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Impact of Artificial Intelligence on Education and Personalised Learning Through a Survey-Based Statistical Approach

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Abstract

In recent years**,** Artificial Intelligence (AI) has emerged as a transformative force in education, reshaping traditional teaching methodologies and redefining learning experiences. The integration of AI-driven technologies has introduced adaptive learning systems, intelligent tutoring platforms, automated assessment tools, and data-driven decision-making processes that aim to enhance personalisation and learning efficiency. However, alongside these advancements, important questions arise regarding the wide-ranging, social, and ethical implications of AI adoption in educational settings.

This study examines the impact of Artificial Intelligence on education and personalised learning through a survey-based statistical approach. Primary data were collected from higher education students using a structured questionnaire to assess awareness, usage patterns, perceived effectiveness, and concerns related to AI tools in learning environments. Descriptive statistical methods, including percentage analysis and measures of central tendency, were employed to interpret the data. The findings indicate that AI technologies are widely recognised for their ability to improve learning flexibility, conceptual understanding, and individualised academic support. Respondents reported that AI-assisted platforms contribute to enhanced engagement and self-paced learning. At the same time, concerns were expressed regarding over dependence on AI systems, academic integrity, reduced human interaction, and data privacy issues.

The study highlights that while AI has significant potential to revolutionize personalized learning and improve educational accessibility, its successful integration requires responsible implementation, ethical administration, and alignment with pedagogical objectives. The paper concludes by emphasising the need for balanced human-AI collaboration in education and suggests directions for future research focusing on inclusive adoption, policy frameworks, and long-term learning outcomes.

Keywords: Artificial Intelligence (AI), Personalised Learning, Educational Technology,Adaptive Learning Systems, AI Usage Frequency, Survey-Based Study, Learning Analytics.

Introduction

In recent years, Artificial Intelligence (AI) has become a regular part of everyday life. From mobile apps and virtual assistants to recommendation systems and automated services, AI is now used by people almost daily. Its impact is not

limited to industries such as healthcare, finance, or business; it is also changing how education works. Students, teachers, and working professionals are increasingly using AI-based tools for learning, communication, and improving productivity.

The use of AI in education has opened new opportunities for improving teaching and learning methods. Traditional education usually follows a common teaching approach where the same content is delivered to all students, even though their learning speed and understanding levels may differ. AI-based systems, however, allow more personalised learning. Through adaptive platforms, intelligent tutoring systems, and automated feedback, students can receive support according to their individual needs. This shift toward personalised learning is bringing noticeable changes in educational practices.

At the same time, the growing use of AI tools has increased dependence on technology. Many students use AI applications to complete assignments, understand difficult topics, generate ideas, and organise study materials. In workplaces, AI is used for drafting content, analysing information, and supporting decisions. While these tools improve efficiency and make learning easier, they also raise important concerns. For example, does frequent use of AI reduce independent thinking? Does it improve real understanding, or does it create over-dependence? These questions need proper examination.

Although many studies discuss the advantages of AI in education, fewer studies focus on how users actually experience and perceive its impact in real learning situations. Since AI tools are becoming more common in academic life, it is important to study how they influence personalised learning and overall academic development.

Therefore, this study aims to examine the impact of Artificial Intelligence on education and personalised learning using a survey-based quantitative approach. By collecting responses from students and working individuals and analysing the data using statistical methods, the research seeks to understand usage patterns, perceived benefits, confidence levels, and concerns related to AI. The findings of this study are expected to provide practical insights into how AI is shaping modern education and how its role may continue to grow in the future.

Scope of the Study : This study focuses on understanding how Artificial Intelligence (AI) is affecting education and personalised learning. It mainly examines how students and working individuals use AI tools in their daily academic and professional activities.

The research looks at how AI helps in improving learning, increasing confidence, and supporting personalised study. At the same time, it also studies possible negative effects, such as whether too much use of AI may reduce independent thinking or critical thinking ability.

The study is based only on the responses collected through a survey questionnaire. It reflects the opinions and experiences of the selected respondents. It does not measure actual academic performance or long-term impact.

The analysis is limited to statistical methods such as mean, standard deviation, t-test, correlation, and ANOVA. The study does not include experimental research or long-term tracking of students.

