position was closely related to concerns about responsible use and academic integrity, particularly about how peers engage with these tools. The participant explained:

“Sometimes I'm worried that whether they [friends and fellow students] are using it [genAI tools] correctly or not. [...] what if they don't use it correctly and what if they get caught for plagiarism and AI use? So I always have that doubt in my mind when I see them using that.”

This outward-focused concern about others' use and its consequences was also expressed by the Watchful Non-User (P10), questioning: *“Do people actually really catch all of the mistakes AI is giving them?”*. Their doubt about users' critical engagement with genAI tool outputs extended to broader worries about the impact of the use of genAI tools on academic writing quality: *“We are talking about the essays and thesis writing, but also articles, are they actually qualitatively worse when they are written with AI?”*. They elaborated: *“I'm generally against shortcuts in science, just because they don't produce qualitatively good results, in my opinion”* (P10).

Besides these concerns related to others' use and academic writing quality, internal values around authorship also contributed to the Watchful Non-User's (P10) skepticism, who noted: *“It's not that I don't believe that the machine could do it better than me, but I kind of don't”*. They further explained: *“I feel like I have more control over the [academic writing] process [...] I find it fulfilling. [...] I think it [using genAI tools] would take to some extent the feeling of I'm controlling that process”*.

Overall, both the Reserved Skeptic and the Watchful Non-User expressed a nuanced, rather than absolute, form of skepticism. The Reserved Skeptic focused primarily on issues of academic integrity, and the Watchful Non-User raised additional concerns about potential declines in writing quality and a loss of personal control over the writing process. Together, these perspectives reflect a critical orientation toward the use of genAI tools based on concerns about the effects of their use on academic integrity and quality, as well as on perceived personal consequences, such as reduced control and fulfillment in the writing process. The Watchful Non-User and the Reserved Skeptic were not completely against the use of genAI tools, but their views emphasize the importance of responsible and ethical academic writing practices, raising concerns about whether using genAI tools supports or undermines high-quality academic writing.

5.2.3 Similar and evolving orientations

In addition to clearly positive or skeptical orientations toward the use of genAI tools, this third subtheme captures the similar and evolving orientations of most participants. While participants' user type influenced their perspectives - users tending to be more positive and non-users more skeptical - this binary alone does not reflect the complex and fluid attitudes that were identified across interviews.

Regardless of their specific orientation, a commonality across all engagement types was a shared curiosity and interest in genAI tools. For example, one Strategic Minimalist (P1) described genAI tools as interesting precisely because of their novelty, remarking: *“This is a new technology. [...] So it is just interesting to use new technologies [...] [and] to see how they develop”*. Similarly, an Embracer (P2) shared that they enrolled in an AI course out of curiosity about how these tools function. Even the Reserved Skeptic (P3), despite ultimately deciding not to use genAI tools for academic writing, reported trying a genAI tool because they were *“curious to see its performance”*. These examples show that curiosity about genAI tools was not limited to those who regularly use them. Rather, an interest in how these tools function and evolve was consistently present across all engagement types, even when it did not always lead directly to continuous or regular use. Nonetheless, for some participants, this curiosity served as a motivation to engage with genAI tools, and several described their use as still new or developing. For instance, two Strategic Minimalists (P6) noted: *“It’s rather a pretty new experience to use AI”* (P6) or *“I’m very new to the game”* (P9). Similarly, an Embracer (P4) described being in a *“honeymoon phase where [they] use it quite often, like everything [they] need to know for”*.

Besides these initial experiences, several participants explained how their general perspectives and behaviors regarding the use of genAI tools had changed over time. P4 (Embracer), for example, described being initially skeptical and avoidant toward genAI tools because they *“only got the information without the references”*, but began using them once this limitation was addressed, and *“also in a free version you [could] get the references”*. Similarly, a Strategic Minimalist (P6) reflected on their evolving views and behaviour:

“I was quite hesitant in the beginning. [...] But in the end, I feel like we will not get around that and I feel like that’s my main reason why I try to get into it right now because it is the future of everything we are going to do.”

Another external factor that seemed to influence changing perceptions and engagement regarding the use of genAI tools was social context, as the Reserved Skeptic (P3) explained:

“I haven’t used it back in my country. But when I came here as a student, I noticed that most of my classmates were using, like mostly ChatGPT. [...]. Since I saw many students using generative AI for their academic life, I was kind of, I thought that okay, maybe I should check once.”

In contrast to these external factors, internal developments were also mentioned as contributors to evolving perspectives:

“From my undergrad days and up until my [...] master's now, how I looked at ChatGPT has always changed over time [...]. Over time, my understanding about [...] learning has also changed. And with that, my understanding about how to incorporate ChatGPT also changed.” (P2, Embracer)

Together, these statements suggest that the orientations of many students toward the use of genAI tools are not static but evolving in response to internal developments, such as changing views on learning, and external influences, including tool improvements and social context. These findings highlight that students' attitudes and practices regarding genAI tools are complex and dynamic rather than simply critical or accepting. Curiosity about these tools was widespread, even among skeptics, and engagement and perceptions seem to often develop over time in response to various factors.

5.3 Perceived benefits of using genAI tools for academic writing

The findings on students' positive and accepting orientations toward the use of genAI tools have already provided initial insights into why students might decide to use genAI tools. Following this, students' perceptions of the concrete benefits of using genAI tools for academic writing will be discussed in this chapter to answer the first part of the second research question on how students perceive the benefits of using genAI tools for academic writing. Participants described the following five main benefits of using genAI tools for academic writing: (1) support for the initial phases of academic writing, (2) support for writing and revision, (3) efficiency and performance gains, (4) learning and skill development, and (5) feeling supported. Figure 3 depicts the number of participants mentioning each benefit, and each of these perceived benefits will be discussed in detail below.

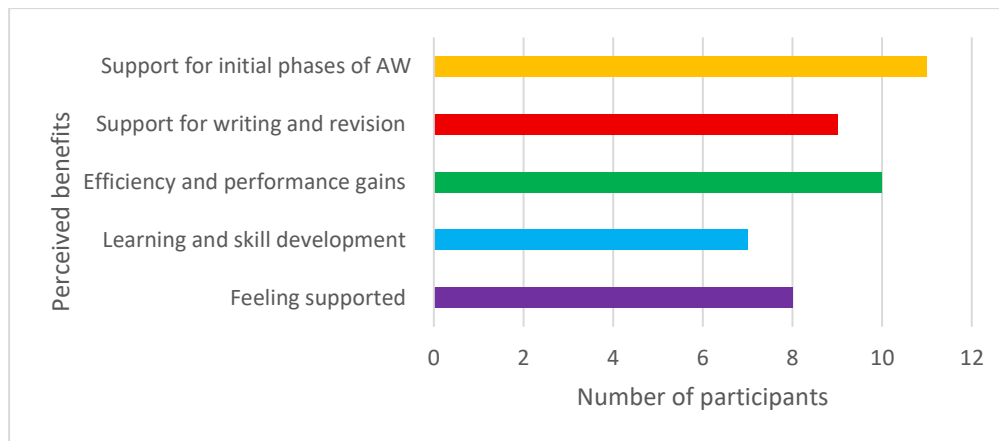


Figure 3. Five main perceived benefits of using genAI tools for academic writing, and the number of participants mentioning each benefit.

5.3.1 Support for the initial phases of academic writing

One clearly perceived benefit mentioned by all participants is the support of genAI tools for the initial phases of academic writing. More specifically, the facilitation of initial idea generation was highlighted by six participants (Embracers and Strategic Minimalists) as particularly helpful during the initial phases of academic writing. Students explained that “sometimes [when they] just don't have ideas” (P1, Strategic Minimalist) or when they are “struggling to find a topic” (P9, Strategic Minimalist), “it's a good starting point [...] to ask it [the genAI tool] for ideas” (P6, Strategic Minimalist). Participants elaborated that “before using AI, [...] it's very difficult to start any writing [or], start thinking about the idea” (P7, Embracer), which is why using genAI tools is “helpful also to get into the topic [and] to go back and forth with ideas, basically” (P6, Strategic Minimalist). P7 (Embracer) specified that, in this way, “it helps me to generate more ideas”, “to brainstorm the other different ideas which I never thought about”, “and to refine the ideas as well”.

Another frequently mentioned benefit related to the early phases of academic writing was the use of genAI tools to facilitate the initial structuring and organizing of students' academic writing. Six participants, some of whom also valued the tools for generating initial ideas, stated that using genAI tools helps “especially for like in the beginning to find a structure” (P11, Strategic Minimalist) because the tools can provide an “outline of the essay, [and] maybe some sub topics” (P9, Strategic Minimalist). The Reserved Skeptic (P3) also shared how they used a genAI tool as support for structuring an essay they were struggling with, recalling: “Then I opened this ChatGPT for the first time in my life. And I asked about the structure for my essay”. Although generally skeptical towards their use, the Reserved Skeptic

(P3) expressed openness to using genAI tools for this purpose, noting: *“Maybe I can use AI tools, maybe to kind of get an idea about the organization, like the structure of the essay, and maybe get some points what to write for each section”*. The value of this support was emphasized by P2 (Embracer), who explained:

“I have been procrastinating it [writing my assignment] for like two weeks just because I did not know where to start. [...] But after I started using ChatGPT or like after I asked ChatGPT to give me an outline, I'm like, okay, this is how I should do it”.

Another participant also highlighted the advantage of AI assistance in developing a writing plan, stating that having such a plan *“is the best way to feel confident”* (P7, Embracer).

Furthermore, participants described the value of using genAI tools *“as a search tool”* (P7, Embracer), i.e., a personalized search engine, for example, *“for looking for references”* (P4, Embracer) or *“related articles”* (P5, Embracer). P9 (Strategic Minimalist) elaborated that this facilitates the search for *“topics, articles, things that you would spend a lot more time looking into, even with existing websites”* and further remarked: *“I don't think I would have found out so many articles, for example, by myself”*. Moreover, the Watchful Non-User (P10) reflected: *“The amount of information in science is growing constantly. It's already very overwhelming. So I can see the use of AI in that sense”*, thereby acknowledging the tools' potential to mitigate information overload, for instance, by serving as a personalized search engine.

To manage huge amounts of available information, students also appreciated the use of genAI tools for their ability *“to repress or summarize the information of the articles”* (P5, Embracer). Even the Reserved Skeptic (P3), who generally avoided genAI tools, described using them to summarize an article and recalled being *“impressed by that”* because *“it gave a kind of in-detail summary”*. Receiving summaries from genAI tools was not only perceived as valuable for saving time, especially in situations of time pressure, but also for facilitating the comprehension of complex academic literature. As P2 (Embracer) explained: *“When I read the answer given or the summary given by ChatGPT, and when I get back to my article, it's more understandable”*, and P8 (Embracer) similarly noted that using genAI tools supported *“understanding [the] main message of articles”*. P5 (Embracer) further stated that knowing if certain sections were unclear, they *“have AI to clarify those things”*, encouraged them to *“explore more”* and *“read [...] more papers”*. Beyond text-based summaries, one participant also mentioned the ability to convert articles into podcasts using NotebookLM, which can further enhance the comprehension of academic literature. They described these AI-generated

conversations as *“two people like other podcasts, [who] talked about that article in a very, you know, interesting way”* (P8, Embracer) and noted that listening to the podcast after reading the article helped deepen their understanding.

In addition to enhancing comprehension, genAI tools were also valued for their ability to facilitate the analysis and synthesis of academic literature. For example, P8 (Embracer) described using genAI tools to compare multiple articles, asking them *“to highlight the similarities or differences between the argumentation”* and to identify common ideas across texts because it helps *“to get this whole perspective from [e.g.] five or six related articles.”*

Overall, a clearly perceived benefit of using genAI tools was their support for the initial phases of academic writing, particularly by facilitating idea generation, organization, and engagement with academic literature. Support for these early phases was the only category of benefits mentioned by all eleven participants, including non-users. This form of support is the most widely shared perceived benefit in this study and appears to be a central motivation for students' interest in genAI tools.

5.3.2 Support for writing and revision

Beyond facilitating the initial phases of academic writing, students also valued genAI tools for their support in writing and revision. For example, some participants appreciated the ability to generate drafts, which they could then personalize and refine. Furthermore, the tools' support in phrasing and translation was recognized as a key benefit. Students reported using genAI tools *“for translation or looking for synonyms”* (P4, Embracer) or to find antonyms, and alternative expressions. This was perceived as helpful, not only for improving the quality and variety of their writing, but also for saving time compared to using traditional resources such as dictionaries or synonym websites.

In addition to genAI tools' support in outlining and organizing texts in the initial phases of academic writing, participants also valued their capability *“to structure”* (P2, Embracer), *“refine and to restructure”* (P7, Embracer) their texts during later stages of writing. As P1 (Strategic Minimalist) explained, using genAI tools helped when *“I didn't know what information can I put in this part or in that part [...] so when I have the text, when I have the ideas, but I don't know how to structurize them”*.

Moreover, genAI tools were valued for their assistance in synthesizing and managing information from multiple sources. For example, P9 (Strategic Minimalist) emphasized that

using genAI tools helped condense and organize extensive knowledge from numerous articles, making it possible to efficiently reference and integrate information for academic assignments. This was considered particularly useful when the volume of required reading made it difficult to manually synthesize and cite all relevant sources, or, in the words of P9 (Strategic Minimalist), to be *“so compact with so much reading.”*

Another commonly perceived benefit was genAI tools’ support during the revision process, particularly through providing feedback and refining writing. As P1 (Strategic Minimalist) explained, they would upload their text to ChatGPT and ask it to *“address grammar mistakes, address wording mistakes, address the general flow of the text. And it does it. Okay, then you see whether you have committed any mistakes, what you can improve in your text”*. Similarly, P7 (Embracer) shared using genAI tools most often *“to criticize what [they]’ve written”* to identify potential weaknesses or provide alternative viewpoints. Others also mentioned using genAI tools *“to check for the spelling”* (P4, Embracer) or *“get some sort of feedback”* (P11, Strategic Minimalist) because, as P6 (Strategic Minimalist) said, *“it kind of gives solid feedback”*. Participants also highlighted the usefulness of genAI tools in refining their writing, for example, by suggesting *“nice academic words”* (P5, Embracer), improving the flow through *“connective words”* (P5), or helping to *“rewrite it [their text] in a more academic way”* (P8, Embracer). P9 (Strategic Minimalist) summarized: *“I think it could be used to make my writing better.”*

In summary, nine participants emphasized the benefits of genAI tools for supporting the writing and revision of their academic writing, helping them to identify errors, receive constructive feedback, and improve the quality of their writing.

5.3.3 Efficiency and performance gains

Another frequently mentioned benefit was that using genAI tools increases efficiency and academic performance. For example, P4 (Embracer) stated that using genAI tools *“made working [...] easier, so it's not [...] taking so much time“* and *“if you won’t use it as a tool, [...] you won't be so efficient in your work”*. The benefit of saving time was likewise highlighted by others, such as P9 (Strategic Minimalist), who summarized: *“Overall, I think it saves time”*, P1 (Strategic Minimalist), who emphasized: *“It saves a lot of time”* and P7 (Embracer) who noted: *“If they take it [AI] away, it would not in any way affect my academic writing, but it might affect [...] my productivity”*. The Watchful Non-User (P10) also

acknowledged: *“The main benefit of AI, as far as I know, for students and researchers, is to save time”*.

Participants elaborated on how using genAI tools contributed to saving time, explaining that: *“planning takes a lot of time, but with ChatGPT, the planning part [...] [is] done like in a very, very short time”* (P7, Embracer). P11 (Strategic Minimalist) also stated that using genAI tools *“seems to be more time efficient [...] because it’s faster than if I do it myself”*.

Moreover, participants described time efficiency gains when engaging with a genAI tool *“because it’s very speed and generate[s] more information within one second”* (P5, Embracer). The ability to obtain *“a lot of information within seconds”* (P7, Embracer) directly contributed to saving time and was seen as a major benefit and motivation for using genAI tools. As P7 (Embracer) said: *“That’s the most important thing about it because of the fast response”*. While P7 (Embracer) particularly valued the tool’s speed and immediate access to information, other participants highlighted the resulting benefit of saving time as a key reason to start using genAI tools. For example, the Reserved Skeptic (P3) shared how both the encouragement of their peers and the desire to save time motivated them to use ChatGPT for the first time: *“My group members also suggested me that, okay, we don’t have time to read several articles and get information, let’s just use ChatGPT. And then I was also, okay, why not?”*.

Beyond simply saving time, some participants also appreciated how using genAI tools *“saves mental toll”* (P9, Strategic Minimalist). P4 (Embracer) explained that *“it would take a lot more energy and time to do the same work without the AI”* (P4, Embracer), and P1 (Strategic Minimalist) agreed that it would *“take more effort from your brain”*.

Furthermore, students described improving the quality of their writing through the use of genAI tools. P4 (Embracer) noted that using genAI tools *“would help [them] like produce better text with AI [...] [i.e.,] more qualitative work”* and P11 (Strategic Minimalist) remarked that it can *“enhance [...] [their] outcomes”*. P8 (Embracer) reflected that one reason for this improvement might be the linguistic support provided by genAI tools since they *“use more simple sentences [and] very limited [...] words [...] because English is [their] second language”*. Similarly, P5 (Embracer) remarked that compared to previous assignments completed without AI: *“I feel now I have more vocabulary-rich assignments, I have information-rich assignments because I easily gain information through AI”*. Additionally, one participant (ID omitted on purpose) stated that using genAI tools can *“help [them] like*

produce better text with AI and to compensate for the kind of like the cognitive changes that [they] have”, referring to cognitive and language-related difficulties resulting, for example, from long-term illness, which make academic writing more difficult.

Overall, ten participants in this study – regardless of their engagement type being Embracers, Strategic Minimalists, or Non-Users – perceived efficiency and performance gains as a major benefit of using genAI tools for academic writing.

5.3.4 Learning and skill development

Beyond improving the overall quality and outcomes of academic writing, many participants highlighted that genAI tools also contributed to the development of their academic skills. As previously noted in Section 5.2.1 on students’ positive and accepting orientations toward the use of genAI tools, some participants perceived genAI tools as a “*learning tool*” (P7, P8, Embracers). The following examples illustrate the specific ways in which students perceived that genAI tools supported their learning.

The most frequently mentioned aspect of skill development that several participants described was how regular engagement with genAI tools contributed to the development of their vocabulary and language skills. For instance, P5 (Embracer) remarked: “*I feel like I’m improving from vocabulary, structures, and phrases*”, and P2 (Embracer) explained in more detail:

“When I use ChatGPT, I also notice new sentence structures and new words sometimes. So I would also like memorize those structures or like you know memorize those words so that I could use them on my own later on. So in that way, ChatGPT has also helped me improve my language skills by giving me more academic words or academic forms of writing.”

