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Suitability Assessments in Higher Education: Pitfalls with the Use of Artificial Intelligence in Extended Mentoring

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Abstract

Advanced suitability assessments of students in higher education in Norway, consider if a student poses a potential risk to vulnerable groups in future professional practice. The purpose of this study is to examine how mentors across disciplines experience students' use of artificial intelligence (AI) in extended mentoring in advanced suitability assessments, and how this impacts mentoring practices. Data were collected through in-depth interviews with four mentors and their reflection notes following mentoring sessions. Thematic analysis revealed that mentors face pitfalls when students use AI to enhance personal and professional development. It becomes difficult to uncover the students' critical reflection and self-awareness, particularly in empathy and care. Findings indicate that students undergoing advanced suitability assessments may lack key competences required for professional practice, such as communication and contextual understanding. The mentees' use of AI as a shortcut rather than as a tool has various impacts on extended mentoring practices, including reduced learning depth, reduced problem-solving skills, increased dependency on technology, and raised ethical concerns.

Keywords: mentoring, critical thinking, reflection, professional development, advanced suitability assessment, artificial intelligence

Sammendrag

Særskilt skikkethetsvurdering av studenter i høyere utdanning i Norge vurderer om en student utgjør en mulig fare for sårbare grupper som studenten kommer i kontakt med under praksis eller under framtidig profesjonsutøvelse. Formålet med denne studien er å undersøke hvordan veiledere på tvers av disipliner og fag opplever studentenes bruk av kunstig intelligens (KI) i utvidet veiledning i særskilt skikkethetsvurdering, og hvordan dette påvirker veiledningspraksis. Data ble samlet inn gjennom dybdeintervjuer med fire veiledere og deres refleksjonsnotater etter veiledningsøkter. Funn gjennom tematisk analyse viser at veiledere står overfor utfordringer når studenter bruker KI i personlig og

profesjonell utvikling. Det blir vanskelig å avdekke studentenes kritiske refleksjon og selvinnsikt, spesielt når det gjelder empati og omsorg. Funnene indikerer at studenter som gjennomgår særskilt skikkethetsvurdering kan mangle viktige kompetanser som kreves for profesjonsutøvelse, som kommunikasjon og kontekstuell forståelse. Bruken av KI som snarvei snarere enn som et verktøy har ulike virkninger på veilederpraksis, og inkluderer studentenes reduserte dybdelæring, problemløsningsferdigheter, avhengighet av teknologi og etiske bekymringer.

Nøkkelord: veiledning, kritisk tenkning, refleksjon, profesjonell utvikling, særskilt skikkethetsvurdering, kunstig intelligens

Introduction

Suitability assessments in higher education in Norway encompass 38 educational programs aiming to protect vulnerable groups, such as patients in hospitals and students in schools, while ensuring educational quality. When doubts arise regarding a student's suitability for future professional practice, an advanced suitability assessment is initiated. This process, governed by the Regulations Relating to Suitability Assessment in Higher Education (Ministry of Education and Research, 2023), includes offering the student extended mentoring. The goal is to provide opportunities for the student to change and develop the necessary skills and qualities required for their future professional roles (Kildahl, 2020). This mentoring involves ongoing, comprehensive support and challenges over an extended period, including supervision related to both personal and professional development.

Professional mentoring should facilitate learning and development, with critical reflection on pedagogical choices being essential for students' progression (Shanks et al., 2020). To foster competence in independent decision-making and actions, mentors must cultivate the ability to critically analyze behaviors and attitudes through reflective practice, both individually and collaboratively (Sondena, 2004). This reflective practice draws upon experiences, theories, and preconceptions as foundational elements for reflection, aiming to understand the connections and rationale behind our actions (Biesta, 2017). Critical reflection is crucial for both mentors and students in navigating uncertainty and encountering new perspectives, which are integral to advancing critical thinking and expanding knowledge (Sondena, 2004).

Additionally, mentoring is grounded in professional values and a solid knowledge base (Tveitnes & Hvalby, 2023). This study aims to explore the broader implications of students' use of artificial intelligence (AI) in the context of extended mentoring for advanced suitability assessments. This is addressed through the research question: *How do mentors experience the impact of students' use of artificial intelligence in their mentoring practices?*