Objectives

The Objectives of this research are

To examine whether respondents significantly perceive that Artificial Intelligence improves learning efficiency in education.

To examine whether there exists a significant relationship between the frequency of AI usage and the perceived impact on learning.

To examine whether there is a significant difference in perceived learning impact of AI between undergraduate and postgraduate students.

To examine whether the perceived learning impact of Artificial Intelligence differs significantly across different levels of AI usage frequency.

To examine whether Artificial Intelligence significantly increases students' academic confidence.

To examine whether Artificial Intelligence significantly reduces students' critical thinking ability.

Hypothesis

The Hypothesis of this research are

Hypothesis 1 (H1): Perceived Impact of AI on Learning Efficiency.
Hypothesis 2 (H2): Relationship Between AI Usage Frequency and Learning Impact
Hypothesis 3 (H3): Difference in Learning Impact Based on Level of Study.
Hypothesis 4 (H4): Difference in Learning Impact Across AI Usage Frequency Groups
Hypothesis 5 (H5): Impact of AI on Academic Confidence
Hypothesis 6 (H6): Impact of AI on Critical Thinking Ability

Literature Review

Artificial Intelligence in Education

AI has now become a very important part of our modern education system. The role of AI in education is described by many researchers worldwide. The use of machine learning algorithms, data analytics and natural language processing, which support teaching, learning and administrative functions are also identified by the researchers in the field of education. Computer-assisted instructions and their early developments laid the foundation for these AI-driven teaching and learning systems, but the recent developments in predictive modelling and data processing have also expanded their capabilities

Now the main topic of discussion is about its utilisation. The technological potential is widely acknowledged, but scholars are emphasising the significance of understanding how these systems can affect the actual learning behaviour rather than just relying on theoretical benefits only.

Personalised Learning and Adaptive Systems

Personalised learning has become a key goal when using AI in education. In traditional classrooms, everyone is given the same syllabus and the same learning style. But personalised learning is about adapting the learning content, teaching methods, and pace of learning according to the ability, needs, and learning speed of each student.

AI-based adaptive learning platforms use student data — such as quiz scores, time taken to answer questions, and interest in learning — to modify learning content in real time. Intelligent Tutoring Systems (ITS) are one of the most widely studied AI applications in personalized learning. They act like a personal tutor, providing explanations, hints, and feedback specifically to each student.

Research shows that such personalised AI systems can improve student engagement and academic performance by identifying and addressing individual learning gaps. Additionally, learning difficulty is adjusted to the student's level, reducing frustration and stress. However, some researchers argue that too much personalisation can reduce students' exposure to diverse ideas and opinions, and reduce opportunities for collaborative learning.

Learning Analytics and Data-Driven Decision Making

EDM, i.e., Educational Data Mining and Learning Analytics, strengthened the further role of AI in education. This involves collecting and analysing data of students to optimise learning environments. AI algorithms are able to process very large volumes of academic data to detect recent trends, outcome prediction, and suggest interventions.

Data-driven systems are known to improve decision-making at both the student level as well as institutional level. Many studies have already indicated this. For example, to improve retention rates, predictive analysis can be used, which can identify students who require academic support. And using these data insights, educators can adjust instructional strategies. Now the advantages are fine, the main concerns are regarding data privacy and ethical data use. These will remain the important issues. Requirements for transparent algorithms and responsible data governance are the need of the hour.

Benefits of AI in Education

Existing research suggests that using AI in education can have several important benefits:

Interactive learning systems increase student engagement — game-like activities, quizzes, and immediate feedback make learning more engaging.
Real-time feedback — students can see their mistakes and progress immediately, so they can improve faster.
A flexible and accessible learning environment — time and place constraints are reduced; students can learn at their convenience.

Reduced administrative workload — tasks such as marking, data management, and report preparation are made easier with the help of AI, so teachers can focus more on teaching.
Improved academic performance through targeted interventions — individual student weaknesses can be identified and specific help can be provided.
AI tools support remote (distance learning) and hybrid (online + offline) learning models, making education accessible to more people without barriers such as geographical distance.
This has proven particularly important during the COVID-19 era, as digital learning systems have rapidly proliferated as educational institutions around the world have been closed, with technologies including AI playing a major role in enabling learning to continue.