In addition to learning new academic words and sentence structures, P2 (Embracer) mentioned that they also “*came across new writing styles*” and concluded that “*yeah, it [using genAI tools] has helped me improve my vocabulary and writing*”. Similarly, P6 (Strategic Minimalist) shared:

“Sometimes, of course, if you ask AI for something, it frames the stuff differently than I would have, and if there are words that I haven’t come across before, then I check

what they mean to understand the output. And then probably I also learn these new words.”

When reflecting on the long-term effects of using genAI tools, P6 (Strategic Minimalist) also viewed the continued use of genAI tools as *“a chance to learn new styles”*. Likewise, if they would stop using genAI tools, P4 (Embracer) reflected: *“I think my vocabulary would become smaller”*, and P6 (Strategic Minimalist) similarly noted: *“probably [...] I will lose the learning, the potential learning of the AI”*.

Apart from the development of vocabulary and language skills, participants highlighted that genAI tools also improved their structuring and organizational skills. For example, P1 (Strategic Minimalist) remarked: *“Maybe I can see some structural patterns myself more clearly after I check how ChatGPT points them out [...]. Then I can do it myself more clearly”*. Moreover, P2 (Embracer) noted that genAI tools had shown them *“how to properly organize an essay”*, and P5 (Embracer) described that regular use of genAI tools contributed to the feeling of *“becoming an organized person, like [capable of] writing a structured, well-organized assignment in [the] future also”*.

As a result of this learning process through AI’s suggestions, some participants also stated that their confidence in their academic writing skills increased, even without using genAI tools as assistance. For instance, P1 (Strategic Minimalist) reflected: *“Maybe I’m more confident in the structure itself, maybe I’m more confident that the text is readable, that my thoughts don’t jump from one place to another constantly. Yeah, on this point, I would say yes.”* (P1, Strategic Minimalist). Similarly, P4 (Embracer) responded, when asked whether they would feel more confident writing academically without AI support than before using genAI tools that *“maybe a little bit yeah, I would be now more confident than I was then”* when writing without AI assistance. This suggests that the use of genAI tools might not only support students’ learning but also positively influence their confidence in their academic writing skills.

Furthermore, P7 (Embracer) explained why they perceived the use of genAI tools as facilitating critical thinking:

“Sometimes, in fact, most times it makes me look inward [...]. I may be looking at something at a surface level, but by the time I consult AI [...], it helps me to generate more ideas. So sometimes it helps me to dig deep [...] it’s like a learning tool. So by

the time you use AI, you get to think again and say, oh, okay, I think this doesn't sound well, so I have to like restructure it. [...] It's like a tool that helps to see other things beyond yourself."

This reflection implies that the use of genAI tools can also encourage critical and metacognitive thinking, encouraging students to critically assess and refine their own thinking and writing.

Overall, seven participants described that the use of genAI tools supported their learning and skill development. This included support for vocabulary and language development, improved structuring and organizational skills, increased confidence in academic writing, and enhanced critical thinking. For some, this support was clearly recognized and actively valued; for instance, P7 (Embracer) explicitly described using genAI tools as a way to strengthen their critical thinking. For others, this learning occurred more implicitly through regular engagement with genAI tool suggestions. While not always mentioned as an explicit benefit, students' reflections indicate that the use of genAI tools can positively influence their learning and skill development and thus represents a benefit of using genAI tools for academic writing.

5.3.5 Feeling supported

Beyond supporting specific writing phases and skill development, students' feeling of being supported was identified as another key benefit of using genAI tools for academic writing. While all previously discussed benefit categories relate to support in some way, this sub-theme does not focus on the practical functions of support (such as for the initial phases of writing), but on the feeling of being supported and the resulting consequences. As previously noted in Section 5.2.1 on students' positive and accepting orientations toward the use of genAI tools, some participants referred to these tools as "*a consultation tool*" (P7), "*a helper*" (P1), "*another hand*" (P5), or "*a support system*" (P7, P11). While these metaphors reflect generally positive perceptions toward genAI tools, they also indicate that participants felt supported when using genAI tools – and this feeling of support was itself perceived as an important benefit. Therefore, the following section will explore when and why students experience feeling supported through the use of genAI tools, and why it is perceived as an important benefit, including its potential consequences.

Some participants stated explicitly that they feel supported by genAI tools, like P7 (Embracer), who shared the feeling of having "*a support system*" and P11 (Strategic

Minimalist) who stated: *“I'm not as worried that I won't be able to make anything because I know there's this support system that will help me in a way”*. For other participants, the feeling of being supported could be inferred from the way they described their experience with genAI tools as *“a consultation tool”*. By viewing genAI tools in this way, they indirectly expressed that the tool provided them with a sense of support. For instance, P1 (Strategic Minimalist) described:

“[When] I have no one to consult with on this because I don't have any friends [...] who can say to me like, [name], you should do like this, you shouldn't do like this. Write your [...] according to this plan. So, I have to consult with someone, and ChatGPT is, might be a good opportunity.”

The Watchful Non-user (P10) also recognized this benefit of having someone *“to consult with”* (P1) as a form of support when no human contact is available, remarking: *“If you don't have anyone to discuss the article with, you can use AI to discuss the article. That would be kind of nice”*. P7 (Embracer) further reflected on how the availability of genAI tools contributed not only to a sense of support, but also to greater independence, reflecting: *“It makes me to be self-reliant, to be independent. So I don't have to consult too much [with others] [...]. And then later I can seek the help of experts”*.

These feelings of self-efficacy and being supported also seem to come from the fact that genAI tools are constantly available and hence can provide assistance whenever needed. As P5 (Embracer) illustrated: *“At that point, I feel like I'm very, I feel like very comfortable to write assignments because I know AI is always with me, I have another hand to do my assignment”*. Another participant described genAI tools' permanent availability even more precisely, summarising:

“It's always with you, it's always by your side. You can always pick your phone, you can always use your laptop, you can always confirm things immediately. So it's not like you have to wait till you get home before you do something.” (P7, Embracer)

This constant availability was one reason why students described feeling continuously supported by genAI tools.

Another contributing factor was the sense of ease these tools provided. As P2 (Embracer) noted, using genAI tools *“just makes [their] life easier”*. P9 (Strategic Minimalist) further explained that it *“makes things much easier [because] it takes a lot of the labour that is not*

really necessary, like, it's not really necessary for me to be able to spend so many hours to find articles". Similarly, P7 (Embracer) described:

"It [using genAI tools] makes my tasks very, very easy [...] [because] the only thing I need to do is to think about a problem, then ask ChatGPT to clarify those problems, if they are researchable and also read papers, and then, yeah."

In this way, genAI tools were perceived as making academic writing easier, which probably also contributed to students' overall sense of being supported. This feeling of increased ease appeared to contribute to reduced stress, as several participants described feeling less stressed as a result of using genAI tools. This reported decrease in stress seems to stem not only from students' overall feeling of being supported, but also from the specific forms of assistance provided by genAI tools, as outlined in the previous subthemes. For some students, it was the support with planning and organizing their writing; for others, it was the help with language-related challenges or the ability to save time that reduced their stress. Depending on their individual needs, participants emphasized different aspects of support that helped them feel more relaxed, but all agreed that they *"would be a lot more stressed"* (P4, Embracer) or that it would be *"more stressful"* (P2, Embracer) without the assistance of genAI tools.

Besides reducing stress, this sense of support also contributed to students' increased confidence in their academic writing skills. Unlike students' confidence described in Section 5.3.4 – where some participants stated that they feel more confident in their independent academic writing skills after having used genAI tools – the confidence discussed in the following refers to students' confidence in their academic writing skills when using genAI tools. This confidence appeared to stem from the sense of being supported throughout the writing process, as P11 (Strategic Minimalist) noted: *"it [using genAI tools] gives me some sort of like more confidence or security in a way"*. P5 (Embracer) explained more specifically why they felt more confident with the use of genAI tools, stating:

"I will feel very confident because I know [...] there [is] someone to refine [my writing], someone to help generate new words and all. So [...] if I have AI to incorporate [into] my academic writing work, [I know that] it will be very successful."

P7 (Embracer) further described the consequences of this increased confidence:

“With AI, I'm a little bit more confident in my writing [...]. That's why, when the teacher puts the writing guidelines in the class and tell[s] you, okay, at the end of this course, this is what you'll be doing, [...] I'm always like, no problem. We're going to do it. [...] So yeah, I would say right now, I'm a bit [more] confident than in the past [before using AI].”

In total, eight participants referred, either directly or indirectly, to the feeling of being supported when using genAI tools. For many participants, this feeling led to reduced stress, increased confidence, and made academic writing feel easier. Therefore, one main benefit of using genAI tools for academic writing was also students' perception that it provides a feeling of being supported.

Taken together, participants perceived five main benefits of using genAI tools for academic writing. The benefit mentioned most often and by all participants was genAI tools' support for the initial phases of academic writing. This category included support for students' initial idea generation and organization, as well as for students' engagement with academic literature. The benefit of using genAI tools as support for writing and revision was mentioned by nine participants. Efficiency and performance gains were another major benefit that students perceived. This benefit was mentioned by ten participants, and therefore, the second most often. Students' learning and skill development as a result of the use of genAI tools was another benefit that was identified during the analysis and mentioned directly or indirectly by seven participants. Feeling supported through the use of genAI tools was the final major benefit revealed during analysis and noted explicitly or implicitly by eight participants. These perceived benefits help explain why many students decide to use genAI tools as support for their academic writing.

5.4 Perceived drawbacks of using genAI tools for academic writing

While students mentioned many benefits of using genAI tools for academic writing, they also identified several drawbacks. These drawbacks refer to participants' concerns, challenges, and perceived limitations regarding the use of genAI tools for academic writing and can be divided into five categories: (1) accuracy and reliability concerns, (2) concerns related to academic integrity, (3) transparency, privacy and broader ethical concerns, (4) access and usability challenges, and (5) cognitive and learning-related concerns. Figure 4 illustrates how many participants expressed concerns related to each of these drawback categories. Each

drawback category will be discussed in detail below to answer the second part of the second research question on how students perceive the drawbacks of using genAI tools for academic writing.

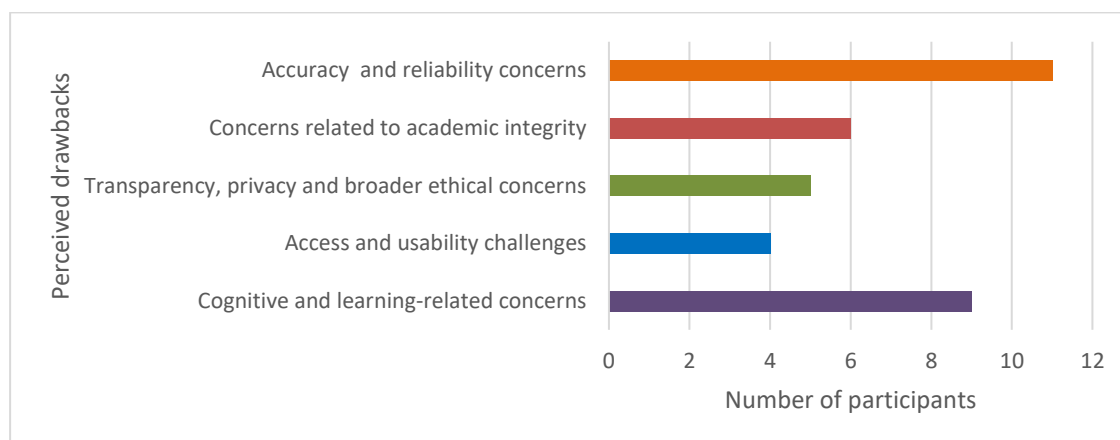


Figure 4. Five main perceived drawbacks of using genAI tools for academic writing, and the number of participants mentioning each drawback.

5.4.1 Accuracy and reliability concerns

The drawback mentioned most often and by all eleven participants was accuracy and reliability concerns. For instance, P6 (Strategic Minimalist) stated: *“I think my main concern usually is that I know that AI sometimes comes up with stuff that is not true”*. Another participant also emphasized this point, noting: *“I can even see mistakes and call it out for the mistakes, and it still will make some mistakes because it just takes the most popular answers and it spits them out”* (P9, Strategic Minimalist). In addition to generally inaccurate information, many students also perceived specifically the generation of unreliable references or citations as a considerable drawback. For instance, P2 (Embracer) shared that when trying to receive sources for articles from a genAI tool, it would sometimes *“keep generating links which are not even working.”*, and concluded *“so it's not very reliable”*. Other participants also emphasized this drawback of receiving *“made up sources that do not exist in reality”* (P6, Strategic Minimalist) or, in other words, the fact that genAI tools *“can invent sources”* (P10, Watchful Non-User). While the sources were not always nonexistent, some students also perceived it as a limitation that genAI tools often *“gave quite old references or not necessarily so strong, like, peer-reviewed references”* (P4, Embracer).

As a consequence of genAI tools providing inaccurate or unreliable information, many participants reported being generally uncertain about their accuracy and quality. This uncertainty was perceived as another drawback of using genAI tools. Participants, such as the

Reserved Skeptic (P3), stated: *“I can't trust it, I mean, 100%. I don't know whether what they're saying is 100% correct or not”*. This lack of trust was perceived as particularly challenging when it was difficult to evaluate the accuracy of genAI tools' outputs, as P5 reflected: *“I have challenge sometimes, okay, that AI generates very nice academically attractive content for the topic, but I have a challenge to recognize, oh, this content is really accurate”*. Even for basic tasks, such as sorting text, this uncertainty remained, as P1 (Strategic Minimalist) shared:

“If I want to sort different textual items in alphabetic order, and I ask ChatGPT, please sort this in alphabetical order. Sometimes I have doubts if it has missed anything or omitted anything. This is a challenge. This is not very convenient. So, I have to double check”.

The need to verify genAI tools' output was perceived as a related drawback of using the tools, as P1 (Strategic Minimalist) added: *“This is also a challenge. [...] [that] you have to check manually after the work is done”*. Another participant agreed, explaining that: *“It also increases the work in the end that you have to double check everything, make sure that the stuff it gives you is actually true”* (P6, Strategic Minimalist). For the Watchful Non-User (P10), this verification burden was a reason not to use genAI tools in the first place. They reasoned: *“I would need to recheck what AI is telling me, and I find that more of a tiring idea than doing the actual writing without AI”*.

In summary, the most commonly perceived drawback among participants was the concern about the accuracy and reliability of genAI tools and the resulting need to verify all outputs.

5.4.2 Concerns related to academic integrity

Another perceived drawback of using genAI tools for academic writing was related to academic integrity. Participants raised several interrelated concerns, including fears of plagiarism, writings being flagged as AI-written, or issues about authorship when genAI tools are used.

Several participants expressed worries about plagiarism and the risk of unintentional copyright violation when using genAI tools. For example, P5 (Embracer) questioned, *“whether this AI tool give[s] the same content to every other student. So if I use this content, I'm repeating, it becomes kind of plagiarism”*. Similarly, P9 (Strategic Minimalist) stated

directly: *“My one issue is actual plagiarism”*, and P10 (Watchful Non-User) noted that using genAI tools *“poses copyright issues.”*

Beyond fears of plagiarism, participants also described concerns about being flagged by AI-detection systems, either when submitting AI-assisted texts or even when submitting entirely human-written texts. One participant described the experience of having their own, fully human-written text incorrectly flagged as AI-generated and their thoughts related to it as follows:

“Sometimes I would have written something and AI would [...] tell me it is AI written, of which I know that this thing, I wrote it myself. [...] And if a teacher should see that, [...] if the teacher did not understand how AI works, then the teacher would not believe the student has written that text himself [...]. So that's one, maybe I would say limitation of AI. [...] Since then, I changed my method of writing.” (P7, Embracer)

Another participant reported a similar concern:

“I'm pretty scared to use it [AI] too much because of people being flagged, even though they don't use AI. [...] That's my main struggle right now. I'm kind of scared to take advantage of it, even if it would help me more.” (P9, Strategic Minimalist)

These fears illustrate how the use of genAI tools, or even just the possibility of their use, can negatively impact students' confidence in submitting their academic writing. Students' perceived risk of being wrongly flagged led some to be very cautious about integrating AI-generated content into their writing, and others to even intentionally change their natural writing style to avoid being suspected of AI use.

While some students worried about their writing being flagged as written by AI, others raised concerns about the validity of assessments when genAI tools are used. The Reserved Skeptic (P3) viewed genAI-assisted writing as a misrepresentation of students' actual competence, noting: *“If [teachers are] giving marks to [an] AI-generated essay, then that's not going to reflect the true competency of the student.”* According to this participant, using genAI tools does not represent students' own *“strengths”*.

The ambiguity of attribution resulting from the use of genAI tools for academic writing was a concern that other participants also mentioned. For instance, the Watchful Non-User (P10) questioned *“to what extent the use of AI is actually ethical in writing”* and further highlighted

the ambiguity surrounding attribution, especially concerning the debate in academia about how to handle co-authorship with AI. In contrast to the Reserved Skeptic's more critical view, the Watchful Non-User (P10) did not oppose the use of genAI tools completely. Rather, they argued that while genAI tools should not be listed as co-authors, their use should be disclosed transparently.

Overall, six participants mentioned academic integrity concerns ranging from fears of plagiarism and writings being flagged as AI-written to questions about authorship and validity when genAI tools are used. While these concerns varied in emphasis and personal relevance, they were widely perceived as drawbacks that complicate the responsible and confident use of genAI tools for academic writing.

5.4.3 Transparency, privacy, and broader ethical concerns

Another category of drawbacks mentioned by participants is related to broader ethical concerns about how genAI tools function. These included issues of bias in AI-generated outputs, lack of transparency in how the systems operate, and concerns about privacy and data protection.

One commonly perceived issue was that genAI tools can produce biased responses. As P2 (Embracer) explained: *"Sometimes it's also biased. [...] So I feel that the answer that it gives is more biased based on the already existing data"*. In addition to biased output, the lack of transparency in how genAI tools function was viewed as problematic, as P3 (Reserved Skeptic) noted: *"We are not sure from where these AI writing tools obtain information"*. The Watchful Non-User (P10) raised a similar concern, considering the problem from a broader perspective: *"Even people who are actually directly working with designing AI, so programmers, even they sometimes don't understand what actually happens inside, and then there is not always transparency on where the data you're inputting is going to"*. These quotes illustrate two interconnected concerns: first, a lack of transparency about where the content of AI responses comes from; and second, a lack of transparency about where users' own data might go after being entered into the system. The Watchful Non-User (P10) summarized: *"it poses transparency issues,"* and *"those are the concerns I have about AI."*

These concerns about transparency were closely linked to concerns about privacy and data protection. Several participants mentioned uncertainty and data protection concerns regarding the information they put into genAI tools. As P6 (Strategic Minimalist) remarked: *"You never*

know what the AI in the end will do with all the information, also, you feed into it". Equally, P7 (Embracer) emphasized:

"The other limitation, it's about ethical concerns like privacy issues. [...]one has to be very careful because immediately you put your information on ChatGPT, then maybe the information is not safe anymore, it's open to the world, so that's another concern which I have".