Suitability Assessments

In a Norwegian context, suitability assessments in higher education are legally regulated, with an associated regulatory paragraph, and guideline have been developed to support its implementation (Norwegian Directorate for Higher Education & Skills, 2024). Suitability assessments are critical processes designed to evaluate whether students possess the necessary attributes, skills, and dispositions to succeed in their chosen professional fields (Ministry of Education and Research, 2023). These assessments aim to protect vulnerable groups, such as patients and students, by ensuring that future professionals meet the ethical, communicative, and practical standards required in their professions. The assessments typically involve a combination of academic evaluations, practical assessments, and personal reflections, providing a comprehensive overview of a student's readiness for professional practice (Natteroy et al., 2023). When doubts arise regarding a student's suitability, advanced assessments are initiated, and the student should be offered extended mentoring (Ministry of Education and Research, 2023). This mentoring provides targeted support and developmental opportunities, guiding students to address identified weaknesses and enhance their professional competencies (Kildahl, 2020). By rigorously evaluating and supporting students, extended mentoring in advanced suitability assessments should help

maintain high standards in professional practice and ensure that graduates are well-prepared to meet the demands and responsibilities of their future roles.

Extended Mentoring

Mentoring in higher education plays a crucial role in supporting students' academic and professional development and is regarded as one of the most important components in advanced suitability assessment processes (Hvalby, 2022). Beyond academic guidance, mentoring often includes aspects of social and emotional support, helping students build confidence, resilience, and interpersonal skills (Bäcklund et al., 2024). This includes developing knowledge about the practices of their future profession and cultivating a professional identity.

According to the national guidelines (Norwegian Directorate for Higher Education and Skills, 2024), the head of suitability assessments must develop a tailored plan for the student's extended mentoring. Then a mentor is chosen for each individual case. However, there is no specific guideline for the heads to inform the mentor in extended mentoring about the goal of the plan nor provide relevant information (Olsen et al., 2023).

A mentor is understood to be a more experienced professional who shares their knowledge and supports students with less experience (Smith, 2015). In extended mentoring, the mentor assumes multiple roles: providing support, challenging the student's perspectives, and guiding their professional development (Hvalby, 2022). By fostering a nurturing environment where learning and personal development are prioritized, mentoring contributes significantly to the holistic development of students as they prepare for their future careers.

The objective of extended mentoring is to facilitate the required change and development in students, guided by the criteria outlined in suitability regulations (Ministry of Education and Research, 2023). For example, students are expected to demonstrate willingness or ability in communication and collaboration. However, there are interpretative nuances within the criteria used for evaluating student suitability (Hvalby, 2022). Furthermore, the personal character aspect of suitability adds complexity to the assessment process (Natteroy et al., 2023).

After the extended mentoring is completed, the mentor summarizes the student's progress in a written report (Kildahl, 2020). The development process should be described in relation to how the student has responded to the mentoring according to the plan. However, the mentor does not conclude whether the student is suitable. The report is submitted to the head of suitability assessments, who will consider the report as part of a comprehensive evaluation of the student's suitability.

The duration required for a student to alter attitudes, behavior, and enhance self-awareness in advanced suitability assessments varies. At the educational institutions, different amounts of time are offered for extended mentoring (Olsen et al., 2023). Developing professionally necessitates a considerable period; hence extended mentoring can span an entire semester.

Ulla and Larsen (2021) argue that mentorship in educational context, where the mentor and mentee share insights, reflect on, and collectively enrich their professional knowledge and cultural legacy, constitutes a process of redefining perspectives. Thus, all participants in mentoring sessions are encouraged to engage in discussions, articulate ideas, express their thoughts and emotions, pose questions, and actively listen to each other. Each mentor's approach to extended mentoring varies, employing methods tailored to the student's specific developmental needs. Common methods include reflective conversations, writing reflection logs, and practicing skills relevant to the future professional role (Olsen et al., 2023).

AI-Supported Mentoring

Mentoring in higher education is inherently a personal and individualized process, wherein mentees leverage the expertise and experience of mentors to expand their knowledge and achieve personal goals (Köbis & Mehner, 2021). The introduction of AI into mentoring processes introduces significant ethical

considerations that extend beyond adherence to applicable laws and regulations, such as data protection and non-discrimination. Köbis and Mehner's review (2021) explores the existing literature on the ethical implications of AI-supported mentoring, focusing on key areas including confidentiality, and bias avoidance.

Mentoring relies heavily on trust, openness, and social-emotional support, as mentees' academic achievements, career prospects, and future life choices are often at stake (Smith, 2015). In light of these foundational elements, the integration of AI into this process raises concerns about maintaining confidentiality and the integrity of personal data. Research by Neumann et al. (2023) emphasizes the importance of protecting sensitive information in digital environments, suggesting that breaches of confidentiality could undermine the trust essential to effective mentoring relationships.