Challenges and Ethical Considerations

While AI (artificial intelligence) gives many benefits in education, research also points to some major challenges.

Ethical concerns include:

Algorithmic bias — if the data used by AI systems is biased, some students may receive unfair results.

Unequal access to technology — not all students have the same access to devices or the internet, which can create inequalities in education.

Data security risks — the risk of students' personal information being leaked.

Overreliance on automated systems — the threat of reduced human interaction.

Some scholars say that overreliance on AI tools may reduce students' critical thinking and independent problem-solving skills. In addition, the changing role of teachers in AI-powered classrooms is still a topic of debate. However, most studies suggest that AI is not intended to replace teachers; Rather, it should serve as a supporting tool that strengthens the teacher's teaching skills.

Research Gap

The theoretical potential as well as the technical capabilities of Artificial Intelligence in the education sector have already discussed extensively in many of the previous studies, but very limited focus has been given on users' dependency patterns and real-life perceptions.

Many existing studies are mainly conceptual reviews or experiments conducted in controlled settings. That is, there is little direct evidence about how people use AI in real-life situations. Therefore, there is a great need for empirical, survey-based studies that examine how students and working individuals use AI tools in education and everyday life.

Understanding users' opinions and attitudes towards AI, frequency of use (how often they use it), perceptions of whether they feel they are improving their learning, and concerns about AI dominance will provide practical knowledge about the long-term impact of AI.

Therefore, this research work aims to address this gap by conducting a quantitative survey-based statistical analysis that evaluates the impact of AI on personalised learning and education.

Research Methodology

The present study adopts a quantitative research design to examine the impact of Artificial Intelligence (AI) on education and personalised learning. Data was collected through a structured online questionnaire prepared using Google Forms. The survey included questions related to AI usage frequency, perceived improvement in learning, academic confidence, personalised learning experience, and concerns regarding critical thinking. Most of the responses were measured using a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree. A total of 233 responses were collected from undergraduate students, postgraduate students, and working individuals using a convenience sampling method. The collected data were analysed using statistical tools such as mean, standard deviation, one-sample t-test, independent

sample t-test, correlation analysis, and one-way ANOVA. The level of significance for hypothesis testing was fixed at 0.05. The study mainly focuses on analysing respondents' perceptions and usage patterns of AI in education and does not measure actual academic performance or long-term behavioural impact.

Data Analysis and Discussion

For the analysis and findings, data from 233 individuals belonging to different streams, colleges, regions, and age groups was collected using a Google Form based on structured questionnaires. The responses were measured mainly on a five-point Likert scale and processed for statistical evaluation.

Various statistical techniques were applied to examine the objectives of the study. Descriptive statistics such as mean and standard deviation were used to understand overall response patterns. Inferential tests including one-sample t-test, independent sample t-test, correlation analysis, and one-way ANOVA were conducted to test the formulated hypotheses and examine differences and relationships among variables.

The findings highlight a generally positive perception of AI in enhancing learning and academic confidence, while also reflecting moderate concern regarding its possible influence on critical thinking. The results provide a balanced understanding of how AI is being experienced across diverse groups of learners.

Hypothesis 1

Formation of Hypothesis

Null Hypothesis (H_0): There is no significant difference between the neutral value and the observed mean perception of AI improving learning efficiency.

$$H_0: \mu = 3$$

Alternative Hypothesis (H_1): Respondents significantly perceive that AI improves learning efficiency.

$$H_1: \mu > 3$$

Level of significance:

$$\alpha = 0.05$$

Statistical Test Used

A One-Sample t-test was applied to determine whether the sample mean differs significantly from the neutral midpoint value (3).

This test is appropriate because:

- The data is numerical (Likert responses converted to scale 1–5)
- Population standard deviation is unknown
- Sample size is sufficiently large (n = 233)
- The objective is to compare one sample mean with a test value

Statistic	Sample Size (n)	Mean (M)	Standard Deviation (SD)	Test Value (μ_0)
Value	233	3.695	0.99	3

The mean score of 3.695 indicates that respondents generally lean toward agreement that AI improves learning efficiency.