"Privacy issues" (P10, Watchful Non-User) or "data protection issues" (P10, Watchful Non-User) were therefore perceived as a drawback of using genAI tools by both users and non-users.

In addition to these concerns, the Watchful Non-User (P10) also pointed to a broader global issue that no other participant mentioned: the negative environmental impact resulting from the widespread use of genAI tools. They reflected:

"There is also a bigger issue for me concerning all AI, and that's the environmental issue. [...] The amount of energy which is going into AI is so huge that, in my opinion, the question is, is it worth it?"

This remark underlines that ethical concerns can also extend to the broader societal and environmental implications of the use of genAI tools. However, such reflections on global consequences of the use of genAI tools were rare since only one participant explicitly raised concerns about the environmental impact of AI. More frequently and in total, five participants expressed concerns related to bias, limited transparency, and data protection issues related to genAI tools.

5.4.4 Access and usability challenges

In addition to ethical concerns, four participants described access and usability challenges as perceived drawbacks of using genAI tools. These issues were not about the accuracy or trustworthiness of the tools, but rather about their functioning in everyday use.

Some participants perceived knowledge and access limitations as practical challenges when using genAI tools. For instance, P7 (Embracer) pointed out that some tools "*can't provide information after 2023*" or beyond a specific date, and explained that this limits their usefulness, as students often need access to current and up-to-date information. Additionally,

students described specific limitations of free versions of genAI tools, such as daily upload limits, as a challenge. P7 (Embracer) specified:

“My only challenge with AI, number one, is that most of the AI tool you have to pay, [and it’s] not free. So by the time you question AI too much, then they will tell you, sorry, you have exhausted the limits for the day. Then you have to continue the next day, otherwise, you should pay. So that’s a limitation for students, especially like me, I don’t want to pay.”

Another perceived drawback was related to prompting and communication difficulties. While participants saw effective prompting as a skill to develop, some also experienced it as a challenge that complicated the tool’s use. Similarly, the fact that genAI tools often failed to understand the intent behind users’ prompts – or as P4 (Embracer) observed *“sometimes they don’t quite understand my question”* or that in the words of P5 (Embracer) *“some AI tools don’t make a very [...] successful answer”* – was perceived as *“another challenge”* (P5, Embracer).

Participants additionally mentioned that genAI tools sometimes generated too much or irrelevant information, which could be distracting and unhelpful. For example, P8 (Embracer) made the experience that genAI tools sometimes *“add points from that article into the writing that you don’t want”*, and P7 (Embracer) described how receiving too much information could lead to drifting off-topic:

“Sometimes, too much of information, they call it information overload, also affects [me]. [...] Like maybe I’ve moved away from the point of my writing and have dived too deep than what the lecturer expected. Then I had to come back and then take away some sheet from the text, and then I spent so much time that way.”

These cases show that, for some students, access and usability challenges were also perceived as drawbacks of using genAI tools for academic writing. Students specifically mentioned access restrictions, knowledge cut-offs, limited AI comprehension, and information overload as challenges.

Since only four participants reported these challenges, this was the least common reported drawback category. Nonetheless, these issues reflect the everyday constraints and frustrations students may face when using genAI tools.

5.4.5 Cognitive and learning-related concerns

Cognitive and learning-related concerns were the second most frequently mentioned drawback of using genAI tools for academic writing. Nine participants raised concerns about how the use of genAI tools could affect their thinking, creativity, and development of academic writing skills.

Students perceived the risk of becoming dependent on genAI tools as one drawback of their use and reflected on how regular use of these tools might reduce their cognitive engagement. For example, one Embracer (P2) described experiencing a sense of dependence on genAI tools and its consequences as the following:

“I have also noticed, like, when I mostly depend on ChatGPT to produce, you know, like text or something, it has also kind of affected my thinking capacity. [...] Like I couldn't actually think on my own [...] [and] it also, I would say, hindered my creativity.”

Not only did Embracers express these concerns, but also a Strategic Minimalist (P9) stated that: *“I can see how it stops me from thinking”*, and the Watchful Non-User (P10) also shared the opinion that a major drawback of using genAI tools is that *“it's just dumbing us out”*.

Students further reflected that reduced thinking and creativity may result not only from being dependent on genAI tools, but also from simply becoming lazy, which was another perceived danger. As one student explained, *“you're just getting used to some things being done for you”* (P9, Strategic Minimalist). Another participant emphasized that, therefore, *“there is of course always the danger of getting lazy, and instead of trying first to think yourself you will just automatically use the AI”* (P4, Embracer). Consequently, some students reported experiencing a *“difficulty to start [their] own writing on [their] own”* (P2, Embracer) or realized that *“maybe [they were simply] too lazy to think on [their] own”* (P2, Embracer).

Another concern was students' potential cognitive bias, especially when reading AI-generated summaries, for instance, of articles, before reading the original texts. As P10 (Watchful Non-User) reflected, reading a summary first can create a biased impression of the article's content, which may reduce critical engagement with the original text and make it less likely that inaccuracies in the summary will be detected.

While many students thought about the impact of using genAI tools on critical thinking, some also reflected on its impact on students' writing. Some participants also perceived the possible loss of unique writing styles as a drawback of the use of genAI tools. As P7 (Embracer) remarked: *“With AI coming, you tend to lose that uniqueness, your way of writing, which is not good. So that's one problem with AI”*. More specifically, P9 (Strategic Minimalist) shared: *“I feel like the writing becomes a bit monotone, if you try to copy the way that ChatGPT writes [...], your personal type of writing disappears”*.

To mitigate all these risks, some participants reported actively trying to limit their use of genAI tools, for example, using them only to structure ideas or clarify concepts since they realized themselves that otherwise, as P2 (Embracer) noted: *“I might always depend on ChatGPT. I might always ask it to produce a writing and then I might change it into my own language, which is not very good for my long-term, you know, career”*. This quote also shows that participants considered not only the immediate effects of using genAI tools on their critical thinking but also the long-term consequences.

Their concerns extended to the development and possible decline of their academic writing skills. In contrast to some participants who reported increased confidence in their academic writing skills after using genAI tools (as discussed in Section 5.3.4 on learning and skill development as a benefit of using genAI tools), others expressed that over time, their writing skills and confidence stagnated or decreased. While some simply noted that using genAI tools has not helped them improve their academic writing skills, others reported decreased confidence and more frequent spelling errors, even when using the tools only for grammar checking. Some participants who reported decreased confidence were further concerned about a more profound loss of skill if they used genAI tools extensively. A P9 (Strategic Minimalist) explained:

“If you abuse it, I feel like you lose the ability to write. Like writing is the skill and you need to figure out what works for you because it's so complex. And I feel like if I were to keep using AI and blindly trust it, I would just lose the skill of being able to write a paper for myself.”

Several participants anticipated that academic writing skills would decrease over time if not actively practiced. The Watchful Non-User (P10) summarized: *“As a rule, the skills fade if not used”*. Although participants generally viewed this potential fading of academic writing skills as a drawback, they also acknowledged uncertainty about the future relevance of these

skills “*because it's possible that the old-school academic writing skills might be just not needed in the future*” (P10, Watchful Non-User). While it remains unclear whether the potential loss of current academic writing skills will be a drawback in the future, most students currently perceive it as one.

Overall, cognitive and learning-related concerns were mentioned by several participants as a drawback of using genAI tools for academic writing. These concerns include worries about reduced creativity and critical thinking, risks of developing dependency on AI assistance, and the potential long-term loss of academic writing skills and confidence when writing without the support of genAI tools.

Taken together, the five different categories of perceived drawbacks – ranging from (1) accuracy and reliability concerns, (2) concerns related to academic integrity, (3) transparency, privacy and broader ethical concerns, (4) access and usability challenges, as well as (5) cognitive and learning-related concerns – demonstrate that many students are not only aware of the benefits of using genAI tools, but also reflect critically on their limitations.

5.5 Responsible and critical engagement with genAI tools

Students’ awareness of the drawbacks of using genAI tools for academic writing helps explain why, regardless of their engagement types, all participants emphasized the importance of engaging with these tools critically and responsibly. This finding addresses the first research question by showing that students’ views on the use of genAI tools for academic writing are characterized by a shared sense of responsibility in how these tools are used. Students’ perspectives on the responsible and critical engagement with genAI tools will be discussed in the following two subthemes: (1) principles and practices of responsible and critical engagement, and (2) approaches to disclosure of genAI tool use.

5.5.1 Principles and practices of responsible and critical engagement

Participants expressed a strong commitment to using genAI tools in ways they considered responsible, ethical, and aligned with academic values. This critical engagement was reflected in a range of principles and practical behaviours that guided their use, including: a) commitment to the responsible use of genAI tools, b) active evaluation and refinement of genAI outputs, c) balancing AI assistance and independent thinking, and d) willingness to increase or redistribute time investment.

Commitment to the responsible use of genAI tools

Across engagement types, participants underscored the importance of using genAI tools responsibly, like one Embracer (P2) who directly said: *“You should understand how to use it [AI] in a responsible manner”*. Another Embracer (P4) also stressed that proper use was a personal priority: *“It's quite important for me to use it [AI] in a right way”*. Similarly, the Watchful Non-User (P10) avoided using genAI altogether because they felt they could not ensure responsible use, reasoning: *“I'm against using it [AI] in a irresponsible way. And I didn't feel up to now that I have enough knowledge to use it in a responsible way”*. They further emphasized that a key aspect of responsible use involves understanding how genAI tools function. In line with this, an Embracer (P7) shared a concrete practice of responsible use, describing:

“Whenever I want to use it [AI], I try to change some personal information, like wherever there is a name, I can put someone else's name or put something else or leave it blank. Then I think it's safer that way.”

Participants associated responsible use also with the ability to trace and verify information, and many therefore preferred genAI tools that provide clear references. These tools were perceived as more trustworthy because, as the Reserved Skeptic (P3) explained, they allow users to *“always go back and double check for the accuracy”*, something several participants, including P3, reported doing when using genAI tools. The fact that participants preferred these tools over others further illustrates their commitment to the responsible use of genAI tools.

Another key aspect of this commitment was participants' awareness that how genAI tools are used is more important than whether they are used at all. A Strategic Minimalist (P6) articulated this awareness using a vivid metaphor:

“Even with a hammer, I can put a nail into the wall, but I can also hit you on the head and that's two completely different outputs. So it's about how you use the tool.”

Similarly, an Embracer (P8) pointed out: *“You can use it [AI], or don't use it [...]. The things matter is how”* and also the Watchful Non-User (P10) agreed that *“it really depends how people will use it”*. These quotes demonstrate that for participants, the responsible use of genAI tools seems to depend primarily on how these tools are used and not simply on whether they are used.

Active evaluation and refinement of genAI outputs

Given their commitment to the responsible use of genAI tools, participants consistently emphasized the importance of actively evaluating and refining genAI outputs. In particular, they highlighted two core practices: reviewing original sources and critically assessing and adapting genAI outputs. The emphasis on these practices reflects not only how participants approached the use of genAI tools in practice, but also their perspectives that influenced their engagement.

The perceived necessity of reviewing original sources was shared across all engagement types. Participants consistently stressed how important it is to read original texts, even when using genAI tools to summarize articles or search for information. What they described in interviews showed that this perspective did not remain abstract but was reflected in their actual practices when using genAI tools. For instance, a Strategic Minimalist (P9) described:

“I physically go to the article, [...] search certain terms that will probably get me to the info that it's referencing and reread that part to see if it has plagiarism and if it's even from there, [because] sometimes it gets the articles mixed up and [...] it references someone else.”

Moreover, P7 (Embracer) shared their practice of verifying AI-generated information using scholarly databases, concluding: *“Even though I understand that ChatGPT got it from the text, [...] I still have to go back to that text and fact check if it is correct”*. Even when using genAI tools to rephrase difficult paragraphs of an article to clarify complex concepts, another Embracer (P5) stated that they would *“double check whether it generate[s] the accurate [...] answer”* by rereading the original paragraph. Participants also reported paying attention to the credibility of sources by *“go[ing] to these sources and also try to see if they seem serious or not”* (P11, Strategic Minimalist). Furthermore, regarding AI-generated summaries, P8 (Embracer) emphasized: *“First, I read it [the article], I have some idea about that. Then I ask the ChatGPT or mostly NotebookLM [to summarize] the part that I want to have notes [on]”*. Similarly, P4 (Embracer) stated that they would *“check from the article itself”* whether the summary provided by AI is correct. These practices suggest that participants who used genAI tools viewed critical engagement with original sources and AI-generated content as important. This perspective was evident in how they described their use of genAI tools and was not limited to active users, but also shared by the Reserved Skeptic and the Watchful Non-User, who also stated: *“Still, I would read the original source”* (P3, Reserved Skeptic) or even that

they “*would have zero confidence that what AI is summarising to [them] is accurate [...] [and] would still need to go to the article and read it*” (P10, Watchful Non-User).

Beyond cross-checking sources, participants emphasised the need to evaluate and edit AI-generated content before including it in their academic writing. This consisted of checking for factual errors, bias, and whether the AI’s language aligned with their own style and argument. Their responses to the question of how important this practice is were unambiguous: “*It’s very important*” (P2, Embracer) or “*very, very, very important because there is so much bullshit coming out of AI*” (P6, Strategic Minimalist). Several participants stressed that “*you have to double-check everything, make sure that the stuff it gives you is actually true*” (P6, Strategic Minimalist) since “*there are sometimes wrong answers that they give. So it is important to check*” (P4, Embracer). All participants shared the view that evaluating genAI outputs involves filtering the relevant and important information from genAI outputs and to “*take only the necessary sentences or important facts*” (P5, Embracer). Some students also reported using multiple genAI tools in parallel to cross-check and validate information.

In addition to verification, editing was described as a necessary part of using genAI tools. Participants across engagement types rejected directly copying and pasting genAI outputs and instead described rewriting them in their own words. For instance, one Strategic Minimalist (P9) explained: “*I never copy paste. I just take the text that it gives me and I will type it out in my own words*” and an Embracer (P5) likewise noted: “*I never copy and paste a whole paragraph to my writing. I read them, I understand them, then I refine it to my version and [...] use as according to myself*”. While some participants stated to always edit the texts themselves, others combined personal and tool-assisted editing, meaning that “*with one or two prompts, [they] get what [they] want*” (P8, Embracer).

Regardless of their method, a key underlying motivation across users was to maintain academic integrity and personal authorship. As one Strategic Minimalist (P9) explained: “*You go back and want to change everything because you want it to be your writing*”, and another participant similarly emphasized: “*I don’t want to include not my text into my work. [...] I try to develop my own text on the basis of what I have acquired from ChatGPT*” (P1, Strategic Minimalist). Additionally, the presence of plagiarism detection systems was mentioned as another reason to substantially revise AI-generated content. One participant admitted: “*[I] change the text about five times because I’m terrified of being flagged, basically*” (P9, Strategic Minimalist).

Together, these practices suggest that participants associated responsible use of genAI tools not only with the critical evaluation but also with the active refinement of AI outputs.

Balancing genAI assistance and independent thinking

Ultimately, students described an effort to balance the support provided by genAI tools with their independent thinking. For instance, one participant reflected: *“It [AI] does the work, but I’m also doing my work”* (P2, Embracer), and another Embracer (P5) summarized: *“It’s good to have a balance between ourself and also with the AI”*. They reasoned:

“I’m thinking, nowadays, teachers as well as students, it’s common to use AI, but we can’t solely depend on AI because we don’t know [...] the trustworthiness, the accuracy, and everything. It’s always the other part. As a human being, it’s always to control ourself and it means have our limitation and all, while taking the advantage of AI.” (P5, Embracer)

P9 (Strategic Minimalist) also expressed that they *“don’t want to use it [AI] too much”*. P1 (Strategic Minimalist) further explained: *“I know that sometimes the text can be generated entirely, but [...] I want ChatGPT to do boring work, not interesting work. I can do the interesting work on myself”*. Their reasoning resembles that of the Watchful Non-User (P10), who remarked: *“I find the process of writing a very cognitively fulfilling process. So why would I delegate it?”*.

In line with participants’ efforts to balance the use of genAI tools and their independent thinking, many emphasized that they do not fully rely on genAI outputs. For example, P1 (Strategic Minimalist) noted: *“I don’t rely on the facts, the information and the data provided by ChatGPT. I have some other sources that I rely on in my work”*. Similarly, P5 (Embracer) underscored: *“But I want to say, I do not totally depend on that, I just want to see how AI look[s] at this question, how AI generate[s] information [...]. I’m not totally depend[ent] on the AI”*. Other Strategic Minimalists and Embracers expressed the same, such as P6 (Strategic Minimalist), who stated: *“I do not rely on the outputs [...] I use the outputs to generate my own texts still”* or P7 (Embracer), who clarified: *“I still don’t rely on ChatGPT texts or information. I still try to fact check [...] before using it exactly”*. The Reserved Skeptic (P3) also stressed: *“I should not totally rely on AI [...] I tend to rely on my strengths”*.

It is notable how many participants repeated this point in different ways throughout their interviews, which highlights how important it was to them to clarify that AI remains a tool,

and not a replacement for their own thinking. Several participants also pointed out that “[they] don't trust it [AI] that much” (P9, Strategic Minimalist) or that “[they] don't believe in ChatGPT like 100%” (P2, Embracer), and that this contributed to their limited reliance on genAI tools. Taken together, these statements illustrate that most participants have a critical and responsible attitude toward the use of genAI tools for their academic writing.

Willingness to increase or redistribute time investment

This critical engagement with genAI tools often involved a willingness to redistribute or even increase time investment in academic writing. Although many participants acknowledged that the use of genAI tools could speed up certain aspects of the process, they also described reallocating the saved time toward evaluating, fact-checking, and refining outputs to ensure quality and accuracy. One Strategic Minimalist (P6) described: “*It rather changes how I spend the time and not the amount of time that I spend for it*”, and another participant noted the same, explaining “*sometimes you can spend equal amount of time just to check its validity*” (P9, Strategic Minimalist). Several participants, such as P11 (Strategic Minimalist), reflected that they “*might just use more time for the other parts, like [...] going over it again*”. These quotes show that although most participants mentioned saving time as a general benefit of using genAI tools, they did not always save time when using them, but instead often simply reallocated their time because of their commitment to critically evaluating genAI tool outputs.