Avoiding bias in AI algorithms is a crucial ethical concern in AI-supported mentoring. Noble (2018) discusses how biases in AI systems can perpetuate existing inequalities, potentially disadvantaging certain groups of students. Ensuring fairness in AI algorithms requires continuous scrutiny and adjustment to prevent discriminatory practices. Moreover, the literature underscores the necessity for transparency in how algorithms make decisions to foster trust and accountability (Diakopoulos, 2016).

A systematic rapid review by Dikilitaş et al. (2024) maps eight resent research studies related to students' use of ChatGPT in higher education. Findings show that AI can serve as both an enhancer and an inhibitor of the learning process for students, involving motivational factors and ethical perspectives. Therefore, teachers and students should approach its role with caution and critical thinking. The authors call for clear guidelines to ensure the responsible integration of ChatGPT in the learning process.

A case study explores the development process of GPT-based educational chatbots focusing on the design, implementation, and evaluation of a prototype that served as an educational personal tutor for a Sociology of Education course within a Primary Education Teaching Degree (Fulgencio, 2024). The findings indicate that developing GPT-based chatbots for education has potential to revolutionize traditional teaching methods. Firstly, GPTs are available 24/7, allowing students to learn at any time and place. Secondly, the chatbots can craft learning experiences aligned with individual student profiles, which may strengthen learning outcomes across diverse educational contexts. Thirdly, GPTs can foster an engaging and interactive learning environment with a broad array of educational materials. By creating lively dialogues, posing targeted questions, and offering tailored responses - along with practical examples and exercises - GPTs greatly enhance the learning experience.

However, as an educational tool, this technology has limitations that need to be addressed. While GPTs have improved in grasping context, they may struggle to accurately interpret the nuances of specific topics and situations. This reduced contextual understanding can lead to incorrect information, which may impact their effectiveness in complex or abstract areas. According to Fulgencio (2024), GPT-based education face challenges related to personal interaction and communication. Although chatbots can mimic conversation, they lack the mentorship, emotional connection, and behavioral support that only a human can provide.

The rapid advancement of digital technologies presents both benefits and challenges, making it difficult to fully grasp their implications. AI is being integrated into higher education at a pace that often outstrips research in the field. The ability to effectively navigate and utilize digital technologies is essential for students in higher education and their future professional roles (Cotton et al., 2024). AI plays a significant role in enabling and enhancing digital literacy skills among students. For instance, chatbots and virtual assistants are designed to prompt students to solve problems or respond to questions using natural language interaction, thus promoting learning (Sullivan et al., 2023). However, there are potential challenges associated with using AI in writing. These systems generate text based on predefined parameters (Cotton et al., 2024), which means that students might exploit these systems to cheat by submitting work that is not their own. This undermines the primary objective of higher education, which is to foster genuine learning and development.

While there is growing body of literature on AI's general applications in education, studies specifically focusing on its influence on mentoring practices and suitability assessments remain limited. The current

study aims to address gaps in existing research by examining how mentors across disciplines experience the impact of students' use of AI in their mentoring practices. By doing so, the research contributes to the academic discourse on AI in education and provides actionable insights for practitioners seeking to harness AI's potential while safeguarding educational integrity and quality.

Methods and Data Sources

This small-scale study adopts a qualitative research design (Tomaszewski et al., 2020), employing in-depth interviews and reflection notes from mentors. These methods were selected to capture the nuanced experiences, perceptions, and practices of mentors navigating extended mentoring, with a particular focus on advanced suitability assessment and mentees' interaction with AI.

Data were collected over a period for seven months in 2023 through in-depth interviews with four mentors at a university. The interviews were semi-structured, conducted individually with each mentor, lasting approximately 40 minutes, and were guided by an interview protocol designed to explore their experiences with students' use of AI in extended mentoring in advanced suitability assessment. One interview was performed for each participant. Additionally, mentors' reflection notes were gathered during one semester following mentoring sessions with students undergoing advanced suitability assessments. All mentors at the institution involved in extended mentoring wrote reflection notes after each mentoring session as part of the quality assurance process for the final report on extended mentoring. A total of 48 reflection notes were collected, each varying in structure and length.

To capture a broad range of perspectives, the sample included formally qualified mentors across professions and disciplines, such as teacher education, nursing, and nursing in social education. The researcher contacted registered mentors for extended mentoring at three different faculties within the selected institution, and they were recruited through invitations to participate in the study. All mentors who accepted the invitations provided informed consent.

The four experienced mentors, aged between 47 and 63 years, had collectively mentored a total of nine students in extended mentoring, with all of these students utilizing AI in their learning process. None of the mentors were particularly familiar with the use of AI in mentoring. According to the mentors, the students in the mentoring sessions had not been exposed to AI in their educational programs and had little to no experience with AI beyond its general concept. During the period of the data collection, the institution did not provide workshops or resources on AI that could increase students' familiarity in how AI might be used in advanced suitability assessments.