The t-statistic is calculated using:

$$t = \frac{\bar{x} - \mu_0}{s/\sqrt{n}}$$

Substituting the values:

$$t = \frac{3.695 - 3}{0.990/\sqrt{233}}$$

t =10.72

Degrees of freedom: $df = 233 - 1 = 232$

p-value: $p = 4.8228 \times 10^{-22}$

Decision Rule

If $p < 0.05 \rightarrow$ Reject H_0

Since:$4.8228 \times 10^{-22} < 0.05$

The null hypothesis is rejected at the 5% level of significance.

Interpretation of Results

The results indicate that the mean perception score (M = 3.695, SD = 0.99) is significantly higher than the neutral midpoint value of 3, $t(232) = 10.72, p < 0.05$.
The 95% confidence interval for the mean difference ranges from 0.567 to 0.823, indicating that the true population perception is consistently above the neutral value.
This suggests that respondents have a statistically significant positive perception regarding the effectiveness of Artificial Intelligence in improving learning efficiency.

Effect Size (Practical Significance)

Cohen's d was calculated to measure the magnitude of the effect:

$$d = \frac{\bar{x} - \mu_0}{s}$$
$$d = \frac{3.695 - 3}{0.99} = .70$$

According to Cohen's guidelines:

.2 = Small

.5 = Medium

.8 = Large

The effect size of .70 indicates a moderate-to-strong practical impact.

Conclusion of Hypothesis 1

Based on the statistical analysis, there is sufficient evidence to conclude that respondents significantly perceive Artificial Intelligence as enhancing learning efficiency in education.

Hypothesis 2

Formation of Hypothesis

Null Hypothesis (H_0): There is no significant relationship between AI usage frequency and perceived learning impact.

$$H_0: \rho = 0$$

Alternative Hypothesis (H_1): There is a significant positive relationship between AI usage frequency and perceived learning impact.

$$H_1: \rho > 0$$

Level of significance:

$$\alpha = .05$$

Statistical Test Applied

Pearson's Product-Moment Correlation Coefficient was employed to assess the strength and direction of the linear relationship between:

AI Usage Frequency (converted to a numerical scale: 0 = Never to 4 = Daily)

Overall Learning Impact Score

The test is appropriate as both variables are continuous (treated as interval-scale for statistical analysis) and the sample size is sufficiently large (n = 233).

Test Results

The Pearson correlation coefficient was found to be:

$$r = .0690$$

The corresponding p-value was:

$$p = .293$$

Since the p-value is greater than the significance level (.05), the null hypothesis is not rejected.

Interpretation

The computed correlation coefficient indicates a very weak positive association between AI usage frequency and perceived learning impact. However, the relationship is not statistically significant.

This suggests that increased frequency of AI usage alone does not significantly predict higher perceived learning benefits among respondents.

Conclusion

It can be concluded that, within the present sample, AI usage frequency does not have a statistically significant linear relationship with overall perceived learning impact.

Hypothesis 3

Formation of Hypothesis

Null Hypothesis (H_0): There is no significant difference in perceived learning impact between undergraduate and postgraduate students.

$$H_0: \mu_1 = \mu_2$$

Alternative Hypothesis (H_1): There is a significant difference in perceived learning impact between undergraduate and postgraduate students.

$$H_1: \mu_1 \neq \mu_2$$

Level of significance:

$$\alpha = .05$$

Statistical Test Applied

An Independent Samples t-test was conducted to compare the mean Overall Learning Impact scores between:

Undergraduate students (n = 216)

Postgraduate students (n = 17)

The Overall Learning Impact score was computed as the mean of responses to Q5–Q13.

Test Results

The calculated t-statistic was:

$$t = -1.276$$

The corresponding p-value was:

$$p = .203$$

Since the p-value is greater than the significance level (.05), the null hypothesis is rejected at the 5% level of significance.

Interpretation

The results indicate that there is no statistically significant difference in perceived learning impact of AI between undergraduate and postgraduate students.

Although postgraduate students reported slightly higher mean scores, the difference is not statistically significant, possibly due to the small postgraduate sample size (n = 17).

Conclusion

It can be concluded that level of study does not significantly influence the perceived impact of Artificial Intelligence on learning within the present sample.