While most Strategic Minimalists described a redistribution of time rather than a reduction, two Embracers shared that their use of genAI sometimes led to also more time spent on academic writing, explaining that “*it takes more time than if I want to write it by myself [...] Because it's like you work with someone else and you have to talk about their idea, their outputs*” (P8, Embracer). Another Embracer (P7) also described genAI tools as a consultation tool and further specified:

“In fact, I would say that if I had to spend 10 minutes to write something on my own, while using AI, I tend to spend one hour, because it's like a learning tool. So by the time you use AI, you get to think again.”

For these participants, this additional time investment was a conscious choice, motivated by a personal commitment to doing their best or by performance-related goals. As one Embracer

explained: *“Because I want to do my best”* (P8), while another noted: *“Because I want to get 5 points”* (P7).

Overall, these combined practices, from verifying and refining AI outputs to balancing assistance with independent thinking and investing additional time when needed, indicate that participants across engagement types expressed a commitment to using genAI tools critically and responsibly.

5.5.2 Approaches to disclosure of the use of genAI tools

Students’ approaches to disclosing genAI tool use represented another key aspect of their ethical and responsible engagement with these technologies. While all participants expressed a strong commitment to responsible and critical use, they differed in whether they disclosed their genAI tool use in assignments. This shows that what is perceived as responsible is interpreted differently and shaped by personal reasoning, perceptions of responsibility, and interpretations of institutional and teacher expectations. Participants’ practices reflected two main approaches: a) disclosure and b) non-disclosure.³

Disclosure

Four participants consistently disclosed their genAI use, even when it was minimal, for example, limited to editing or outlining. Students mentioned different reasons why they chose to disclose their use. For some, transparency was part of maintaining trust and avoiding misunderstandings with teachers. Others also explained that their minimal use made them feel safe to disclose their use: *“Because I use it so little and I don't use it to literally type out all of my essay, I'm not that worried about my teachers”* (P9, Strategic Minimalist). It is also noteworthy that some participants initially did not disclose their minor use due to a lack of awareness that it was expected but changed their practice after realizing it, like P4 (Embracer) who shared: *“At first I didn't because I didn't realize that I have to state [...] just using it, kind of like Google Scholar to give me references but now I do”*. This suggests that disclosure is not only a question of personal ethics but also depends on students’ knowledge and understanding of institutional expectations.

³ One participant categorised as the Reserved Skeptic is not represented in this section, because questions about disclosure were only added to the interview guide from the fourth interview onward. Nevertheless, the first two participants still shared relevant comments about their disclosure practices, which are included below.

Four participants reported to always disclose their use of genAI tools, but two others described a more conditional approach that was influenced by individually perceived requirements or instructions from teachers. One Strategic Minimalist (P6) explained that they disclosed their use of genAI tools *“if the professors want [them] to do that”*. Otherwise, they did not see it as necessary, because they were *“mostly using it in the beginning to find ideas and to get first inputs on the topic, and some professors do not require [them] to state that”*. Similarly, the Watchful Non-User, although currently not using genAI tools, also said that if they were to use them, disclosure would depend on official guidelines.

These examples show that, for some participants, responsible use of genAI tools included the disclosure of their use when it was expected or based on their own initiative. However, as the following section will illustrate, viewing responsible use as important did not necessarily mean that all participants felt disclosure was required.

Non- disclosure

Four participants reported not disclosing their use of genAI tools, primarily because they viewed their usage (e.g., for editing or outlining) as too minimal to state. Moreover, an Embracer (P7) who fact-checked AI suggestions through academic sources argued:

“If the point I get from AI is in some articles, [...] and I reference the article, then I feel I don't have to reference that I use AI because the source of the ideas are not from the AI but from the articles. So I personally, I don't say that I use AI because why would I say I use AI if the ideas are from the articles?”

Others also emphasized that their use felt too insignificant to mention and that they did not feel dependent on genAI tools. This is why they did not consider disclosure necessary or had simply not been given it much thought: For instance, P2 (Embracer) explained:

“Even though I use ChatGPT, I'm the one who did most of the work. [...] Maybe it's because I thought it was not necessary. Because I just got the help of it to kind of understand the text or, you know, to have an outline or a structure or, you know, to simplify a topic.”

These perspectives suggest that students interpret minimal use differently, and some consider its disclosure as unnecessary. The findings also reveal that some students had not fully thought about whether limited use requires disclosure, which indicates a lack of awareness or

clarity among certain students. Moreover, the emphasis of some students on ‘not being dependent’ shows that it was important for students to maintain personal control and ownership over their academic writing. For some, this was an ethical reason not to disclose their use of genAI tools.

In summary, four participants disclosed their use regardless of how minimal it was (P4, P8, P9, P11), two disclosed or would disclose their use depending on institutional requirements (P6, P10), and four did not disclose their use because they considered it too minor or insignificant (P1, P2, P5, P7). Participants’ approaches to disclosure were not related to engagement types, and the variation in approaches is particularly remarkable given that many participants used genAI tools in similar ways (e.g., for outlining, editing, or background research) but still made different decisions about whether to disclose their use. These differences show that current expectations about genAI tool disclosure are still unclear for some students, which leads to inconsistent practices. They also highlight that not disclosing the use of genAI tools does not necessarily indicate deceptive intent, but might instead reflect genuine confusion, lack of awareness, or an assumption that disclosure is not relevant for specific support of genAI tools.

The findings on students’ disclosure practices were included as part of the broader theme of responsible and critical engagement with genAI tools for academic writing. Across all engagement types, participants viewed the responsible and critical use of genAI tools as very important. This perspective became evident through the various practices of responsible and critical use described by participants, such as fact-checking, rewriting, and reviewing sources. To look at another layer of how students understand and define responsible use, their approaches to the disclosure of using genAI tools were analyzed. The findings revealed that, although all participants perceived the responsible use of genAI tools as important, they differed in their views on whether this also means that any use of genAI tools has to be disclosed. These differences further illustrate that students’ views on the use of genAI tools for academic writing are complex and influenced, among others, by how individuals define responsibility.

5.6 Contextual influences on the use of genAI tools for academic writing

The research data showed that students’ views on their use of genAI tools are not only characterized by a strong commitment to the responsible and critical engagement with these tools, but also by their awareness of the various contextual factors that influence this use. The

contextual factors students perceived to be influencing their use of genAI tools will be described in the following, with a focus on (1) social influences, (2) institutional influences, and (3) situational influences.

5.6.1 Social influences

Two types of social influences were identified as particularly relevant in the interviews: a) perceived teacher attitudes toward the use of genAI tools, and b) peers' and friends' use of genAI tools.

Perceived teachers' attitudes toward students' use of genAI tools

Students' decisions about whether to disclose the use of genAI tools were not only influenced by their personal reasoning – as discussed in the previous Section 5.5.2 – but also by their perception of how their teachers view the use of genAI tools. While the previous section focused on whether students disclosed their genAI tool use, the following looks at what participants believed their teachers thought about this, and how these perceptions have influenced their use or disclosure practices.

Perceived teachers' attitudes

Two Embracers and the Watchful Non-User perceived teacher attitudes toward students' use of genAI tools as positive or accepting. They described teachers as “*quite open towards AI*” with some even encouraging students to “*work smart, not hard*” (P4, Embracer). Accordingly, “*they [teachers] did not mind at all that people would use AI. And they only mind the ways students would use AI. So for example, not stating that you use AI*” (P10, Watchful Non-User). Another Embracer (P5) even thought that “*now teachers as well as students, all love using AI*” and noted that the use of genAI tools has become common and normalized, not only among students, but also among teachers, and teachers would therefore also accept students' responsible use. They further elaborated that assignments generated entirely by AI without proper referencing might be viewed critically, but more limited uses, such as refining sentences or organizing content, would likely be seen as common and unproblematic.

In contrast to students perceiving teachers' attitudes as accepting, two other participants perceived teachers' attitudes toward the use of genAI tools as rather skeptical or negative. For example, the Reserved Skeptic (P3) shared:

“I have used Turnitin [...]. So whenever I see that, okay, there's a hit for AI usage, that, okay, gives me kind of negative feeling, attitude [...]. Then I wonder, okay, have this student copied or used AI? So I don't want my lecturers to have that feeling towards me.”

This quote illustrates how students' personal perspectives toward the use of genAI tools might influence their perceptions of their teachers' attitudes. More specifically, in this case, the Reserved Skeptic projects their own skepticism about the use of AI onto their teachers, believing that they would be just as critical. The second participant, however, who also perceived teachers' attitudes toward students' use of genAI tools as negative, was an Embracer (P7), who, as a regular user of these tools, holds a generally positive view towards their use. Nevertheless, they reasoned:

“If I state that I use AI, the teacher would think like, oh, this [student] is lazy. This [student] has no points or has no idea. And the teacher might not even read the paper because when it's just reading the paper with the knowledge that you use AI, the teacher might be thinking he or she is wasting his time reading. Because you might, you will be thinking like, ah, this thing is from AI, and I'm reading it. Why? Why do I have to read? I want something from you. So I think that's what most teachers would think.”

In addition to some students who perceived teacher attitudes as accepting, and others who viewed them as critical, the majority of participants described them as unclear or inconsistent. For instance, P2 (Embracer) stated, *“I do not know how they would perceive it”*, and P8 (Embracer) remarked that *“it's very, very complex. It's very difficult to answer”* what teachers think when students disclose their use of genAI tools. P8 (Embracer) further reflected: *“How a human can trust a human that using AI for their work. Yeah, it's very difficult to imagine. [Teachers think] so many things maybe”*. Similarly, P9 (Strategic Minimalist) noted: *“Hopefully they believe what you claim. Because maybe some people underestimated, like say less than they actually did”*, and added that *“it would be useful to know how they [teachers] see AI”*. While some students shared the view that it is difficult to know what teachers think when students disclose their use of genAI tools, others did not necessarily perceive teachers' attitudes as unclear but rather as inconsistent. P6 and P11 (both Strategic Minimalists) pointed out that *“it depends on the teacher”* how students' use of genAI tools is viewed. As P11 explained: *“Some teachers are very, like, when they talk about it, you get the feeling that they*

don't like it. [...] And I think there's like then other people who are very open about it and say for these and these purposes it can be very good". Similarly, P6 (Strategic Minimalist) noted:

"There are a lot of teachers who are really curious about all the things that AI can do. [...] Like some even state that they want us to do the AI disclosure for them to learn what is all possible [...] And I think some others are completely resistant to that and don't like it at all. And, so I think it depends, like with most new technologies."

Overall, whether participants were categorized as Embracers, Strategic Minimalists, or Non-Users did not seem to influence how they perceived teachers' attitudes. Instead, participants from all engagement types showed a wide range of assumptions about teachers' attitudes toward their use of genAI tools for academic writing, ranging from positive or accepting, over unclear or inconsistent, to skeptical or negative.

Influence of perceived teachers' attitudes

Students' perception of their teachers' attitudes toward their use of genAI tools appeared to have different effects on participants' genAI tool use and disclosure.

For some participants, teachers' perceived attitudes did not seem to influence whether they disclosed their use of genAI tools.

On the one hand, some students disclosed their use regardless of perceiving their teachers' attitudes as positive or negative. For instance, P8 (Embracer) remarked that no matter how teachers might perceive students' use of genAI tools, *"it's better to be honest, to keep the trust in interpersonal interaction"*, implying that teachers' attitudes would not change their disclosure practices. P9 (Strategic Minimalist) also noted: *"Maybe I would still state it [...]. I think maybe it even influences the amount of how much I use it"*, indicating that teachers' negative attitudes toward the use of genAI tools would probably not prevent them from disclosing their use; instead, it might affect how much they use them. They further mentioned that because their use of genAI tools was currently very limited, they did not feel very concerned about how their teachers might respond to the disclosure of their use. Similarly, P11 (Strategic Minimalist) stated that even with teachers who seem skeptical about the use of genAI tools: *"I might be a bit like worried that they think it's not good, or I don't know, I'm lazy or whatever. But so far I still have stated it, so I wasn't like, oh no it doesn't look good, I won't state it"*. They added that with teachers who had more positive or accepting attitudes, *"then [they] don't have any concerns"*. This suggests that while students' disclosure practices

may not necessarily change based on perceived teacher attitudes, students still seem to feel more confident to disclose their use of genAI tools when they perceive their teachers as open toward their use.

In contrast, some participants chose not to disclose their use of genAI tools regardless of how they perceived their teachers' attitudes. For example, P5 (Embracer) viewed their teachers' attitudes as generally accepting but still decided not to disclose their use because they considered their use too minimal or insignificant. Likewise, P2 (Embracer) explained:

“Even if I use ChatGPT, I'm kind of scared to tell that I use ChatGPT. But the person is also giving me a choice, like if you use, you can tell me. But then, yeah, I would not tell the person. Because like coming [...] from my background, where it's very prohibited, I don't know how they would take it.”

As a result, P2 admitted that they had never disclosed their use of genAI tools during their studies in Finland. Their quote illustrates that even when teachers appeared open to disclosure, students' prior experiences and personal concerns could still prevent them from being transparent about their use of genAI tools. The influence of prior experiences may be particularly relevant in international master's programs where students come from a wide range of backgrounds and countries with very different rules and norms regarding the use of genAI tools.

While not all participants' disclosure practices were influenced by their perceptions of teachers' attitudes, since some would disclose or not disclose their use regardless, students' use of genAI tools could be affected instead. The earlier example of P9 (Strategic Minimalist), who reflected *“Maybe I would still state it [...]. I think maybe it even influences the amount of how much I use it”*, illustrated that they might not change their disclosure practice when perceiving teachers as negative toward the use of genAI tools, but rather their use. Similarly, the Reserved Skeptic (P3) explained that assuming their teachers would react negatively to their use of genAI tools is *“another reason [they] don't use ChatGPT or any other tool”*. The Watchful Non-User (P10) also remarked that when a teacher would be clearly opposed to students' use of genAI tools, they would avoid using the tools altogether rather than use them without disclosing it.

Conversely, for other participants, it was not their use but rather their disclosure practices that were influenced by how they perceived their teachers' attitudes.

On the one hand, perceiving their teachers as open and accepting could encourage students to

disclose their use openly. For instance, P4 (Embracer) answered the question whether their perception of teachers' attitudes being accepting toward the use of genAI tools influences whether they state their use: *"Definitely. Definitely yeah"*. As discussed in the previous section (5.5.2) on students' disclosure practices, this participant (P4, Embracer) began disclosing their limited use of genAI tools after realizing that it was expected. In addition, they mentioned that perceiving their teachers as open toward the use of genAI tools also encouraged their use and disclosure.

On the other hand, in the case of P7 (Embracer), their perception of teachers' negative attitudes toward students' use of genAI tools affected their non-disclosure. They stated: *"Yes, it [their perception that teachers would react negatively] influences it [their non-disclosure]"* and elaborated: *"If I stated to you that I use AI, I'm very sure you would think I don't have any idea anymore or maybe everything is from AI"*. They explained that although lecturers at their university advise students to disclose AI use, they perceive it as *"not realistic because if we tell you we use AI, [...] you would think I have used it a lot"*. Related to their fear that disclosing their use would lead teachers to the assumption that they have used genAI tools excessively, they raised concerns about trust, remarking: *"Even if you present the prompt, the teacher would not believe you because you only presented the prompt from a particular AI system. What if you have used another system? So there is still this trust issues in the use"*. The reasoning and statements of P7 (Embracer) show that some students may not disclose their use of genAI tools not only because they consider their use as minimal or insignificant, but also due to concerns about how teachers might react and assumptions that they would respond negatively. The example of P7 further illustrates that it is students' perceptions of teachers' attitudes and not necessarily teachers' actual attitudes that seem to influence students' decision not to disclose their use of genAI tools.

Overall, how students perceive their teachers' attitudes toward the use of genAI tools appeared to have different effects. For some participants, these perspectives did not influence their behaviour because they decided to disclose or not to disclose their use regardless, while for others, they affected either their use of genAI tools or the disclosure of their use. Despite these differences, students who perceive teachers' attitudes as critical appear more likely to either avoid using genAI tools or not disclose their use. Conversely, students who are not worried about the negative reactions of their teachers seem to feel more confident about using and disclosing their use of genAI tools. Students' statements further show that their

perceptions of teachers' attitudes are only one of multiple factors influencing their disclosure practices.

Peers' and friends' use of genAI tools

The second key social influence on students' use of genAI tools identified in this study was peers' and friends' use of genAI tools. Perceived teacher attitudes affected how participants approached or disclosed their use of genAI tools, and informal peer interactions influenced students' adoption and familiarity with these tools.

Several participants described how seeing others use genAI tools led to curiosity and a change in their personal perspective on the use of genAI tools. For example, the Reserved Skeptic (P3), although being initially reluctant to the use of genAI tools, shared: *"I started kind of at least looking at them once I came here because I saw my friends using those tools extensively"*. Similarly, an Embracer (P7) explained how direct support from a peer helped them overcome their initial avoidance of genAI tools:

"At first, in my first year in the university, [...] I did not use AI because [...] whenever I ask AI question, I get too generic response. [...] Until at some point [...] a colleague told me to use AI [...] Then she taught me [...] how to use it. [...] So since then I started learning how to use AI. I started doing many things with AI."

Other participants reported that friends not only influenced their initial engagement with genAI tools but also served as the main resource for practical guidance and tips regarding their use. For instance, both P4 (Embracer) and P5 (Embracer) emphasized how much they learned through conversations with friends, gaining tips and strategies for using genAI tools effectively. P4 (Embracer) even mentioned that, so far, they had fully relied on advice from a friend rather than doing their own research about the use of these tools.

These examples suggest that students' adoption of genAI tools is not only affected by individual decisions but also by their social context. Peers and friends seem to influence not only whether students start using genAI tools, but also how they learn to use them effectively.

5.6.2 Institutional influences

Besides social influences, students' engagement with genAI tools was also shaped by broader institutional factors, specifically by the general guidelines on AI use at their university.

Therefore, the following sections explore (a) students' familiarity with and perceptions of

their university's guidelines on AI use, (b) the perceived influence of these guidelines on students' use of genAI tools, and (c) desired university support for the use of genAI tools.

