


Chapter 14

AI and Psychosocial Factors: Attitude, Perception, Anxiety, Learning, and Self-Regulation Skills

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ABSTRACT

Integration of AI into education has significantly influenced psychosocial factors of students (attitudes, perceptions, anxiety levels, learning motivation, and self-regulation skills). Through adaptive learning environments and personalized feedback, AI fosters positive attitudes towards learning and enhances engagement. AI mitigates learning anxiety by creating a supportive atmosphere that adapts to individual needs, enabling students to progress at their own pace. AI platforms motivate learners through gamification and interactive features, cultivating a deeper intrinsic motivation for academic pursuits. Enhanced self-regulation skills are facilitated by tools that track progress, set personalized goals, and provide timely reminders, empowering students to take control of their learning journey. However, challenges (over-reliance on AI, privacy concerns, and ensuring equitable access) need to be addressed to maximize benefits. This chapter examines multidimensional impact of AI technologies on psychosocial factors, highlighting their implications for student success and learning outcomes.

INTRODUCTION

AI systems can affect attitudes, perception, anxiety, drive to learn, and self-control in a variety of ways (Rodríguez-Ruiz et al., 2025). Through individualized support, AI can improve learning and lessen

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anxiety, but if not used carefully, it also carries the risk of increasing anxiety, causing dependence, and possibly impairing critical thinking & self-regulation (Ma et al., 2025; Mohebbi, 2025).

The increasing incorporation of AI in everyday life promises increased productivity and creativity. The foundation for AI's broad adoption is the European Commission's Trustworthy AI principles, which place a strong emphasis on data protection, security, and prudent governance. There was a correlation found between how society interpreted the influence of AI and factors including usage/acceptance, associated hazards, and trustworthiness. While supporters of AI see its revolutionary potential, those who perceive its hazards frequently have a gloomy outlook on its potential outcomes. These dispositions resonate with trust and AI's apparent singularity. Thus, public opinion is shaped by elements including perceived weaknesses, application scope, and trust, portraying AI as either a blessing or a curse for humans (Gerlich, 2023).

AI is viewed as a means of increasing overall efficiency across a range of industries, automating operations, and streamlining procedures (Waqar et al., 2024). Large volumes of data can be analyzed by AI algorithms to offer insights and facilitate improved decision-making in fields including scientific research, healthcare, and finance (Pillai, 2023). AI is being applied to medication discovery, individualized treatment planning, and early disease identification, all of which could improve patient outcomes (Abdallah et al., 2023). AI has capability to completely transform a number of industries by spurring innovation in robotics, automation, and other technologies (Dhanabalan & Sathish, 2018).

Many individuals are feeling optimistic about AI's potential to increase productivity, enhance healthcare, and tackle difficult problems (Lee & Yoon, 2021). AI-powered goods that simplify labor are already making many people's daily life easier (Dandotiya et al., 2024).

According to Cockburn et al. (2018), AI is believed to promote innovation across a variety of industries, leading to development of new products, services, and discoveries. People who have had good experiences with AI, including in customer service or healthcare, tend to view it more favorably (Ostrom et al., 2019).

Individual experiences with AI technologies, including using chatbots or virtual assistants, can affect perceptions (Wuenderlich & Paluch, 2017). The way AI is portrayed in the media, whether positively or negatively, can affect public opinion (Cui & Wu, 2021). Cultural values and beliefs can also affect how people view AI (Shin et al., 2022). Younger generations tend to be more optimistic about AI, whereas older generations may be more cautious (Barbul & Bojescu, 2023).

There are concerns like issues with data privacy, algorithmic unfairness, and potential for illegal use of AI-driven automation which could lead to significant loss of jobs, particularly in sectors that need regular, physical labor (West, 2018; Cheng et al., 2021).

Many AI systems are "black boxes," i.e. AI's decision-making process is not transparent which might lead to mistrust. Because of this, the generation of fake news through AI results in reduction in trust in media due to spread of these misleading information (Jung & Abbaszadeh, 2023; Nasiri & Hashemzadeh, 2025; Turchin & Denkenberger, 2020).

AI's potential to replace human jobs, leading to unemployment, is one of the major concerns. It also leads to ethical concern about privacy which can be influenced through cultural values, individual traits, and social norms. This concern or fear is because of ignorance, which can be resolved through increasing familiarity with AI tools (Intelligence, 2016; Hagerty & Rubinov, 2019; Walz & Firth-Butterfield, 2019; Boer & Fischer, 2013; Yadrovskaja et al., 2023; Kelly et al., 2023).

Businesses are also increasing familiarity with AI technology to update their content according to the customers, as their satisfaction is the key to their success. AI's use is not only limited to businesses,

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