The Norwegian Agency for Shared Services in Education and Research approved the study, and the research adhered to the guidelines of the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH) from 2023.

Ethical Concerns

To ensure transparency, stakeholders, including mentors and the educational institution, were provided with clear information about the study's objectives, methodology, and potential impacts. However, ethical considerations arose regarding the collection of data in the sensitive context of extended mentoring in advanced suitability assessments. To address confidentiality concerns, information shared during mentoring sessions was anonymized, handled with strict discretion, and utilized solely for research purposes. The audio files of the interviews and reflection notes were transcribed verbatim.

The importance of being aware of the researcher's personal perspectives, experiences, and preunderstanding is emphasized by Leavy (2014), as these can influence how data is interpreted. Thus, the researcher's professional background as Head of Suitability Assessments may have affected the interviews and the interpretations of the data. To mitigate potential biases, several strategies were employed. Two data sets were collected to corroborate the findings. During data collection and analysis, the researcher's personal assumptions were temporarily set aside through bracketing (Saldaña, 2014). Additionally, to enhance the validity of the findings, member checking was employed (Tomaszewski et al.,

2020), involving sharing interpretations with participants to validate the accuracy and relevance of the data collected. By soliciting feedback from mentors who participated in the study, this method ensures that their perspectives and experiences are accurately represented in the final analysis.

Data Analysis

This study on mentors' practices in extended mentoring is framed within a phenomenological perspective (Moser & Korstjens, 2018), to explore how mentors experience students' use of AI in advanced suitability assessments. A phenomenological approach provided the foundation for investigating the subjective and lived experiences of mentors, shaping the study's focus on meaning-making. However, the analysis follows an inductive thematic approach, applying Saldaña's (2014) coding methods to systematically identify patterns and themes within the data.

First, the mentors' narratives in the interviews were analyzed inductively. The transcriptions were openly coded to ensure an exploratory approach while bracketing prior assumptions. Next, the codes were systematically grouped into broader categories, allowing for the identification of emerging themes. Finally, these themes were refined and interpreted in relation to the research question, ensuring that the analysis remained grounded in the empirical data. Throughout the process, the study adhered to qualitative thematic analysis principles, emphasizing transparency and rigor in theme development.

The mentors' reflection notes were also analyzed thematically, following the same inductive process (Saldaña, 2014). The analysis proceeded in three stages: (1) open coding of the material, (2) identification of emerging themes and patterns, and (3) interpretation of key themes in relation to the research question. Initially, the reflection notes were reviewed line by line, with codes generated directly from the data to ensure an open and explorative approach. These codes were then systematically grouped into broader categories, allowing for the identification of recurring themes.

Finally, the findings from both datasets were interpreted in conjunction to provide a comprehensive thematic understanding of how mentors perceive students' use of AI in extended mentoring. Through this process, 19 sub-themes were identified (see Table 1). These sub-themes were later consolidated into five main themes reflecting key concerns regarding AI use in extended mentoring: (1) its impact on mentoring practices, (2) reduced depth of learning, (3) diminished persistence in problem-solving, (4) increased dependency on technology, and (5) ethical concerns.

Table 1. Through the thematic analysis process, five overarching themes were developed from the interviews and the reflection notes.

Impact on Extended Mentoring Practices	Reduced Depth of Learning	Impact on Problem-Solving Skills	Increased Dependency on Technology	Ethical Concerns
Altered mentoring methods	Superficial engagement	Over-reliance on AI for solutions	Lack of self-reliance	Academic integrity
AI integration in extended mentoring	Lack of critical thinking	Reduced creativity	Limited self-awareness	Bias and fairness
Challenging to uncover the student's own critical reflections and self-awareness	Gaps in subject knowledge	Diminished persistence	Potential for skill atrophy	Contextual misinterpretations
Ethical use of AI in extended mentoring	Weak communication skills	Lack of contextual understanding		Ethical responsibility

Findings

In presenting the qualitative findings, the results of the analysis of the mentors' reflection notes are integrated with the insights gained from the in-depth interviews. The different mentors are referred to by number (M1–M4) to enhance clarity and readability.