Students' familiarity with and perceptions of their university's guidelines on AI use

Two participants were aware that university guidelines on AI use exist, but they were not familiar with them. P1 (Strategic Minimalist), for example, noted that they had been told to review the guidelines when they use genAI tools, but they had never been explicitly shown them. The Watchful Non-User (P10) also stated that they had not yet looked at the guidelines, but that it would be their first step if they decided to use genAI tools for academic writing. All other participants were either moderately or only somewhat familiar with the university guidelines on AI use. For example, P7 (Embracer) was partly familiar with the guidelines but admitted to have only partially understood their content. Similarly, P11 (Strategic Minimalist) perceived the guidelines as partially vague and unclear, explaining that: *"the guidelines are usually relatively clear, but I feel like sometimes there can be, like, a gray zone of what is allowed and what not"*. This results in some participants occasionally feeling uncertain or worried about whether their use of genAI tools complied with the guidelines. Furthermore, P7 (Embracer) and P8 (Embracer) considered the guidelines as generic and lacking distinctiveness, which was evident in their descriptions of them as containing *"nothing special"* (P8) or *"[no] special requirement on AI use"* (P7). This might be a reason why the guidelines did not appear to leave a strong or lasting impression on most students. Several participants described their understanding as vague or outdated, for instance, P2 (Embracer) stated: *"I don't know how to explain the guidelines in detail,"* and P5 (Embracer) said: *"Because recently I didn't read the guidelines. I'm expressing things according to my before knowledge"*.

While the general university guidelines did not appear to be memorized very well by most students, many participants were still aware of core expectations. For example, they understood that the use of gen AI tools is generally allowed, but AI-generated content should not simply be copied and pasted. Some students (e.g., P3, Reserved Skeptic, and P8, Embracer) also knew that they had to disclose their use of genAI tools. However, this knowledge was not always acquired from the guidelines themselves, as one student clarified: *"The teacher told us if you use it for the assignments, please state that"* (P8, Embracer). Some participants (e.g., P7, Embracer) also expressed being aware of ethical considerations, such as the need to protect privacy when using genAI tools. However, not all students

mentioned these considerations, and it was not clear whether this understanding came from reading the university guidelines or from participants' own reflections and prior knowledge.

Many students were more familiar with the guidelines from their specific program or individual teachers, and their focus on these specific guidelines helps explain their limited familiarity with the general university guidelines. For instance, P4 (Embracer) demonstrated a good understanding of their program-specific guidelines on AI use, as they could summarize that students are expected to state whether and how they had used AI, and that permitted uses – such as checking spelling or searching for references – were specified in the guidelines. Other students (e.g., P6 and P11, both Strategic Minimalists) focused even more closely on the guidelines provided in individual courses because they recognized that most teachers have their own distinct rules or expectations. According to P6 and P11, most teachers required them to disclose how they used AI, but some encouraged the use of genAI tools for certain tasks, and others strictly prohibited to use of any AI-generated content in their writing. Consequently, they chose to primarily rely on their course- and teacher-specific guidelines rather than on the broader university guidelines on AI use.

Despite some students focusing primarily on program- or course-specific guidelines, and others perceiving the general university guidelines as partly ambiguous or overly generic, students generally appreciated the existence of the university guidelines on AI use. They valued the guidelines for clarifying the acceptable use of genAI tools and perceived them as helpful.

Perceived influence of university guidelines on students' use of genAI tools

For five participants (Strategic Minimalists and Embracers), the university's general AI-use guidelines did not directly influence their personal use of genAI tools. For P6 and P11 (both Strategic Minimalists), this was primarily because they focused on course- or teacher-specific guidelines, which they perceived as more relevant. As P6 (Strategic *Minimalist*) explained: “*I stick to what the professors tell me. I not so much stick to what the university guidelines are because that differs*”. Another reason for the limited perceived influence was that some participants, like P1 (Strategic Minimalist), “*don't think that editors' work, which [they] primarily use ChatGPT for, is a subject for guidelines*”. P7 (Embracer) agreed with P1 (Strategic Minimalist) in perceiving their use as falling outside the scope of the guidelines and stated that the guidelines did not directly influence their personal use. Nevertheless, P7

(Embracer) noted that having official guidelines helped destigmatize the use of genAI tools and facilitate open communication about them, also among peers.

In contrast, the remaining four genAI tool users (Embracers and Strategic Minimalists) reported that the university's guidelines influenced their personal use of genAI tools. However, this influence varied in direction. For some, the guidelines provided clarity on how genAI tools could be used appropriately. For P2 (Embracer), this clarity even increased their willingness and confidence to use genAI tools. On the other hand, for P9 (Strategic Minimalist), the guidelines had the opposite effect and increased hesitation and anxiety around using genAI tools. They noted: *"They [the guidelines] made me more scared"*. This reaction stemmed from increased uncertainty rather than clarity about the acceptable use of genAI tools after reading the guidelines on AI use.

This diversity of responses highlights how the perceived influence of university guidelines can vary strongly among students, depending on their understanding and perspectives on the guidelines.

Desired university support for the use of genAI tools

At the end of the interview, students were asked whether they would like to receive more support from the university regarding the use of genAI tools. This question was introduced in interview 7, and from the participants who answered this question (P7-P11), most expressed that additional support on how to use genAI tools effectively and responsibly would be beneficial. P7 (Embracer), for example, noted that they personally no longer needed this guidance, but *"for the new coming students, especially those in the first year, [they] think it's very important they have a foundation about how to use AI"*. The student elaborated:

"The university needs to still invest some time to teach the students how to use it [AI] academically in a way that would not go against the academic integrity and also how to search for responses, how to get the right responses from AI and at the same time how to transfer what you've gotten from AI into your writing." (P7, Embracer)

Furthermore, P7 (Embracer) highlighted the importance of educating students about privacy-related risks when using genAI tools and the greater value of students' own critical thinking and original contributions compared to AI-generated content. They argued that by providing such an introduction to students, *"the university would also gain from this"* as it would help promote the responsible and ethical use of genAI tools.

Several other participants expressed that they would personally appreciate more support from the university on how to use genAI tools effectively and responsibly. For some users, such support could help reduce feelings of uncertainty or overwhelm associated with the use of genAI tools. As P9 (Strategic Minimalist) shared: *“I don't know what's happening in this AI world, so I'm very scared of it. So [...] I would like that [more support from the university]”*. Moreover, for students who have never used genAI tools, a course or workshop on *“how to use it [AI] responsibly”* and *“how to write a scientific text with AI”* would also be very helpful, as noted by the Watchful Non-User (P10). Comparing such courses to previously offered courses for academic writing, P10 (Watchful Non-User) concluded:

“It also lies in the university's kind of realm of responsibility in terms of education. In the same way that we had courses during our program about how to do scientific writing, and AI starts to be part of that, inescapably, so this is part of scientific writing nowadays. And in that sense, [...] it actually should be part of the education, how to use it [AI] responsibly and how to use it with benefit.”

Besides practical support and guidance, P8 (Embracer) also mentioned that *“the university [...] can do something for [...] the perception of AI”* among teachers by encouraging them not to view genAI tools simply as *“a tool for cheating, or [...] a tool for learning”* but to focus on how genAI tools are used, how teachers can communicate with students about their use of genAI tools, and how both sides can support each other in using genAI tools in ways that support learning. P8 (Embracer) further noted that trust should be mutual, as just as teachers may be concerned about students' use of AI, students may also question teachers' practices; for instance, whether and how they use AI to grade students' assignments. P9 (Strategic Minimalist) specified what they would find helpful to know about teachers' practices regarding AI: for example, whether and how AI tools are used in assessment processes, how flagged content is interpreted, to what extent teachers trust AI detection systems, and whether AI tools are used to verify the validity of students' academic writing. P9 (Strategic Minimalist) emphasized that such transparency is not intended to encourage the misuse of AI; instead, it *“would take away a lot of the stress of being flagged by using this minute amount of AI. So I think it would benefit using AI for its benefits and not abusing it”*.

Overall, students expressed a desire for more guidance and support on how to use AI tools responsibly and effectively. Furthermore, they underscored the importance of open communication between teachers and students.

5.6.3 Situational influences

In addition to social and institutional influences, participants also described more personal and situational factors that influenced whether and how they used genAI tools. To conclude the discussion on contextual influences, this section explores two interrelated situational influences on students' use of genAI tools: a) academic workload and task demands, and b) personal perspectives and challenges.

Academic workload and task demands

One key situational factor mentioned by participants was the number of assignments they had to complete. Several participants described a direct link between high academic workload and their decision to begin the use of genAI tools. P8 (Embracer) recalled: *“I started to use AI-generated text from the second semester, not actually [the] first semester. In [the] second semester, we have a lot of assignments and I started to use it. To help me to write my things.”* Similarly, P9 (Strategic Minimalist) cited as a possible reason for not starting to use genAI tools earlier: *“I haven't had as many assignments. Maybe that's the reason”*. This suggests that the academic workload, particularly the number of assignments, can influence students' decision to adopt genAI tools.

Moreover, participants emphasized that it was not only the quantity of assignments that mattered but also the requirements of the task itself. Some types of assignments were seen as more compatible with the use of genAI tools than others. For example, P11 (Strategic Minimalist) reflected: *“I use it rather for essays than learning diaries, because in learning diaries I don't really see the point so much, because it's very much based on my own perspective”*. While this might indicate that students may use genAI tools less for assignments perceived as personal or reflective, their use ultimately appeared to depend on the specific demands of the task. This becomes evident in the example of P9 (Strategic Minimalist), who described beginning to use genAI tools when they had to write a particularly demanding learning diary:

“The first time I had to use it [AI], I had tens of articles to read and do basically a learning diary answering questions. One answer wants us to mention all of the articles [...] So that's the actual one time that I thought, okay, why not? Let's see. [...] I fact checked everything and I had done the reading necessary, but I would never be able to do the successful writing and show all of the knowledge that I actually have without

ChatGPT, like without AI. So maybe it was also the demands of some assignments that forced me to, and not just ease of use, but actually the demands of being so compact with so much reading”.

Together, these examples show that both the amount and specific requirements of assignments seem to have an influence on whether students use genAI tools.

Personal perspectives and challenges

Participants’ personal interpretations of what a given assignment requires also influenced their decisions around the use of genAI tools, particularly about whether the task was seen as process- or outcome-oriented. For instance, the Watchful Non-User (P10) described how their willingness to use genAI might change depending on whether the emphasis lies on the final product or the learning process, noting: *“Maybe in the future when [...] it's more about the outcome than the process, then I would consider using AI”*. This suggests that it is not only the formal characteristics of an assignment that influence the use of genAI tools, but also students’ subjective view of its purpose and function.

The extent to which students engaged with genAI tools was further influenced by individual challenges and pressures. Some students linked their use of genAI tools to general academic pressure, such as the stress associated with deadlines, grades, or thesis writing. Several participants also described using genAI tools in moments where they struggled to get started or did not know how to approach a task. As P1 (Strategic Minimalist) phrased it: *“Sometimes you just don't know how to do it,”* and especially in these situations, genAI tools were perceived as helpful. Time pressure was another situational factor that made the use of genAI tools more likely, especially for summarizing articles. P2 (Embracer) shared: *“If I do not have time to read the article entirely, I would just ask it [ChatGPT] to summarize, then it's, I mean, it's better to do something than not to do anything”*. Both non-users (P3, Reserved Skeptic, and P10, Watchful Non-User) also mentioned that in situations of strong time pressure, they might consider using genAI tools – suggesting that time constraints can reduce hesitation, even among students who are otherwise reluctant to use genAI tools. While these situations can be understood as situational influences on students’ use of genAI tools, they also show how perceived benefits of using genAI tools, such as saving time and their support for the initial phases of academic writing, can motivate students to use them, especially in challenging situations with uncertainty or time pressure.

Additionally, health-related challenges were mentioned as a situational factor that might affect students' engagement with genAI tools. One Embracer (P4) explained that since they do not receive “*sick leaves when [...] studying*”, they “*compensate it by kind of like lowering [...] [their] moral standards for using AI*” meaning that they might “*be more chill with [their use]*”.

Furthermore, students' perceived readiness to use genAI tools also seemed to be relevant, especially for non-users. This included both a personal sense of not yet being prepared to use such tools and more practical concerns related to the time, effort, and responsibility required to use them effectively and ethically. For instance, the Watchful Non-User (P10) did not postpone the adoption of genAI tools because they completely rejected their use, but because they felt they lacked the necessary knowledge or conditions to use them. They clarified: “*At the moment, I actually consider that just the time to learn to use those tools responsibly and effectively, [...] that would take me more time than me actually writing my thesis without [...] using them*”. Students' perceived readiness to use genAI tools is thus not only about their familiarity with or knowledge of how to use genAI tools, but also about their personal assessment of the costs and benefits of adopting them.

Overall, these examples show that genAI tools were not necessarily used as a default, but often as a response to specific challenges, whether related to time, health, emotional pressure, or uncertainty about how to begin.

These situational challenges were identified as one category of contextual factors affecting students' use of genAI tools for academic writing. In addition, social environments, such as perceived teacher attitudes or peer behavior, and institutional structures, particularly university or course-specific guidelines on AI use, were analyzed as circumstances that may influence students' adoption, use, and disclosure of genAI tools. Across all engagement types, participants described how their decisions around the use of genAI tools were shaped by these social, institutional, and situational factors. These findings contribute to a broader understanding of how students view their use of genAI tools for academic writing, highlighting that they do not view their engagement in isolation, but as embedded in and shaped by contextual influences.

5.7 Future perspectives on the use of genAI tools

In addition to reflecting on the contextual influences on the use of genAI tools for academic writing, participants also shared their views on how their current use of genAI tools is influenced by their perceptions of the tools' future relevance. These future-oriented views included not only future perspectives but also current motivations for students' engagement with genAI tools. This final theme, therefore, explores students' future perspectives on the use of genAI tools and offers a closing lens on the first research question on how students view their use of genAI tools for academic writing in the present and with regard to the future.

While most participants expressed the belief that the use of genAI tools will remain relevant and even necessary in future academic and professional contexts, some students also expressed uncertainty and ambivalence about their future relevance. Perceiving the development of the use of genAI tools in the upcoming years as unclear or unpredictable, P8 (Embracer) noted: *"The future is the big question mark in our mind, how it will go. It depends on the real future, the next years, how people use it"*. Similarly, P9 (Strategic Minimalist) questioned how the use of genAI tools will be viewed in the future, considering that public attitudes are constantly changing. They reflected: *"I think it's already in the process of being demonized and un-demonized, so we don't know how it's going to be next year or in the future"* (P9, Strategic Minimalist). For the Watchful Non-User (P10), this uncertainty extended to academic writing more broadly: *"It's hard to imagine how it would be in the future"*.

Despite this uncertainty, eight participants stated that they believed genAI tools would remain relevant or even indispensable in the future. For many, this perceived future relevance influenced their decision to engage with genAI tools already now – to avoid falling behind or to prepare for future work and academic demands. As P4 (Embracer) explained: *"If you won't use it as a tool, you will be left behind and you won't be so efficient in your work"*. Similarly, P6 (Strategic Minimalist) reflected: *"I feel like we will not get around that [...] it is the future of everything we are going to do"*. This sense of inevitability was expressed by many participants with statements such as *"there is no escape from using AI in academic writing"* (P10, Watchful Non-User) or *"AI is here to stay, and it's important to keep up with this development"* (P4, Embracer).

Participants also perceived AI literacy – the ability to use genAI tools effectively and responsibly – as a future skill that would be essential in both academic and professional life.

P10 (Watchful Non-User) shared their belief that *“it's going to be a future skill to be good in academic writing with using AI”* and further emphasized that *“without learning those skills [...] I'm not gonna be able to be competitive”*. Similarly, P11 (Strategic Minimalist) stated that *“it might be a skill that is needed also in the future and the work life”*. Considering this perceived future relevance of the use of genAI tools, P6 (Strategic Minimalist) explained: *“That's my main reason why I try to get into it right now [...] familiarity is also a way to prepare myself for a future that will definitely include AI”*. Other participants shared the same view, noting that *“it's good to learn using AI, its' kind of for me also like practice for the future”* (P4, Embracer). The Watchful Non-User (P10) further expressed the concern to already be behind, more specifically, in their own words, they stated: *“I'm already a little bit behind, because I don't know how to use those tools”*. P4 (Embracer) shared this concern as well, reflecting: *“I only started using it last year. So I'm also kind of late already on that”*.

The perceived future relevance of the use of genAI tools was not only associated with technological developments but also with changing academic practices. For instance, the Watchful Non-User (P10) predicted an increased pressure for researchers to publish more efficiently and expressed the belief that AI-supported writing might increasingly be part of meeting such demands. Although not all participants were enthusiastic about this development, most emphasized the need to learn how to use genAI tools to *“not lose the pulse of the time”* (P11, Strategic Minimalist) and *“to keep up with this development”* (P4, Embracer). According to P2 (Embracer), *“we are in this age where like AI is becoming a huge thing. So you cannot avoid that”*, and thus concluded that students and teachers *“will also have to kind of know like how to use ChatGPT responsibly”*.

Overall, this theme illustrates that students' views on their use of genAI tools for academic writing are not limited to the present moment but are also influenced by how they perceive their future relevance. Many participants actively considered how the use of genAI tools might be relevant in their future academic and professional lives and described how these expectations influenced their current perspectives and motivations regarding their use. In this sense, students did not only view genAI tools as support their current academic writing, but also as a way to prepare for a future in which AI is likely to become an integral and unavoidable part of academic writing and working life.

6 Discussion

The following chapter integrates the findings of this study with Zimmerman's (2000) model of self-regulated learning (SRL), situates them within existing literature, and briefly compares the engagement types in this study with existing profiles on students' use of genAI tools. How the themes identified in the analysis answer the two research questions will be summarized subsequently, before the limitations of this study, potential directions for future research, and the study's practical implications are discussed.

6.1 Self-regulated learning and the use of genAI tools for academic writing

While the thematic analysis was conducted inductively to explore students' views on the use of genAI tools for academic writing, the theoretical framework of SRL is used in the following to provide a structured interpretation of how these perspectives align with the three phases of SRL: forethought, performance, and self-reflection.

6.1.1 Forethought phase

As described in Section 2.4, the forethought phase of SRL involves that students analyze the task they need to complete, such as a written assignment, set goals, and plan strategies to accomplish them. This phase is influenced by students' motivations and contextual factors that affect their reflections and decisions (Zimmerman, 2000).

The results of this study indicate that the forethought phase encompasses two related but distinct dimensions. On the one hand, it involves students' consideration of whether and how to use genAI tools as part of their strategic planning to complete their writing task. On the other hand, for students who decide to use genAI tools, the tools' use can support their forethought processes related to the task, such as planning strategies or organizing their work. Therefore, the forethought phase includes both the decision-making about using genAI tools and, for those who decide to use them, their support for task-related planning.

