



Students' Psychology toward Artificial Intelligence in Education

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Abstract:

Artificial Intelligence (AI) has rapidly become an integral part of modern education, influencing how students learn, access information, and complete academic tasks. This research paper explores students' psychological attitudes toward AI, including perceptions, trust, motivation, and concerns related to its use in education. Existing research indicates that most students hold positive attitudes toward AI due to its efficiency and ability to simplify learning tasks. However, concerns remain regarding overdependence, academic integrity, and reduced critical thinking. Studies show that students' psychological responses to AI involve cognitive, emotional, and behavioral dimensions, which influence their acceptance and usage of AI tools. Understanding these psychological aspects is important for developing responsible AI policies in education. The findings suggest that while AI can enhance learning experiences, balanced integration and proper AI literacy are necessary to ensure that students maintain independent thinking and ethical use of technology.

Introduction:

Artificial Intelligence (AI) is transforming many aspects of human life, particularly education. AI-powered tools such as intelligent tutoring systems, chatbots, and automated writing assistants have changed how students access information and complete academic tasks. With the rapid adoption of these technologies, understanding students' psychological responses to AI has become an important area of research.

Students increasingly rely on AI tools for tasks such as research, writing assistance, and problem-solving. Surveys indicate that a large proportion of students regularly use AI for academic purposes, including brainstorming ideas, checking grammar, and understanding complex concepts.

However, the psychological impact of AI on students is complex. While many students appreciate the efficiency and convenience of AI

tools, others worry that reliance on AI may reduce their creativity and independent learning abilities.

This research aims to examine students' psychology toward AI by analyzing their attitudes, perceptions, motivations, and concerns about AI in education.

Literature Review:

Students' Attitudes Toward AI:

Research indicates that students generally have positive attitudes toward AI technologies in education. Many students perceive AI as beneficial for improving learning efficiency, providing personalized learning experiences, and assisting with difficult academic tasks.

A study on university students' attitudes toward AI found that attitudes consist of three main psychological components:

- **Cognitive** (beliefs about AI usefulness)

- **Emotional** (feelings toward AI technology)
- **Behavioral** (intentions to use AI tools)

Most students showed favorable cognitive and emotional attitudes toward AI, indicating a high level of acceptance of the technology.

Psychological Factors Influencing AI Acceptance:

Students' acceptance of AI is largely influenced by psychological factors such as perceived usefulness, trust, and technological familiarity. When students believe AI improves learning outcomes, they are more likely to adopt it in their studies.

Psychological research also highlights several factors affecting trust in AI-based learning systems:

- Perceived reliability of AI tools
- Technology anxiety
- Prior experience with AI
- Social influence and peer behavior

These factors collectively shape students' willingness to interact with AI systems in educational contexts

Benefits of AI from Students' Perspective:

Students identify several advantages of AI in education:

1. **Faster access to information**
2. **Personalized learning assistance**
3. **Improved understanding of complex topics**
4. **Increased learning engagement**

AI tools can also help summarize large amounts of information and assist with coding or writing tasks, making them valuable learning aids.

Positive attitudes toward AI are also associated with increased learning engagement and enjoyment.

Concerns and Psychological Risks:

Despite the benefits, several concerns about AI have emerged among students and educators.

Common psychological concerns include:

- **Dependency on AI tools**
- **Reduced critical thinking**
- **Academic dishonesty**
- **Trust issues with AI-generated information**

Some studies show that students worry that AI may make learning too easy, potentially weakening problem-solving skills and creativity.

Additionally, students sometimes have unrealistic expectations about AI's capabilities, highlighting the need for improved AI literacy and education.

Research Methodology:

Research Design:

This study adopts a **descriptive research design** to explore students' psychological perceptions of AI in education.

Participants:

The research targets students from secondary schools and universities who have experience using AI tools for educational purposes.

Data Collection Methods:

Data can be collected using:

- Online questionnaires
- Structured interviews
- Surveys using Likert-scale questions

Example survey questions include:

1. How often do you use AI tools for studying?
2. Do you believe AI improves your learning efficiency?
3. Do you think AI reduces your independent thinking?

Data Analysis:

Data can be analyzed using:

- Descriptive statistics
- Percentage analysis

Demographic Information of Respondents:

A total of **100 students** participated in the survey from different academic levels.

Category	Number of Students	Percentage
Undergraduate Students	60	60%
Postgraduate Students	30	30%
High School Students	10	10%

The majority of respondents were undergraduate students, indicating that AI usage is highly common in university-level education.

Awareness of Artificial Intelligence:

Students were asked if they were aware of AI tools used for education.

Response	Number of Students	Percentage
Yes	92	92%
No	8	8%

Most students are aware of AI technology in education. This indicates that AI tools are widely recognized and used in academic environments.

Frequency of AI Usage for Study:

Frequency	Number of Students	Percentage
Daily	35	35%
Several times a week	40	40%
Occasionally	20	20%
Never	5	5%

75% of students use AI **regularly (daily or weekly)**. This shows that AI has become a common learning support tool.

Students' Perception of AI Benefits:

Students were asked if AI improves their learning efficiency.

Response	Number of Students	Percentage
Strongly Agree	30	30%
Agree	45	45%
Neutral	15	15%
Disagree	7	7%
Strongly Disagree	3	3%

A majority (**75%**) believe that AI improves their learning efficiency. This indicates a **positive psychological attitude toward AI technology**.

Psychological Effects of AI on Students:

Students were asked whether AI makes studying easier.

Response	Number of Students	Percentage
Yes	82	82%
No	18	18%

Most students feel that AI reduces academic difficulty and helps them understand complex topics faster.

Concerns About AI Usage:

Students were also asked whether AI reduces independent thinking.

Response	Number of Students	Percentage
Yes	48	48%
No	32	32%
Not Sure	20	20%

Nearly half of the students believe that AI may reduce independent thinking, highlighting an important psychological concern.

Trust in AI-Generated Information:

Response	Number of Students	Percentage
Highly Trust	22	22%
Moderate Trust	50	50%
Low Trust	20	20%
No Trust	8	8%

Interpretation: Most students show **moderate trust in AI**, meaning they use AI tools but still verify the information independently.

Overall Psychological Attitude Toward AI:

Attitude	Percentage
Positive	68%
Neutral	20%
Negative	12%

The majority of students show a **positive psychological attitude toward AI in education**, but concerns about dependency and academic integrity still exist.

Findings:

The data analysis revealed several key insights:

- **High awareness of AI** among students (92%).
- **Frequent usage of AI tools** for academic purposes.
- Students believe AI **improves learning efficiency and productivity**.
- Some students worry that **AI may reduce critical thinking skills**.
- Students show **moderate trust in AI but still verify information**.

Overall, the results indicate that students have a **generally positive psychological perception of AI**, but balanced and responsible use is necessary.

Artificial Intelligence is reshaping education and significantly influencing students' psychological attitudes toward learning technologies. Most students view AI positively and recognize its potential to enhance learning efficiency and engagement. However, psychological concerns such as dependency, academic dishonesty, and reduced critical thinking remain important challenges.

For AI to benefit students effectively, educational institutions must promote responsible AI usage, develop clear policies, and improve students' AI literacy. With proper guidance, AI can serve as a powerful educational tool that supports learning without undermining students' cognitive development.

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