Students undergoing advanced suitability assessments in Norwegian higher education may present a potential threat to vulnerable groups in professional practice. The findings show that students' mentors expressed to experience pitfalls when mentees used AI to enhance personal and professional development. When students used generative AI such as ChatGPT and Gemini in reflection logs, the mentors found it challenging to uncover the students' critical reflection and self-awareness, particularly in areas related to empathy and care. The findings emphasize that mentors pointed out that students undergoing advanced suitability assessments frequently lacked essential skills for professional practice, including communication and understanding of context. Additionally, mentors emphasized that students undergoing advanced suitability assessments frequently exhibited weak subject knowledge. They implied a deficiency in the students' understanding of the professional domain relevant to their educational program, which the mentors pointed out could potentially lead to difficulties in comprehending concepts or executing tasks within that field. Consequently, this experienced lack of subject knowledge may impede students' capacity to contribute effectively to assignments aligned with their professional role.

Mentors expressed, both in interviews and reflection notes, that when these students used AI as a shortcut rather than as a tool, the mentors experienced it had an impact on extended mentoring practices. The influence was related to the mentees' reduced depth of learning, reduced persistence in problem-solving skills, increased dependency on technology, and ethical concerns.

1) Impact on Extended Mentoring Practices

The mentors highlighted the impact that the indirect integration of AI had on their practices. M3 stated: "In the extended mentoring sessions, I have had to address how students use AI tools, guiding them to use AI responsibly and ethically, ensuring they do not become overly dependent on these technologies." This quote shed light on mentors' shift in focus from solely underlining the students' needs for change and development to also involve AI. All mentors stressed that the presence of AI had introduced new ethical considerations into the mentoring dialogue, which was elaborated by M2: "I spend more time in the sessions discussing the ethical implications of AI use now, pinpointing the importance of maintaining academic integrity."

Additionally, more time was being spent discussing AI in the sessions, necessitating the adaptation of traditional mentoring methods to incorporate these discussions. This is illustrated in the following excerpt:

> In mentoring sessions, I always encourage independent thought and reflection. Since I discovered students' extended use of ChatGPT in their reflection logs, I have had to teach them how to critically evaluate AI-generated content, ensuring they understand the context and limitations of such tools. In my opinion, this is an important part of their learning process to be suitable for their professional roles. (M1)

This excerpt relates to the adaptation in extended mentoring practices due to AI and the increased emphasis on providing support and guidance to help students navigate the use of AI tools. Mentors also mentioned they were developing new strategies for monitoring and assessing students' work to differentiate between AI-generated content and the students' own understanding. According to the participants, this ensures that students are genuinely engaging with the reflection logs and not just relying on AI for quick answers.

Finally, mentors identified a need for further education and training on AI technologies to better support their students. This included understanding how AI works, its potential pitfalls, and how to effectively integrate it into educational practices. They all expressed a desire to learn more about what AI may mean for suitability, professional practice, and higher education. Overall, the introduction of AI into extended mentoring practices required mentors to evolve their approaches to ensure that students

developed the necessary competencies for their professional roles while understanding the ethical and practical implications of AI use.

2) Reduced Depth of Learning

The participants experienced that most students used AI to write their reflection logs, and they struggled to connect different pieces of information meaningfully. M2 stated:

> The reflection logs contained a few relevant terms, but during mentoring, the students demonstrated significant gaps in subject knowledge and critical thinking. In my opinion, their engagement for growth seemed superficial, relying on Chat GPT for quick answers rather than understanding concepts deeply.

The quote illustrates the mentors' concerns about students' superficial learning and inadequate critical thinking skills, which was debated by participants to potentially result in a surface-level understanding of concepts, rather than engaging in deeper learning experiences through exploration and critical thinking. Additionally, mentors experienced students having poorly developed communication abilities, as they might not practice articulating their understanding effectively. Furthermore, all mentors noted that for some students, the use of AI hindered their ability to develop a comprehensive understanding of both the subject matter and their own suitability.

3) Reduced Persistence in Problem-Solving Skills

All mentors experienced that students' use of AI had an impact on their problem-solving skills. M3 pointed out: "The pre-service teacher posed a potential danger to students and lacked self-awareness. Using ChatGPT or Gemini for written reflection, the logs showed signs of being superficial, generic, and lacking critical reflection about own suitability for teaching." This quote indicates that by bypassing the process of independent problem-solving, students may miss opportunities to develop critical thinking, analytical reasoning, and problem-solving skills that are essential for suitability in their educational program and future professional role.