Students' tool-related considerations of whether and how to use genAI tools during the forethought phase appeared to be influenced by their motivations and general orientations toward the use of these tools. For example, curiosity was mentioned as a reason to use genAI tools, which is consistent with Simkute et al.'s (2025) finding that curiosity motivated undergraduate students in the UK to use genAI tools. Moreover, considering that all participants who reported using genAI tools regularly or occasionally expressed positive or

accepting attitudes toward their use for academic writing, these attitudes seem to motivate their decision to use these tools. More specifically, participants' perceptions of genAI tools as '*a helper*' or '*an assistant*', which are the same metaphors used by students in other studies (Adnin et al., 2025; Simkute et al., 2025), likely encourage their use. Furthermore, outcome expectations and students' motivation to "*do [their] best*" or to improve the overall quality of their academic writing appeared to influence students' decisions to use genAI tools. Students' beliefs about the potential of these tools to enhance writing quality, which is a perceived benefit that was also identified in previous studies (Delello et al., 2023; Kim et al., 2024; Tan et al., 2023), consequently contributed to students' decisions to use genAI tools for their academic writing. One participant further mentioned using genAI tools to compensate for individual challenges, for example, cognitive and language-related difficulties, which prior research has similarly documented as a reason for students' use of genAI tools (Holland & Ciachir, 2024). Overall, these predominantly positive views of the use of genAI tools, which led most participants ultimately to use genAI tools, align with previous research showing that university students generally hold positive attitudes toward the use of genAI tools (Blahopoulou & Ortiz-Bonnin, 2025; Holland & Ciachir, 2024; Suonpää et al., 2024; Tan et al., 2023).

In contrast, skeptical or critical orientations led other students, such as the non-users in this study, to refrain from using genAI tools. These critical attitudes were closely related to concerns about academic integrity, reduced control over the writing process, or fears that using genAI tools might negatively affect writing quality – concerns that have also been reported by students in previous studies (Delello et al., 2023; Kim et al., 2024; Nugroho et al., 2024). In addition, non-users mentioned a perceived lack of need and thus, doubts about the tools' usefulness, which supports Launonen's (2024) findings that Bachelor's students in Finland likewise decided not to use genAI tools because of uncertainty about their utility and a general lack of perceived necessity. Further reasons for avoiding the use of genAI tools included a personal motivation to earn grades based on their "*own strengths*" or a desire to use genAI tools only once they feel sufficiently informed about how to use them responsibly. This emphasis on personal accountability reflects attitudes described in other studies, where students also highlighted the importance of using genAI tools responsibly (Holland & Ciachir, 2024).

Besides students' general motivations to use or avoid genAI tools, participants also emphasized the influence of contextual factors on their decision about whether to use genAI

tools for academic writing. Participants' decision to use genAI tools often originated from their analysis of specific tasks as being particularly demanding, challenging, or time-intensive. The benefits they associated with genAI tools, such as support for task initiation, reduced cognitive effort, and saving time, directly addressed the situational challenges and therefore led to their decision to use genAI tools for certain assignments. Students across countries seem to perceive these benefits as particularly beneficial (Holland & Ciachir, 2024; Kallunki et al., 2024; Kim et al., 2024; Lee et al., 2025; Lopez & Qamber, 2022). In contrast, when tasks were perceived as more personal and reflective, some participants reported deciding against using genAI tools, as they did not view extra support as necessary or beneficial in these contexts.

In addition to these situational influences, broader institutional factors, particularly students' university guidelines on AI use, also seemed to influence their decisions regarding the use of genAI tools. Most participants perceived their university guidelines as useful, which aligns with the findings of Suonpää et al.'s (2024) study, conducted in Finland during the autumn semester of 2023, where the majority of students similarly viewed their university guidelines on AI use as helpful. Nevertheless, several participants also perceived the guidelines as generic and partially unclear. This lack of clarity and uncertainty was found in this as well as in other studies as affecting students' decisions to use and/or disclose their use of genAI tools (Gonsalves, 2025; Simkute et al., 2025).

Moreover, social influences, including students' perceptions of teachers' attitudes toward the use of genAI tools, appeared to affect their decisions about the use and disclosure of these tools. In line with findings from students in the UK (Gonsalves, 2025), this study found that some students chose not to use or disclose their use of genAI tools due to concerns about negative reactions or potential bias from their teachers. In contrast, when participants perceived their teachers as accepting or even encouraging the use of genAI tools, they felt confident about their use and disclosure – a result also reported by Adnin et al. (2025) involving students in the United States.

Furthermore, peers' behavior seems to impact students' decisions about using genAI tools. The findings of this study support the results of Korchak et al. (2025), whose quantitative research with university students in the United Arab Emirates showed that students' intention to use genAI tools was closely related to how popular these tools were among peers. Their study further suggested that initial resistance toward new technologies tends to decrease when students observe successful use by others (Korchak et al., 2025), which is consistent with the experiences of the Reserved Skeptic and the Watchful Non-User in this study. Both, despite

their skeptical attitudes, reported at least trying or intending to use genAI tools after seeing how widely and extensively peers use them. However, in contrast to previous studies, for example, by Adnin et al. (2025) and Gonsalves (2025), who report that students often avoided discussing their use of genAI tools with peers due to fears of stigma or to protect their own strategic advantages, participants in this study described open and collaborative communication among peers about their use of genAI tools. Several participants stated that they had adopted genAI tools after being introduced to them by peers or friends and that they shared effective strategies regarding the use of these tools among each other. This contrast may be explained partly by contextual differences, since the studies of Adnin et al. (2025) and Gonsalves (2025) were conducted in the USA and the UK, respectively. In comparison, Finland's educational environment may be less competitive among students and more open toward the adoption of new technologies, considering Finland's national goal to become a global leader in the adoption of AI, as discussed in Chapter 3. Another possible explanation is that the increased awareness and normalization of the use of genAI tools since the earlier studies have contributed to a more open and collaborative communication among students in this later phase of data collection, roughly a year after the two previous studies. P7's reflection that the official guidelines on AI use helped destigmatize the use of genAI tools and facilitated open communication among peers supports this latter explanation.

Beyond contextual influences, students' future perspectives on the use of genAI tools also influenced their decisions during the forethought phase of SRL regarding whether to use genAI tools. Several participants described the feeling that becoming familiar with the use of genAI tools was not only beneficial for their current academic writing but increasingly necessary to remain competitive in future academic and professional contexts. The perceived future relevance and inevitability of the use of these tools seems to lead even more hesitant students to consider or begin using genAI tools. These findings support earlier studies, which similarly found that the growing normalization of the use of genAI tools in higher education contributes to students' perception that their use is becoming unavoidable (Delello et al., 2023; Gonsalves, 2025).

Overall, the majority of participants' reflections referred to the first dimension of the forethought phase regarding students' decisions about whether to use genAI tools to support their academic writing. This is why this dimension is discussed in more detail than the second dimension, which refers to how the use of genAI tools supported students' forethought processes once they had decided to use them. The findings of this study suggest that students'

decisions regarding the use of genAI tools for academic writing already reflect a self-regulatory consideration, where students evaluate their needs, beliefs, and context before engaging with a writing task. This evaluation is influenced by their general orientations toward the use of genAI tools for academic writing (Theme 1), their commitment to the responsible and critical engagement with genAI tools (Theme 4), contextual influences (Theme 5), students' future perspectives (Theme 6) and their perceived benefits and drawbacks of using genAI tools for academic writing (Theme 2 and 3). These findings align with Zimmerman's (2000) view that self-regulation does not occur in isolation but develops through the dynamic interaction of personal, behavioural, and environmental influences.

In addition to this first dimension of students' decision-making regarding the use of genAI tools, the second dimension concerns the tools' support during the forethought phase. Most participants perceived the use of genAI tools as particularly helpful for the initial phases of academic writing, for example, in supporting task-related planning, which correspond to the forethought phase of SRL. In particular, participants valued the tools' support in clarifying how to begin and making it easier to overcome initial difficulties or procrastination. This perception is consistent with the findings from previous studies, which have shown that students value genAI tools for their support in brainstorming and their ability to reduce uncertainty at the beginning of a writing task (Kim et al., 2024; Nugroho et al., 2024; Tan et al., 2023). Knowing that genAI tools could assist with task analysis and strategic planning appeared to increase participants' self-efficacy and made them feel less dependent on asking others for advice. Students' feeling of greater independence and confidence in their own abilities when using genAI tools was also identified by Lopez and Qamber (2022), Simkute et al. (2025), and Kim et al. (2024). As a result, some participants reported that genAI tools reduced their initial stress and worry associated with academic writing tasks, which supports the findings of Adnin et al. (2025) and Meng & Dai (2021). Overall, the findings of this study suggest that students perceived the use of genAI tools as supporting the planning phase of SRL. These findings are closely related to participants' perceived benefits of using genAI tools for academic writing (Theme 2).

Taken together, the results indicate that the forethought phase of SRL involves students' decision-making about whether to use genAI tools and their use of these tools to support task-related planning.

6.1.2 Performance phase

Following the forethought phase, the performance phase involves implementing strategies and monitoring progress (Zimmerman, 2000). Regarding this phase, the findings of this study refer to participants' descriptions of how the use of genAI tools supported their academic writing, as well as to the concerns and drawbacks expressed by users and non-users regarding the use of these tools in this phase.

Participants perceived the use of genAI tools as helpful for a variety of writing-related tasks; for instance, to find synonyms, summarise academic texts, synthesize information, receive feedback, or refine their writing. These uses and perceived benefits have been reported by many previous studies (Kim et al., 2024; Nugroho et al., 2024; Simkute et al., 2025). Many participants found the use of genAI tools not only helpful for facilitating task initiation and reducing initial stress but also for making the writing process more time-efficient and less stressful, especially under time constraints. Similar perceptions have been identified by Adnin et al. (2025) and Holland & Ciachir (2024). By supporting time management and other aspects of the writing process, the use of genAI tools seems to support students' self-regulation during the performance phase.

Nevertheless, students also expressed awareness of the drawbacks of genAI tools. The most frequently mentioned concern was the accuracy and reliability of genAI outputs – a finding consistent with Simkute et al.'s (2025) study, and Schei et al.'s (2024) scoping review of 24 empirical articles, which also found accuracy and reliability concerns as the most commonly perceived limitation among higher education students. In addition, participants raised concerns about academic integrity, transparency, bias, and data protection – drawbacks that were also stressed by other university students (Charman & Tan, 2024; Delello et al., 2023; Nugroho et al., 2024; Simkute et al., 2025; Tan et al., 2023).

Because of their awareness of these drawbacks, participants emphasized the importance of using genAI tools responsibly and critically. This perceived importance influenced how they controlled their use of genAI tools and led many to make deliberate efforts to balance AI assistance with independent thinking. Participants described critically evaluating and refining AI outputs, as well as avoiding the input of sensitive or personal information into the systems. These practices highlight the ongoing process of monitoring and regulating genAI tool use as part of students' broader self-regulatory strategies. They also suggest that most participants valued quality, accuracy, as well as ensuring academic integrity, over ease of use or saving

time. These findings contrast those of Fu et al. (2024), who found that university students tended to prioritise the convenience of the use of genAI tools over accuracy and reliability concerns. In comparison, students in this study often described reallocating or investing more time in their academic writing instead of saving time when using genAI tools. Participants' perceptions of using genAI tools critically and responsibly align with findings from Simkute et al. (2025), Nugroho et al. (2024), and Adnin et al. (2025), who likewise revealed that students in various international contexts prioritize the responsible use of genAI tools. Nevertheless, while most participants perceived their use as responsible, the fact that several of them chose not to disclose their use of genAI tools, although transparency can be considered part of responsible use, contradicts this perception and suggests that responsibility was understood in varied, and sometimes limited, ways.

Besides students' perceptions of using genAI tools critically and responsibly, the results of this study also indicate that students actively monitor the effects of using genAI tools on their learning and skill development. In addition to self-control, including practices like fact-checking the accuracy of genAI outputs and not relying on them, self-observation is a key component of the performance phase. This includes reflections on whether they are learning through the use of genAI tools or becoming "*lazy to think on [their] own.*", as well as observations of how their use influences their confidence in their academic writing skills. Students in previous studies have shown similar forms of metacognitive monitoring by reflecting on the impact of genAI tools on their learning processes, critical thinking, creativity, and self-confidence (Charman & Tan, 2024; Nugroho et al., 2024; Simkute et al., 2025; Suonpää et al., 2024; Tan et al., 2023). Together, these findings suggest that metacognitive monitoring represents a widespread and important aspect of students' SRL processes.

The performance phase of SRL seems to be most directly influenced by students' perceptions of the benefits and drawbacks of using genAI tools for academic writing (Themes 2 and 3) and their perspectives on the responsible and critical use of these tools (Theme 4). For what specific purposes students decide to use genAI tools in this phase is further affected by their general orientations toward their use (Theme 1) and contextual influences (Theme 5). Students' self-observation during the performance phase lays the foundation for the subsequent phase of self-reflection.

6.1.3 Self-reflection phase

The self-reflection phase involves evaluating one's performance after completing a writing task and adjusting future strategies accordingly (Zimmerman, 2000). In the context of genAI tool use, this phase encompasses students' self-assessments of how the use or non-use of genAI tools affected their academic writing and learning processes. For users of genAI tools, it includes the critical reflection on their collaboration with AI, what the tools can do for them, what they still need and want to do themselves, and how this collaboration can be improved. An example of the human part of this collaboration is students' self-regulation, encompassing the ability to monitor, evaluate, and decide which aspects of the academic writing process to retain or delegate. Additionally, it can involve students' consideration of their roles within this collaboration, for instance, whether they want to act as evaluators or independent writers.

In this study, many genAI tool users reflected that using genAI tools helped them enhance the quality of their writing, save time, compensate for learning difficulties, or improve specific skills. These experiences align with those of other students in various contexts (Kim et al., 2024; Schei et al., 2024; Simkute et al., 2025), and often led to students' satisfaction with their practices and a decision to continue using genAI tools in established ways.

Students' perceived benefit of saving time when using genAI tools may appear contradictory to their statements about using these tools critically, as critical engagement typically requires additional time for evaluation and revision. However, whether and how time is saved depends on the specific tasks for which genAI tools are used. For example, using these tools to find literature or synonyms more quickly may save time without much fact-checking, whereas tasks such as summarizing academic texts often require careful verification and might save less time when done critically. Students' reflections on whether they save time when using genAI tools, and with what consequences, are part of this self-reflection phase. Some participants came to the conclusion that they saved time but at the cost of less thorough evaluation or reduced learning, while others realized that their use of genAI tools does not necessarily save time but improves the quality of their academic writing. These students viewed genAI tools less as a time-saver and more as a consultation tool that can support deeper reflections and help them consider alternative perspectives. Several participants also recognized that they can save time and improve the quality of their writing at different stages of the writing process, while the non-users in this study, in turn, reflected that using genAI

tools critically would not inevitably save time or improve their academic writing. Students' evaluations of where the use of genAI tools provides benefits without considerable costs, such as a loss of quality or skill development, and where potential drawbacks outweigh advantages, are part of this final, self-reflective phase. These reflections inform students' future decisions about whether and how to use genAI tools for subsequent academic writing tasks.

For instance, some users expressed concerns about reduced independent thinking, creativity, or confidence in their academic writing skills and noted a growing dependence on genAI tools. Such concerns are consistent with those of other students (Simkute et al., 2025, Suonpää et al., 2024, Tan et al., 2023, Charman & Tan, 2024, Schei et al., 2024). After realising that heavy reliance negatively affected their ability to think and write independently, some participants described adapting their practices, for example, by intentionally limiting their use of genAI tools. A similar strategy could be to use genAI tools primarily during the initial phases of academic writing, as their use at this stage may have the least risk of being counterproductive to students' own skill development. This type of strategic adjustment to mitigate the potential negative effects of the use of genAI tools has also been described by students in other studies (e.g., Adnin et al., 2025).

In contrast, the non-users in this study reflected that not using genAI tools would positively influence their academic writing skills in the long term, because their writing skills and confidence would improve through writing completely on their own. Their uncertainty or lack of belief that using genAI tools would help them with their academic writing contributed to a perceived lack of need to use them and informed their decision not to use these tools for previous and immediate upcoming writing tasks. Nevertheless, the Watchful Non-User acknowledged that using genAI tools effectively will be an important skill in the future and therefore expressed an intention to use these tools eventually. These reflections indicate that students' self-reflection includes short-term as well as long-term considerations about the use of genAI tools for academic writing, with different implications for their immediate decisions and future behavior regarding their use.

Beyond students' reflections on their use or non-use of genAI tools, this self-reflective phase could also involve students' reflections on their disclosure practices. For example, students may consider how they can demonstrate that they have used genAI tools critically and responsibly, rather than primarily being concerned about potential negative reactions from teachers when stating their use. Such concerns could shift toward efforts to build mutual trust

between students and teachers. Only a few participants reflected on disclosure as a way of fostering reciprocal trust, whereas several others appeared to view trust as one-directional, being more concerned about possible teacher mistrust or disapproval. Reflecting on how trust can be supported through transparent disclosure practices may therefore be another consideration in this last phase of SRL.

The findings of this study align with Zimmerman's (2000) concept of adaptive self-reaction, in which learners evaluate their performance and revise strategies for future tasks based on prior experiences. While students' perceived benefits and drawbacks of using genAI tools for academic writing (Themes 2 and 3) appeared to have the strongest influence on this phase, their broader orientations toward genAI tools (Theme 1) and expectations regarding future relevance (Theme 6) also seem to affect their reflective evaluations. Students' reflections during this phase inform their subsequent forethought phase, including whether and how to use genAI tools in future tasks. This feedback loop illustrates how students' SRL processes shape their engagement with genAI tools across all phases of academic writing.

The application of Zimmerman's (2000) model of SRL provides a clear framework for understanding how students integrate, adjust, or sometimes avoid using genAI tools for their academic writing. It also shows that students' perceptions, including their perceived benefits and drawbacks, of the use of genAI tools influence their self-regulatory strategies for academic writing. The more extensive discussion of the forethought phase of SRL, compared to the subsequent performance and self-reflection phase, reflects the emphasis found in the research data. Most participants' statements were related to the forethought phase, as many reflections concerned the decision-making process regarding whether and how to use genAI tools for academic writing tasks. This decision appeared to be influenced by all identified themes, which made the forethought phase the only phase to which all themes were connected. Moreover, the most frequently perceived benefit of using genAI tools was their support for the initial phases of academic writing, which also relates to the forethought phase. Viewing the data through the SRL framework suggests that students tended to focus mainly on the forethought phase, especially on their decisions about whether to use genAI tools, as well as on the performance phase, which involved their commitment to the critical use of genAI tools. By contrast, fewer participants reflected more extensively on the benefits and drawbacks of their use or non-use of genAI tools, and particularly on their disclosure practices. This variation highlights the importance of bringing more attention to the self-reflection phase, as it is also an integral part of students' SRL.