Demonstrating self-awareness was one of the suitability assessment criteria that mentors expressed that there was frequently noted doubt about. As a result, according to the mentors, students in extended mentoring had to focus on developing and learning in relation to this criterion. Furthermore, mentors observed that over-reliance on AI in reflections negatively impacted the students' learning process, as they depended on AI to produce content. Mentors also highlighted students' diminished persistence in problem-solving and their lack of contextual understanding, as illustrated in the following excerpt:

> In mentoring sessions, it became clear that most students were not fully comprehending the broader context of problems they were encountering. They missed understanding the nuances, relying on AI to provide answers and reflections. In my experience, students also gave up on difficult problems more easily because they expected AI to provide quick fixes. Several of the students approached empathy instrumentally, which posed a challenge for me. It became difficult to uncover their self-awareness and genuine care. This issue is disturbing because sincere emotional engagement is crucial in professional practice. (M4)

The excerpt describes the mentors' concerns about a tendency among students to give up on challenging problems more easily because they rely on AI for quick solutions instead of working through the problems themselves. Moreover, the participant addresses an issue related to students' empathy and care.

4) Increased Dependency on Technology

In the mentors' narratives, they emphasized the students' overreliance on AI, which they experienced to have fostered an increased dependency on technology for problem-solving or decision-making. M1 expressed: "In my opinion, students are less confident in their own abilities to find solutions without assistance from ChatGPT. I have experienced students who struggle to recognize their own learning needs and progress due to overuse of AI." The issue highlighted in the quote relates to students' lack of self-reliance and limited self-awareness because their reliance on AI. Mentors were concerned that this

dependency might hinder students from engaging in meaningful self-reflection and recognizing their own learning needs and growth.

When mentors observed that students were overly dependent on AI, they stated that they adapted their approach by encouraging students to engage in more independent thinking and reflection. All mentors emphasized the importance of self-insight and critical thinking in their extended mentoring practices. Thus, they articulated that they were guiding students to reflect more deeply on their own learning process. Additionally, two of the mentors provided opportunities for students to practice problem-solving without the aid of AI to strengthen their self-awareness.

5) Ethical Concerns

The extensive use of AI in extended mentoring, raised some ethical concerns expressed by mentors related to academic integrity, plagiarism, and responsible use of technology. The mentors worried that the students did not understand the limitations of AI, which is illustrated in the following quote: "The limitations that AI technologies seem to have, are not fully capable to support the students to be able to capture the complexity of human behavior or suitability for professional practice." (M2) The mentors emphasized the ethical issue related to potential bias and reinforcement of stereotypes in AI algorithms that could perpetuate inequality or unfair treatment of certain student groups based on gender, race, or background. M4 pointed out:

> Some of the students did not grasp the issue that needed to be solved related to their suitability. Using ChatGPT or Gemini in the reflection logs added confusion for the student and made me concerned because AI misinterpreted context, which occasionally led to inappropriate responses.

This quote involves the importance of ethical self-awareness, as mentors were worried that students might not develop a strong sense of ethical responsibility and awareness if they relied on AI without understanding its ethical implications. Overall, the mentors articulated that using AI in extended mentoring for suitability assessments impacted students' learning experiences, engagement, and the development of essential skills and competencies required for their professional roles.

Discussion: The use of Artificial Intelligence in Extended Mentoring Requires Critical Thinking

The findings underscore the significant impact that students' use of AI has had on extended mentoring practices, revealing several key areas: a shift in focus, enhanced ethical discussions, adaptation of methods, support and guidance, monitoring and assessment, and increased mentor training needs.

According to the Norwegian Agency for Quality Assurance in Education (NOKUT, 2021), critical thinking is a key component of quality in higher education. This highlights the importance of students developing independent analytical skills to meet professional standards. Additionally, students require a solid grounding in knowledge and critical thinking to foster suitability for their professions. This assertion is supported by prior research on mentoring, which emphasizes the importance of professional principles anchored in robust knowledge foundations (Tveitnes & Hvalby, 2023). Critical reflection plays a pivotal role in navigating uncertainty and encountering novel perspectives, both of which are essential for fostering critical thinking and broadening knowledge (Sodena, 2004). However, excessive reliance on AI can make students vulnerable to manipulation, potentially undermining their ability to discern the truth and impeding the development of self-awareness. Mentors have adapted their practices to focus more on AI, integrating ethical discussions and promoting independent thought and reflection, striving to enhance students' critical thinking skills.