6.2 Comparison of engagement types with existing profiles

Besides analysing the research data through the SRL framework to explore how students' use of genAI tools relates to their SRL processes, the following section briefly discusses how the four engagement types in this study might appear comparable to other profile types on students' use of genAI tools. For example, Stojanov et al.'s (2024) five profiles based on university students' self-reported reliance on ChatGPT share some similarities with the engagement types described in this study. Among these, the Embracers may be perceived as similar to Stojanov et al.'s 'all-rounders', as both groups were characterized by positive attitudes toward the use of genAI tools while also engaging with them critically. In Stojanov et al.'s (2024) study, 'all-rounders' reported relatively high reliance on ChatGPT across a wide range of tasks, which could be viewed as partly comparable to the Embracers' broad use of genAI tools for academic writing. Moreover, the Strategic Minimalists in this study could be regarded as somewhat similar to the "proactive learners" in Stojanov et al.'s study, who showed relatively high reliance on ChatGPT for planning and feedback, but low reliance on drafting or writing assignments. The Strategic Minimalists' pattern, which involved limiting the use of genAI tools to specific purposes, such as for the initial phases of academic writing or feedback, may be seen as somewhat comparable. The Reserved Skeptic might also be considered partly similar to the 'versatile low reliers', since both were characterized by limited positive attitudes toward the use of genAI tools and low overall reliance on, or use of these tools.

However, Stojanov et al.'s (2024) profiles, which were identified through quantitative survey data and latent profile analysis, differ in their analytic focus from the qualitatively developed engagement types presented in this study. Therefore, although certain engagement types in this study show some similarities to the profiles described by Stojanov et al. (2024), the two typologies remain distinct.

6.3 Summary of key findings and the study's contribution

This study aimed to answer the two research questions: (1) How do international Master's students in Finland view their use of genAI tools for academic writing? and (2) How do they perceive the benefits and drawbacks of this use? Semi-structured interviews with eleven international Master's degree students enrolled in social sciences programs at a university in Finland were analyzed using thematic reflexive analysis.

Six major themes were identified of which four, to be precise Theme 1 on students' general orientations toward the use of genAI tools, Theme 4 on students' responsible and critical engagement with genAI tools, Theme 5 on contextual influences and Theme 6 on students' future perspectives regarding the use of genAI tools, helped answer the first research question on how students view their use of genAI tools for academic writing. The findings of this study support previous research (e.g., Delello et al., 2023) suggesting that students increasingly perceive the use of genAI tools as necessary to not "*be left behind*" (P4) in their current studies and their future professional life.

However, while many prior studies emphasize the perceived benefit of saving time when using genAI tools, a key finding of this study is that several students seemed to consciously prioritize critical engagement over efficiency. All participants, regardless of their user type, agreed on the importance of using genAI tools critically. Many described reallocating time to tasks such as verifying AI-generated content instead of saving time, and for some, this critical engagement even resulted in spending more time on assignments when using genAI tools. This finding challenges the widespread assumption that genAI tools primarily serve to increase efficiency in academic writing. While participants also perceived saving time as a benefit of using genAI tools for academic writing, the improvement of the quality of their writing appeared to be more important to many of them.

Another important finding of this study is that students view their use of genAI tools as highly context-dependent, influenced not only by peers' practices and university guidelines on AI use, but also by their perceptions of teachers' attitudes toward that use. To the researcher's knowledge, this is the first qualitative study in Finland that explores how international Master's students perceive the influence of their teachers' attitudes on their use and disclosure of genAI tools. While researchers have begun to address this topic in other national contexts, for instance, Gonsalves (2025) in the UK and Adnin et al. (2025) in the USA, this study extends the discussion by providing insights from international students studying in Finland. It thereby contributes to a broader and more diverse understanding of how perceived teacher attitudes affect students' engagement with genAI tools.

To answer the second research question of this study – how international Master's students in Finland perceive the benefits and drawbacks of using genAI tools for academic writing – Themes 2 and 3 were developed. The findings revealed that students perceive a wide range of benefits associated with using genAI tools for academic writing, but are also aware of several

drawbacks. Among the drawbacks, concerns related to accuracy and reliability were raised most frequently by all participants, followed by cognitive and learning-related concerns. Nevertheless, the perceived benefits appeared to outweigh the drawbacks for most students. The benefit mentioned most consistently across all participants, including non-users, was genAI tools' support for the initial phases of academic writing, such as assistance with generating initial ideas, planning, and engaging with academic literature. Efficiency and performance gains were the second most frequently reported benefit of using genAI tools for academic writing. These findings are consistent with previous research, which suggests that students perceive the drawbacks and benefits of using genAI tools for academic writing similarly across different contexts (e.g., Schei et al., 2024; Tan et al., 2023; Charman & Tan, 2024; Suonpää et al., 2024; Delello et al., 2023).

By relating all identified themes to Zimmerman's (2000) model of SRL, this study demonstrates how students' perceptions, attitudes, and behaviors concerning the use of genAI tools for academic writing are embedded within their broader self-regulatory learning processes. This conceptual integration highlights not only the reciprocal relationships between students' views, their perceived benefits and drawbacks of using genAI tools, and their academic practices, but also situates these findings within a theoretical framework of learning and motivation. This approach allows a nuanced understanding of how genAI tools are strategically adopted or avoided, how students assess the risks and rewards, and how contextual factors – including peer norms, university guidelines, and perceived teacher attitudes – shape self-regulated engagement. Connecting students' perspectives to the different phases of SRL further indicated that the self-reflection phase receives less attention from some students than the two preceding phases. This highlights the importance of placing greater emphasis on this final, self-reflective phase in the context of students' use of genAI tools for academic writing. In addition, this theoretical framing helped situate the findings in relation to existing research.

While the literature on students' perspectives on the use of genAI tools is rapidly expanding, this study makes a distinctive contribution by focusing on international Master's students in Finnish higher education, a group whose experiences remain underrepresented in existing research until now. To the researcher's knowledge, this is among the first qualitative studies to explore how international students' social sciences programs in Finland perceive and engage with genAI tools for academic writing. Therefore, this research offers new insights into how this specific population perceives and integrates genAI tools into their academic

writing. Moreover, besides its empirical contribution, this study provides several practical implications for universities and teachers, particularly in Finland, by emphasizing the need for clearer guidelines and enhanced communication between teachers and students regarding the use and disclosure of genAI tools. These implications will be discussed in more detail in Section 6.5.

6.4 Limitations and directions for future research

When interpreting the findings of this study, the following limitations should be considered:

Firstly, due to the voluntary participation in this study and the use of convenience sampling, certain perspectives may be overrepresented in the sample. For example, students with a particular interest in the use of genAI tools or regular users of these tools might have been more motivated to participate than others with limited experience or less interest in the topic. Moreover, since interviews were conducted in English with non-native speakers, students who felt more confident in expressing themselves in English may have been more likely to volunteer and share more detailed insights.

Secondly, the study relied on self-reported data collected through interviews. Therefore, participants may have responded in ways that they believed to be socially desirable, particularly when discussing responsible and critical use of genAI tools. Recall bias may have also affected students' responses. Future research could supplement the findings of this study with large-scale, completely anonymous quantitative studies to provide a more comprehensive understanding of international Master's students' perceptions on the use of genAI tools for academic writing in Finland.

Thirdly, the sample of this study, consisting of eleven international Master's students enrolled in social sciences programs at one university in Finland, was small and specific. While this group was well-suited to explore the study's research questions, the findings cannot be generalized and may have limited transferability to other academic levels, disciplines, or cultural contexts. It is also important to consider that international Master's students are often highly motivated and achievement-oriented; hence, their critical and reflective engagement with genAI tools may differ from students at earlier stages of their studies. For example, first-year Bachelor students who began their studies after the mainstream adoption of genAI tools may approach their use differently. Future research could explore these differences by interviewing undergraduate students, who may have less prior experience with academic

writing without using genAI tools. This could provide further insights into how academic level, prior experience, and educational background influence students' use of and reliance on genAI tools.

Further research should also examine teachers' perspectives on students' use of genAI tools for academic writing, particularly at Finnish universities. Such studies could explore what teachers think when students disclose their use of genAI tools, how they identify the use of genAI tools in students' writings, and whether they encourage or discourage their use.

Moreover, future studies could adopt quantitative methods to investigate students' awareness of the broader ethical implications regarding the use of genAI tools, including their environmental impact. In the present study, this aspect was mentioned by only one participant, suggesting that such considerations may not be reflected upon by many students.

6.5 Pedagogical implications

Despite its limitations, this study offers several practical pedagogical implications that will be described in the following.

For teachers

As outlined in Section 5.6.3, situational influences, including students' academic workload, task demands, and personal challenges, were identified as affecting students' use of genAI tools. More specifically, the amount and specific requirements of assignments seem to influence whether students use genAI tools. This suggests that teachers may indirectly influence students' engagement with genAI tools through their decisions about how many assignments students must submit and what specific demands these assignments involve. Moreover, one participant mentioned sickness as a situational factor that may increase their use of genAI tools to compensate for nonexistent sick leaves. This highlights another area where teachers may indirectly influence students' use of genAI tools, for instance, by allowing deadline extensions due to illness or offering multiple submission dates. In addition, the findings of this study revealed that students value the assistance of genAI tools, particularly for the initial phases of their academic writing, especially when they are uncertain about how to begin or perceive an assignment as particularly challenging. This further suggests that teachers might influence students' use of genAI tools to some extent by providing sufficient clarity on assignment instructions and additional guidance or support for the initial phases of students' academic writing.

Regarding open communication between teachers and students

Besides these indirect influences of teachers on students' use of genAI tools, the findings of this study highlight the importance of open communication between teachers and students about the use of genAI tools for academic writing to foster more transparent disclosure practices. Although most participants were to some extent familiar with their university guidelines on AI use, they described them as generic, unclear, or ambiguous. Consequently, many participants used genAI tools in similar ways (e.g., for outlining, editing, or background research) but made different decisions about whether to disclose their use. As described in Section 5.5.2, students' decision not to disclose their use of genAI tools appears not to always be due to deceptive intent but may simply reflect confusion, lack of awareness, or an assumption that disclosure is not relevant for specific support. These unclear expectations may highlight a need for clearer guidelines that acknowledge the varied ways in which genAI tools are used and in which "the extent of allowed GenAI use needs precise definition" (Simkute et al., 2025, p. 17). This may also help guide students who perceive their use as minimal in making informed decisions about their use and disclosure of genAI tools.

However, considering that students' perceptions of their teachers' attitudes also appear to influence whether they disclose their use of genAI tools, improving the clarity of university guidelines alone may not be sufficient to promote more transparent disclosure practices. The findings of this study indicate that students hold a range of assumptions about their teachers' attitudes toward the use of genAI tools, which in turn affect their disclosure practices. In particular, participants who perceived their teachers as open and approachable regarding the use of genAI tools tended to be more likely to disclose their use without hesitation. Some participants explained that when they expected a negative or critical response from their teachers, they would either limit their use or still disclose their use of these tools. In contrast, others reported that uncertainty about their teachers' views or anticipated negative reactions discouraged them from disclosing their use, even when their university guidelines allowed it. Moreover, some students stated that although their teachers had allowed them to state their use, they did not disclose their use of genAI tools due to concerns about possible negative reactions. These results illustrate how the disclosure decisions of some students are not only influenced by their university guidelines on AI use but also by their perceptions of their teachers' reactions toward this use. They further show that students' disclosure practices are less affected by teachers' actual attitudes and more by students' assumptions and concerns about them. Given the diversity of these assumptions about teachers' reactions to students'

use and disclosure of genAI tools, as well as the different practices resulting from them, including disclosure, non-use, or non-disclosure, it appears unlikely that clearer guidelines alone would lead to more transparent disclosure decisions.

Instead, more open communication between teachers and students about the use of genAI tools and its disclosure seems to be needed to foster transparency. In practice, this means that teachers should communicate their expectations and attitudes toward the use of genAI tools clearly within their courses, while students should also take an active role by initiating conversations about teachers' perspectives and by expressing their own viewpoints and related uncertainties. These dialogues should also include discussions about the university guidelines on AI use to encourage active engagement with them, ensure clarity, and create space for questions. This appears particularly relevant considering that two participants in this study were aware of, but not familiar with, their university's guidelines, which is a phenomenon also discovered in other studies (Simkute et al., 2025) that suggests that it may not be sufficient to assume that students independently read and understand them. Such reciprocal communication about teachers' attitudes and university guidelines on AI use could help reduce ambiguity, address concerns, build mutual trust, and support transparency in students' disclosure practices. Moreover, open dialogue may prevent students from relying on assumptions or projecting their own views onto their teachers.

Overall, in line with Gonsalves' (2025, p. 602) conclusion, the findings of this study emphasize that “institutions must create a supportive, transparent environment where students feel confident that honest AI declarations will be assessed fairly”. More specifically, they highlight that effective AI integration in higher education requires not only clear guidelines but also open communication and a foundation of mutual trust between teachers and students.

Regarding students' AI literacy

Beyond open communication between teachers and students, universities could support students in learning effective prompting. Several studies underscore the future importance of effective prompting, and Vartiainen et al. (2024) even questions whether “prompting is on its way of becoming another 21st century skill required for future professionals” (p. 7).

Considering the perceived future relevance of using genAI tools in academic and professional lives, participants in this study also expressed a desire for more guidance and support on how to use genAI tools effectively and responsibly (as described in Section 5.6.2). By offering support and courses for students on the use of genAI tools, universities could not only

enhance students' AI literacy but also promote greater equity among them. As P4 noted: *“Not everyone learns how to use it [AI], and not everyone necessarily has the possibility to learn to use it”*. Providing such support could therefore help ensure that all students have equitable access to the knowledge and skills needed to engage with genAI tools responsibly and effectively. Universities could even consider offering their own genAI tools that ensure equal access and provide up-to-date information without the need for paid subscriptions.

Furthermore, universities could support students' AI literacy by placing greater emphasis on strengthening students' evaluative judgment, that is, their ability to critically assess the quality of their own and others' work, including AI-generated content (Bearman et al., 2024; Tai et al., 2018). While evaluative judgement is a general academic skill, it becomes particularly important for the use of genAI tools, as users must constantly evaluate the quality, accuracy, and appropriateness of AI-generated outputs. Considering the growing relevance of this competence, universities could focus more on fostering students' evaluative judgement and thereby promote the critical and responsible use of genAI tools.

In addition to supporting students in using genAI tools effectively and critically, universities and teachers could inform students more about the drawbacks of using genAI tools for academic writing. While the findings of this study indicate that students are aware of many drawbacks related to using genAI tools, they also emphasize that certain issues are not widely reflected upon. For instance, the limited number of participants who raised concerns regarding the broader ethical effects of using genAI tools, including its environmental impact, suggests that many students may not fully consider these issues. This highlights a potential area for teachers to raise greater awareness and discussion among students regarding the wider drawbacks of using genAI tools.

In summary, universities could increase their support for students by fostering open and informed discussions that promote the ethical, critical, and effective use of genAI tools for academic writing. Moreover, providing clearer guidelines on AI use and improving communication between teachers and students about these guidelines and their respective attitudes toward the use of genAI tools and its disclosure, may help promote more transparent disclosure practices. Taken together, these measures could contribute to a more transparent and trust-based academic environment.

7 Conclusion

The purpose of this study was to explore how international Master's students in Finland view their use or non-use of genAI tools for academic writing and how they perceive the benefits and drawbacks of this use. By focusing specifically on social sciences students in international Master's programmes in Finland, this research contributes to the evolving body of literature on students' perspectives on the use of genAI tools in higher education.

Drawing on Zimmerman's (2000) model of self-regulated learning (SRL) as a theoretical framework, this study suggests that students' use of genAI tools functions as a self-regulatory strategy and facilitates their SRL. The application of this model also indicated that students might focus less on the self-reflection phase than on the preceding forethought and performance phases, thereby highlighting the importance of placing greater emphasis on this final, self-reflective phase of SRL. Furthermore, consistent with previous research, participants reported a range of perceived benefits and several drawbacks of using genAI tools for academic writing. Concerns about accuracy and reliability were the most frequently mentioned drawbacks, whereas the primary benefit was genAI tools' support in the initial phases of academic writing. Overall, participants tended to perceive the benefits of the use of genAI tools as outweighing the drawbacks.

A particularly important finding was that all participants emphasized the importance of using genAI tools critically. Motivated by a desire for high academic performance, they often reported reallocating time or even investing additional time when using genAI tools. This differs from common assumptions that portray students as primarily using these tools to save time. Moreover, perceived teacher attitudes were found to influence some students' decisions regarding their use and disclosure of genAI tools, highlighting the importance of open communication not only about university guidelines on AI use but also about teachers' perspectives. These findings point to several pedagogical implications, particularly for Finnish universities, in terms of how institutions and teachers can foster transparent and supportive environments for the responsible and effective use of genAI tools.

The perceived future relevance of genAI tools in academic and professional life also appeared to influence students' views on their use of genAI tools. Many participants expressed the belief that AI is here to stay and emphasized the necessity to learn how to use genAI tools to avoid being left behind. This perspective highlights the importance of embracing genAI tools

but also the need for students, teachers, and institutions to ensure the responsible use of these tools. Students in this study recognized that the key question is not whether genAI tools are used, but how they are used. As Yin (2024) notes, “AI chatbots and other AI technologies possess the transformative power to revolutionize the learning process and reshape our world”, yet their impact ultimately depends on how they are used.

Disclosure of AI use

AI, more specifically genAI tools as defined in this thesis, were used as support for the academic writing of this thesis. They assisted with initial brainstorming of potential research questions and procedures, as well as with planning and organization. Occasionally, they were used similarly to a search engine, for instance, to search for relevant literature, clarify unclear concepts, or answer general questions that arose during the writing process. Moreover, genAI tools were used to refine written text by suggesting synonyms or alternative expressions, proofreading for grammar and readability, or suggesting improvements for academic style and flow. They also helped in comparing different formulations to select the most appropriate phrasing and served as a translation tool.

The use of genAI tools was guided by principles of originality, critical evaluation, and data protection. No personal information about participants was entered into any AI system, and only selected passages of text were used for refinement. Any AI output or suggestions were critically evaluated and revised to ensure accuracy, reliability, and ethical integrity. Finally, all ideas, arguments, analyses, and interpretations remained the researcher's own.

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Appendices

Appendix 1 Interview guide

Introduction

- Thank you for your time and participation in this interview.
- The purpose of this interview is to explore international Master's students' perspectives on the use of generative AI writing tools for academic writing.
- With genAI writing tools I mean by the way any AI tools that generate text, like e.g. ChatGPT, Gemini, Copilot but also Notion AI or DeepL Write.
- *[Discussion and signing of privacy notice and consent form]*
- This interview will take approximately 20-30 minutes, during which I will ask you about your experiences and views on using or not using genAI writing tools for academic writing.
- When I will ask you questions about your academic writing, I mean not only writing itself but also everything related to it, like planning, reading, or evaluating information, e.g. when writing assignments or your thesis.
- This interview will be audio recorded to ensure that all responses are accurately captured.
- Please keep in mind that you won't be identifiable from anything you say during this interview and everything will remain confidential.
- Do you have any questions at this point? Are you comfortable with proceeding?

[Depending on the responses, I will decide whether to ask follow-up questions or not]

Background questions

1. What year of your Master's degree are you currently in?
2. What is the most common way of assessment in your courses? (e.g. exams, presentations, essays, reports, learning diaries)

Follow-up question:

- In how many of your courses do you need to write assignments, like essays, reports, or learning diaries?
3. Is English your native language?
 4. How comfortable do you feel using English for academic writing?
 5. Have you used any genAI tools in the last six months for academic writing, e.g. for writing on your thesis or an assignment like an essay or a report?

Main questions

For those who have used genAI tools for academic writing in the last six months

6. Which genAI tools have you used within the last six months?
5. Approximately how often do you use genAI tools for academic writing, (do you use them regularly, occasionally, or only for specific assignments)?

If only for specific assignments:

- For what kind of assignments do you use genAI tools?
 - Why do you use genAI tools only for those assignments?
6. Can you describe, in more detail, a recent experience with using genAI tools for academic writing, e.g. for an essay, report, or your thesis?

Follow-up questions:

- What kind of assignment was it (e.g. essay, report, thesis)?
 - What specific tasks did you use genAI tools for (e.g., to generate ideas, paraphrase or proofread)?
 - What were your reasons for using genAI tools for this assignment?
 - Can you give some examples of how using genAI tools has helped you with your academic writing?
 - Can you describe any challenges or concerns you had with using genAI tools for this assignment?
7. Have you had other experiences with using genAI tools for your academic writing that were different from the one you just described?

If yes: Can you describe one of those other experiences?

Follow-up questions:

- How was this experience different from the one you described before?
 - What kind of assignment was it?
 - For what tasks and reasons did you use genAI tools this time?
 - How did using genAI tools help you with this assignment?
 - Did you have any challenges or concerns with using genAI tools this time?
8. Besides the reasons you have mentioned, is there anything else that motivates you to use genAI tools for your academic writing?

Follow-up question:

- Do you also use genAI tools partly because you think their use will be relevant in your future work?
 - Do you invest time in learning how to use genAI tools effectively because you think this knowledge might be useful in your future work?
9. Can you describe your typical process after receiving AI's suggestions and before including them in your writing?

Follow-up questions:

- Can you describe how you fact-check or edit the AI-generated content before using it in your writing? (e.g. do you use other tools to cross-check the AI-generated content?)
 - How important is it for you to evaluate or edit AI-generated content before using it in your writing?
10. Are you aware of any university guidelines on using AI tools for academic writing?

If yes:

- What is your understanding of these guidelines?
 - How do these guidelines influence your use of genAI tools for your academic writing?
11. How has using genAI tools influenced the time you spend on academic writing?

Follow-up question:

- Has it helped you save time or increased the time spent on certain tasks?

12. Have you noticed any changes in your writing style or vocabulary knowledge since you started using genAI tools? *If yes:* Can you describe them?

13. Has using genAI tools influenced how confident you feel about writing academically on your own, without the help of genAI tools?

If yes: How has your confidence been influenced?

If no: Why do you think your confidence has not been influenced?

14. How do you think using genAI tools will affect your academic writing skills in the long term?

15. If you imagine you would no longer use genAI tools for your academic writing, how do you think this would affect your academic writing skills?

For those who have not used genAI tools for academic writing in the last six months

6. Have you ever used genAI tools for academic writing?

If yes:

- Approximately how often have you used genAI tools for academic writing?
- Can you describe a past experience you had with using genAI tools for academic writing?

Follow-up questions:

- Which genAI tools did you use?
- What kind of assignment or academic writing did you use genAI tools for?
- What specific tasks did you use them for (e.g. generating ideas, paraphrasing, proofreading)?
- What were your reasons for using genAI tools?
- Can you explain why you did not continue to use genAI tools for your academic writing?

Follow-up question:

- Do you have any specific concerns about using genAI tools?
If yes: What are they?

If no:

- Have you ever used genAI tools for other purposes?
If yes: For what specifically have you used genAI tools?
- What are your reasons for not using genAI tools for your academic writing?

Follow-up question:

- Do you have any specific concerns about using genAI tools?
If yes: What are they?

7. Are you aware of any university guidelines on using AI tools for academic writing?

If yes:

- What is your understanding of these guidelines?
- How do these guidelines influence your decision to not use genAI tools for your academic writing?

8. How do you think not using genAI tools will affect your academic writing skills in the long term?
9. Even though you don't use genAI tools, do you think using them would help you with your academic writing?
If yes: In what ways do you think would it help you?
If no: Why do you think it would not help you?
10. If you imagine you would use genAI tools for your academic writing, how do you think this would affect your academic writing skills?
11. Is there anything that could make you reconsider using genAI tools for academic writing in the future?

Additional questions

- *For users:* Do you state when you use genAI tools for your academic writing (e.g. at the end of your assignment)? Why or why not?
- *For non users:* If you were to use genAI tools for your academic writing, would you state it (e.g. at the end of your assignment)?
- What do you think your teachers think if you state that you used genAI tools?
 - *For users:* Does this perception influence whether you state that you used genAI tools or not?
 - *For non-users:* Do you think this perception would influence your decision to state the use of genAI tools or not?
- Would you like to have more support from the university on how to use genAI tools?
 - What kind of support would you like to have?
(e.g. support on how to use them effectively or responsibly)?

Closing

- Has this interview sparked any new reflections or influenced your perspective on the use of genAI tools for academic writing?
If yes:
 - Can you describe a new thought or perspective you gained during this interview?

- Is there anything else you'd like to share about your experiences or thoughts about the use of AI tools?
- Do you have any questions for me about this study?
- Thank you very much for your participation. If any questions or comments still come up later, feel free to contact me.

Appendix 2 Privacy notice

Thank you for your interest in participating in this research. For this study, personal information will be collected and under the General Data Protection Regulation (GDPR), a justification, known as a 'legal basis,' is required for collecting and processing personal information. The legal basis for this study is your informed consent to participate in this study. Before signing the consent form, please read this privacy notice carefully and feel free to ask any questions you may have. This privacy notice describes what personal data will be collected and how it will be used and protected during this study.

1. Purpose and description of the research

This research aims to explore how international Master's students in Finland view their use of generative AI writing tools for academic writing and how they perceive the benefits and drawbacks of this use. Qualitative interviews will be conducted with international Master's students studying social sciences at a university in Finland.

2. Person conducting the research

Sfia Karnabi, sikarn@utu.fi

3. Parties involved in the research and responsibilities

Responsible researcher: Sfia Karnabi, sikarn@utu.fi
Research supervisor: Koen Veermans, koevee@utu.fi.

4. Data controller

Sfia Karnabi, sikarn@utu.fi

5. Purposes of processing personal data

All collected data will only be used for research purposes as part of this Master's thesis. The data will be used to:

- Analyze participants' responses to gain insights into the research topic.
- Draw comparisons and conclusions relevant to the study.
- Share pseudonymized results through the final thesis.

Personal data will not be directly linked to specific responses, and all published findings will be pseudonymized, ensuring that no participant can be identified (see also sections 7 and 10).

6. Legal basis for processing personal data

The legal basis for processing your personal data is your informed consent based on Article 6(1) of the EU General Data Protection Regulation.

7. Personal data included in the research

The personal data collected during this study are your field of study, your academic year and whether your native language is English or another language. The main interview questions will focus on your experiences and views on using or not using genAI writing tools for academic

writing. Your name, email address, or phone number will only be used to communicate and schedule the interview (see also section 10).

8. Source of personal data

In order to send the invitations to the interview, email addresses or the possibility of forwarding a message are requested from the university. The other data is collected directly from you during the interview for this study.

9. Transfer or disclosure of personal data

Your personal data will not be shared with anyone outside the research group or with any third parties unless it has been fully pseudonymized. Only the responsible researcher will have access to the interview recordings and the research supervisor may only review the pseudonymized transcriptions. No personal data will be transferred outside the EU or the European Economic Area.

10. Safeguarding, processing and storage of personal data

Your personal data will be treated confidentially at all times and no automated decisions, including profiling, are made. Interviews will be audio or video recorded to ensure accuracy in data collection. The research data will be securely stored on a password-protected device or on the University of Turku online cloud Seafile, accessible only to the researcher and protected by a personal username and password.

The recorded interviews will be transcribed into text files and the recordings will be destroyed. Simultaneously, the research data will be pseudonymized by erasing identifiable personal data. Your name, email address, or phone number will be stored separately from the research data, following the University of Turku's data security guidelines. No direct identifiers will be linked to the interview data, and pseudonymization procedures will ensure your privacy throughout the research. After two years, all research data will be permanently deleted.

11. Your rights

As a participant and under the General Data Protection Regulation (GDPR), you have certain rights. These include your right:

- To access the data you have provided.
- To request the correction or deletion of your data.
- To withdraw your consent at any point, without providing a reason or facing negative consequences.
- To ask any questions or raise concerns about the research.
- To lodge a complaint with the supervisory authority if you believe your personal data has been processed in violation of applicable data protection laws. In this case, you can contact the national Data Protection Ombudsman of Finland at tietosuoja@om.fi.

There may be limitations to certain rights, especially after your data is pseudonymized. For more information about your rights under GDPR and how your data is handled, please visit: <https://utuguides.fi/researchdata/dataprotection>

Please keep this information sheet and thank you for taking the time to read it.

Appendix 3 Consent form

Research title: International Master's students' views of their use of generative AI writing tools for academic writing.

Purpose of study: This research aims to explore how international Master's students in Finland view their use of generative AI writing tools for academic writing and how they perceive the benefits and drawbacks of this use.

Name of researcher: Sfia Karnabi

I, the undersigned below, confirm that:

- I have read and understood the privacy notice for this research. I have had the opportunity to consider the information, ask questions, and have had these answered to my satisfaction.
- I understand that my participation is voluntary and that I am free to withdraw at any point, without providing any reason or any negative consequences.
- I understand that participating in this study involves an interview lasting approximately 20-30 minutes, which will be audio or video recorded to collect research data.
- I understand that participating in this study has no potential risk or harm and that I am free to decline to answer any questions during the interview.
- I understand that the information I provide will only be used for research purposes and that any personal information that could identify me will not be shared.
- I understand who will have access to the personal data provided, how the data will be stored, and what will happen to the data at the end of the project.
- I understand that I will not be identifiable from any publications resulting from this research.
- I agree to the use of quotations in research outputs if I am not identifiable.
- I understand how to raise a concern or make a complaint.
- **I voluntarily agree to participate in this research.**

Name of participant

Date

Signature

Appendix 4 List of themes, sub-themes, and codes

Note. AW = academic writing

Themes	Sub-themes	Codes			Files	References
Orientations toward genAI tool use for AW					11	100
	Positive and accepting				10	47
		Advantages perceived as outweighing disadvantages			1	1
		Belief in the value of learning effective use of genAI tools			6	14
		Broad personal use of genAI tools beyond AW			3	6
		GenAI tools perceived as analogous to other digital writing aids			1	2
		GenAI tools perceived as supportive and collaborative tools			7	22
	Skeptical or critical				4	23
		Concerns about genAI tools' impact on AW quality and authorial control			1	7
		Distrust in AI output quality or feedback accuracy			3	5
		Personal avoidance and discouragement of genAI tool use			1	1
		Rapid AI development and lack of regulations perceived as scary			2	3
		Skepticism about others' responsible and critical use of genAI tools			2	3
	Diverse and evolving				10	30
		Curiosity and interest in genAI tools			5	5
		Current preference for non-AI-assisted writing			1	8
		Evolving perceptions and use of genAI tools			6	6
		GenAI tool use perceived as personal and private			2	4
		Personal sense of novelty in using genAI tools for AW			3	5
		Varied confidence in personal genAI tool use			2	2
Critical engagement with genAI tools for AW					11	142
	Principles and practices of critical engagement				11	115
		Awareness of importance of how genAI tools are used			8	16
		Commitment to responsible and ethical use			10	31
		Intentional limitation or avoidance of genAI tool use and reliance on outputs			9	22
		Perceived importance and active evaluation and refinement of genAI tools outputs			10	36
		Willingness to increase or redistribute time investment			6	10
	Approaches to disclosure of genAI tool use				10	27
		Disclosure			4	10
		Non-disclosure			4	14
		Requirement-dependent disclosure			2	3
Contextual influences on genAI tool use for AW					11	121
	Situational influences				8	27
		Assignment characteristics and academic demands			5	6
		Individual challenges and pressures			7	11
		Perceived readiness for genAI tool use			1	10
	Social influences				10	40
		Belief that genAI tools are widely used			3	6
		Peers' and friends' use of genAI tools			4	6

		Perceived teacher attitudes toward genAI tool use	10	28
		Perceived influence of teachers' attitudes	7	10
		Do not influence disclosure	2	2
		Influence disclosure	4	5
		Influence use	3	3
		Range of perceived attitudes	10	18
		Neutral to positive	3	6
		Skeptical to negative	2	4
		Unclear or inconsistent	5	8
		Institutional influences	11	54
		Desired institutional support for genAI tool use	6	17
		Clear and explicit guidelines from teachers on genAI tool use	1	1
		Faculty training and mindset shift around genAI tool use	2	3
		Student support and guidance on how to use genAI tools	5	13
		Perceptions and influence of university AI-use guidelines	11	37
		Familiarity with and perceptions of university AI-use guidelines	11	19
		Limited to moderate familiarity	9	12
		No familiarity	2	2
		Perceived as helpful but unclear or generic	3	5
		Perceived influence of university AI-use guidelines on genAI tool use	9	18
		Do not directly influence personal use	5	13
		Main reliance on course or professor-specific instructions	2	4
		Influence personal use	4	5
		Increase hesitation and anxiety around use	1	1
		Increase willingness and confidence to use genAI tools	1	1
		Provide clarity on how to use genAI tools	3	3
		Perceived benefits of genAI tool use for AW	11	210
		Support for initial phases of AW	11	62
		Encourages further exploration of academic literature	1	1
		Facilitates analysis and synthesis of academic literature	2	2
		Facilitates comprehension of complex academic literature	6	10
		Facilitates initial idea generation	6	12
		Facilitates initial structuring and organizing	6	13
		Facilitates search for academic references	3	4
		Mitigates information overload	1	1
		Serves as personalised search engine	2	3
		Summarizes academic literature	5	10
		Support for writing and revision	9	34
		Assists in formatting	2	4
		Assists in structuring written text	3	5
		Provides adaptable drafts	1	1
		Provides feedback	4	8
		Refines written text	7	11

		Reviews written text for spelling and grammar	3	3
		Supports phrasing and translation	2	2
		Efficiency and performance gains	10	45
		Improves writing quality	6	9
		Increases efficiency	3	4
		Increases productivity	1	2
		Rapid information generation	2	4
		Reduces cognitive load and effort	4	6
		Saves time	9	20
		Support for learning and skill development	7	24
		Compensates for cognitive and language-related difficulties	1	3
		Enhances vocabulary and language skills	5	14
		Facilitates critical thinking	1	4
		Improves structuring and organizational skills	3	3
		Affective support	8	45
		Facilitates AW	6	9
		Increases confidence in own AW	5	8
		With genAI use	3	4
		Without genAI use	2	2
		Promotes self-efficacy	1	1
		Promotes sense of support	3	5
		Provides immediate and constant assistance	3	8
		Constant availability	2	3
		Ease of use	1	1
		Reduces anxiety	4	4
		Reduces stress	4	4
		Serves as a consultation tool	4	6
		Perceived drawbacks of genAI tool use for AW	11	116
		Accuracy and reliability concerns	11	37
		Inaccuracy of information	7	17
		Incomplete information	1	1
		Incorrect information	5	9
		Unreliable references or citations	5	7
		Uncertainty about output accuracy and quality	6	13
		Difficulty evaluating accuracy	2	2
		Verification burden	4	7
		Academic integrity concerns	6	19
		Attribution ambiguity	2	3
		Misrepresentation of students' competence	1	2
		Plagiarism and originality concerns	5	14
		Fear of AI detection	4	8
		Potential plagiarism	4	6
		Ethical concerns about genAI systems	5	15
		Bias and transparency concerns	3	6
		Embedded bias in AI outputs	1	1
		Lack of transparency in AI Functioning	2	5
		Negative environmental impact	1	1

		Privacy and data protection concerns	3	7
		Cognitive and learning-related concerns	9	34
		Concerns about AW skill development	7	15
		Limited or no improvement of AW skills	4	4
		Possible decline in AW skills over time	5	8
		Reduced confidence in AW skills without genAI tool use	3	3
		Concerns about cognitive engagement	6	17
		'Danger of getting lazy'	3	4
		Reduced thinking and creativity	3	7
		Risk of cognitive bias	1	1
		Risk of dependence on genAI tools	3	5
		Loss of unique writing style	2	2
		Functionality and usability challenges	4	11
		Irrelevant or overwhelming output	2	3
		Addition of unwanted or irrelevant content	1	1
		Overwhelming or excessive AI output	1	1
		Knowledge and access limitations	2	3
		Knowledge cut-off limitations	1	1
		Limitations of the free version	2	2
		Prompting and communication challenges	3	5
		Importance of effective prompting	1	2
		Limitations in AI prompt comprehension	3	3
		Future perspectives on genAI tool use for AW	11	60
		Outlook on the future of genAI tool use	10	40
		Belief in future relevance of genAI tool use and AI literacy	8	25
		Future intention to use genAI tools for AW	1	6
		Perceived long-term benefits of not using genAI tools for AW	2	3
		Uncertainty about future development of genAI tool use for AW	4	6
		Perceived effects of genAI tool use on AW skills	7	20
		Minimal or no effects	6	11
		Potentially negative	4	7
		Potentially positive	1	1
		Uncertain	1	1
		Total number of files (= interview transcripts) and references (= coded segments):	11	749