A reflective approach relies on experiences, theories, and preconceptions as foundational elements, aiming to understand the connections and reasoning behind our actions (Biesta, 2017). This process is particularly crucial for students undergoing advanced suitability assessments, as it facilitates critical thinking (Hvalby, 2022). In extended mentoring, this entails guiding students to challenge assumptions, evaluate evidence, and consider alternative perspectives. Additionally, mentors should provide diverse

viewpoints and theories to broaden students' understanding and enhance their critical thinking skills (Shanks et al., 2020). However, mentors have experienced pitfalls when using written reflection logs as a method. Instead of addressing their own challenges, several students have opted for shortcuts, using AI to write about their academic progress. The responses generated by applications like ChatGPT or Gemini often did not accurately reflect the student's actual level of understanding. The students' increased reliance on technology, combined with AI's ability to generate quick solutions, may prevent them from developing a deep understanding and a more nuanced view of their own learning needs. Furthermore, they may avoid the challenging but necessary reflections that help them understand and confront their strengths and weaknesses in relation to the demands of the profession. In the extended mentoring sessions, this raised mentors' concerns regarding the students' self-awareness, critical thinking, and suitability.

In the context of extended mentoring, where reflection and self-awareness are essential for the student's process of developing suitability, challenges can arise. Specifically, the direct interaction between mentor and student becomes more important than the reflection notes produced by the student. Through conversation and real-time reflection, the mentor can gain valuable insight into the student's critical thinking and ethical reasoning abilities. According to Sondena (2004), reflection in mentoring must be more than just reinforcement and mirroring of what is already known. This requires the mentor in extended mentoring to challenge the student's mindset.

In light of the findings in this study, it becomes clear that the mentor's strategy and extended mentoring practice gain added significance. An adaptation is required, where mentors should be aware that they play a key role in fostering independent thinking and reflection in students (Ødegard et al., 2014). By challenging students in these areas, mentors can support them in developing the necessary skills and critical perspectives that go beyond AI-generated responses and move toward the professional requirements related to suitability.

Students undergoing advanced suitability assessment are in a demanding position, as they are evaluated not only on their academic skills but also on their personal suitability and their ability or willingness to meet the profession's ethical and practical requirements, as outlined in Norwegian suitability regulations (Ministry of Education and Research, 2023). This process can be stressful and challenging, as it touches on personal aspects of the student's competence and development.

Ødegard et al. (2014) emphasize the mentor's responsibility to be attentive to student vulnerabilities and the necessity of providing appropriate support. In the context of extended mentoring, the mentor's role becomes even more crucial, as they must not only challenge the student but also support them through what is often a difficult and emotionally demanding process. The mentor should therefore balance the necessity of challenging the student's reflection while also considering their mental and emotional state in a way that does not worsen their already vulnerable situation. This further highlight how essential it is for the mentor in extended mentoring to be flexible in their approach and to employ a supportive and empathetic mentoring strategy.

Mentorship assumes a profound and transformative role, facilitating a reciprocal journey of reflection and professional growth for both mentor and student (Ulla & Larsen, 2021). This dynamic interaction entails mentors offering continuous guidance, support, and constructive challenges tailored to the unique needs and developmental goals of each student. Through regular discussions, reflection, and feedback, mentors aid students in navigating intricate professional landscapes, fostering their professional identities and critical thinking abilities. Simultaneously, mentors also reflect on their practices, learning from the experiences and perspectives of their mentees, which enhances their own professional development. According to Pettersen and Løkke (2019), this mutual engagement between mentor and mentee ensures an ongoing cycle of learning and improvement, enriching their professional competencies, and deepening their understanding of their respective roles.

However, it is crucial to acknowledge that extended mentoring can be affected by power dynamics stemming from the assessment context and the interpretative flexibility inherent in the criteria for assessing the suitability of students (Hvalby, 2022). Conversely, students may struggle to assert their

viewpoints within the mentorship dynamic, influenced by their perceptions of authority and personal development needs. Moreover, the concept of suitability is complex, with assessments grounded in a combination of attributes (Natteroy et al., 2023).

The findings show a collective recognition among mentors of the growing influence and potential impact of AI in their fields. They are aware of AI's transformative capabilities and want to understand its implications more thoroughly. Furthermore, mentors are interested in how AI can be leveraged to improve professional practice, possibly by offering new tools for reflection, feedback, and skill development. In the broader context of higher education, this curiosity suggests that mentors are contemplating how AI could reshape teaching methodologies, learning experiences, and educational outcomes.

Chatbots availability, ability to personalize learning experiences, and capacity to create an engaging and interactive environment with diverse educational materials are key advantages of using GPTs in education (Fulgencio, 2024). However, working with AI in a specific academic context, such as suitability assessments, requires that critical reflection must guide the process, endeavoring to comprehend the connections and rationale behind students' actions (Biesta, 2017). This highlights the importance of blended learning approaches. By seeking to expand their knowledge of AI, mentors aim to better prepare themselves and their students for the evolving technological landscape in education and professional environments.

Many students independently incorporate AI into their studies despite guidance from academic staff and mentors (Cotton et al., 2024). If academia does not proactively integrate AI into higher education, students and commercial entities will fill this gap. Therefore, issues related to AI in higher education demand attention. Extended mentoring aims to cultivate and shape students' characters and professional identities through ongoing guidance, support, and tailored challenges (Hvalby, 2022). This process highlights a shared responsibility for mentors and students to enhance digital literacy. The probable use of AI by students in this context could involve leveraging AI tools to assist in various aspects of the extended mentoring. Examples might include assessment simulations and personalized learning. Moreover, the integration of AI in higher education requires robust academic oversight, aligning with findings from other recent studies (Dikilitaş et al., 2024; Neumann et al., 2023).

Implications

AI tools are continuously evolving and being adapted to various contexts. The main implication of this study is to build mentoring competence through mentor education specifically related to the use of AI. Additionally, professional interdisciplinary collaboration is essential to develop effective mentoring practices in advanced suitability assessments. This includes clarifying expectations between the student and mentor regarding the what, how, and why of mentoring. While AI can be a valuable tool, its impact on mentoring practices requires mentors to adapt their guidance to how students use these technologies. Importantly, AI alone does not foster the independent development of professional skills.

The literature highlights numerous ethical questions surrounding AI-supported mentoring in higher education, including issues of trust, confidentiality, bias, privacy, and transparency (Köbis & Mehner, 2021). Addressing these concerns is essential for the ethical development and use of AI in mentoring. Future research should focus on developing frameworks and guidelines that ensure AI systems are used responsibly, protecting the interests and rights of mentees. This discourse seeks to raise awareness and foster an ongoing dialogue on the ethical considerations necessary for advancing AI-supported mentoring environments in higher education. The ethical perspective is particularly significant, as many students undergoing advanced suitability assessment face challenges with moral decision-making. Therefore, national guidelines and principles for the use of AI in mentoring should be established. Moreover, the extended mentoring process should prioritize the enhancement of students' critical judgment.

Limitations and Avenues for Future Research

The primary limitation of this study is the small sample size. Thus, the study can only provide a limited insight into mentors' perceptions of students' use of AI and these mentors' practices of extended mentoring in advanced suitability assessments. Given the small number of participants, the study cannot be generalized. Nevertheless, all mentors worked in different educational programs, and possessed diverse professional backgrounds, potentially offering a range of perspectives.

For future research it would be of interest to include the students' perspective on how they experience use of AI in extended mentoring. Another area of interest is to explore how AI can be used in ways that promote personal and professional development, aligning with the principles of social justice, human rights, collective responsibility, and respect for diversity.

Conclusion

In conclusion, this study highlights the challenges mentors face when students use AI in extended mentoring during advanced suitability assessments in higher education. The use of AI as a shortcut rather than a tool can hinder students' critical reflection, self-awareness, and essential competencies like communication and contextual understanding. Mentors observed that this reliance on AI negatively impacted the depth of learning, problem-solving skills, and increased dependency on technology. Additionally, ethical concerns were raised regarding the potential for AI to reinforce biases and undermine the development of key professional skills.

The findings underscore the significant impact that students' use of AI had on extended mentoring practices. There was a noticeable shift in focus within mentoring sessions, as mentors had to redirect attention from traditional developmental processes to addressing issues arising from students' reliance on AI. This shift led to enhanced ethical discussions, where mentors raised concerns about the implications of AI in students' professional growth, particularly regarding the potential for reinforcing biases, reducing critical thinking, and compromising ethical decision-making.

Mentors also had to adapt their methods to effectively integrate AI into the mentoring process, ensuring that students were encouraged to engage with the technology critically rather than relying on it as a shortcut. This required adjustments to their usual approaches in providing support and guidance, as they navigated how to best address students' over-dependence on AI while fostering their self-reflection. Additionally, the integration of AI into extended mentoring practices highlighted the need for ongoing professional development to equip mentors with the skills required to effectively guide students in an increasingly technology-driven environment. Overall, the findings suggest that AI's role in extended mentoring is complex and requires a comprehensive reevaluation of extended mentoring practices, ethical considerations, and ongoing support for mentors.

Scientific Significance

This study identifies a critical gap in existing research regarding the impact of AI on students' development of key professional competences, such as communication, contextual understanding, and problem-solving skills. It reveals that students' reliance on AI can impede their acquisition of these essential skills, which are crucial for their future professional roles. This focus on professional development in the context of advanced suitability assessments provides valuable insights for educators and policymakers aiming to balance technological advancements with the need to cultivate essential human skills. Furthermore, the study provides insight into how mentoring practices can ensure the quality of education across professions, disciplines, and traditions.

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