Hypothesis 4

Formation of Hypothesis

Null Hypothesis (H_0): There is no significant difference in mean learning impact scores across AI usage frequency groups.

$$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$$

Alternative Hypothesis (H_1): At least one group mean differs significantly.

$$H_1: \text{At least one } \mu_i \neq \mu_j$$

Level of significance:

$$\alpha = .05$$

Statistical Test Applied

A One-Way Analysis of Variance (ANOVA) was conducted to compare the mean Overall Learning Impact scores across five AI usage categories:

Never

Rarely

Occasionally

Weekly

Daily

The dependent variable was the Overall Learning Impact Score

Test Results

The group mean scores were as follows:

Table No. 1

Pattern	Daily	Occasionally	Weekly	Rarely	Never
Mean	3.76	3.62	3.70	3.47	3.94

Although minor differences are observed in the mean values, statistical testing is required to determine whether these differences are significant.

The ANOVA test yielded:

$$F = 0.440$$
$$p = 0.779$$

Since the p-value is greater than the significance level (0.05), the null hypothesis is not rejected.

Effect Size (η^2)

The effect size for the ANOVA test was estimated using eta-squared (η^2). The value was found to be $\eta^2 = 0.007$, indicating a very small practical effect. This suggests that differences in perceived learning impact across AI usage frequency groups are negligible in practical terms.

Interpretation

The results indicate that there is no statistically significant difference in perceived learning impact across different AI usage frequency groups.

Although respondents who reported "Never" using AI showed a relatively higher mean score, the variation across groups is not statistically significant. This suggests that frequency of usage alone does not significantly influence perceived learning impact.

Conclusion

It can be concluded that differences in AI usage frequency do not significantly affect the overall perceived learning impact among respondents.

Hypothesis 5

Formation of Hypothesis

Null Hypothesis (H_0): AI does not significantly increase academic confidence.

$$H_0: \mu = 3$$

Alternative Hypothesis (H_1): AI significantly increases academic confidence.

$$H_1: \mu > 3$$

Level of significance:

$$\alpha = .05$$

Statistical Test Applied

A One-Sample t-test was conducted to compare the mean confidence score (Q12: "AI increases my confidence in learning") with the neutral midpoint value of 3.

Sample size:

$$n = 233$$

Test Results

The descriptive statistics were as follows

Table No. 2

Mean (M)	Standard Deviation (SD)	Sample Size (n)
3.635	1.03	233

The calculated t-statistic was:

$$t(233) = 9.377$$

The corresponding p-value was:

$$p = 6.338 \times 10^{-18}$$

Since the p-value is less than the significance level (0.05), the null hypothesis is rejected at the 5% level of significance.

Interpretation

The results indicate that the mean confidence score is significantly greater than the neutral value. This suggests that respondents perceive AI as significantly enhancing their academic confidence.

The relatively large t-value indicates strong statistical evidence supporting the positive influence of AI on students' confidence levels

Effect Size

To examine the magnitude of this effect, Cohen's d was calculated. The resulting value (d = 0.62) indicates a moderate practical effect, suggesting that the influence of AI on academic confidence is not only statistically significant but also meaningful in practical learning contexts.

Conclusion

It can be concluded that Artificial Intelligence has a statistically significant positive impact on students' academic confidence.

Hypothesis 6

Formation of Hypothesis

Null Hypothesis (H_0): Artificial Intelligence does not significantly reduce students' critical thinking ability.

$$H_0: \mu = 3$$

Alternative Hypothesis (H_1): Artificial Intelligence significantly reduces students' critical thinking ability.

$$H_1: \mu > 3$$

Level of significance:

$$\alpha = .05$$

Statistical Test Applied

A One-Sample t-test was conducted to compare the mean response score of Q15 ("AI reduces my critical thinking ability") with the neutral midpoint value of 3.

Sample size:

$$n = 233$$

The mean value is slightly above the neutral midpoint, indicating a tendency toward agreement.

Test Results

The descriptive statistics were as follows:

Table No. 3

Mean (M)	Standard Deviation (SD)	Sample Size (n)
3.227	1.13	233

The calculated t-statistic was:

$$t(233) = 3.048$$

The corresponding p-value was:

$$p = .0025$$

Since the p-value is less than the significance level (0.05), the null hypothesis is rejected at the 5% level of significance.

Interpretation

The results indicate that the mean score is significantly greater than the neutral value. This suggests that respondents perceive that AI may reduce their critical thinking ability to some extent.

Although the mean is not very high, the result is statistically significant, indicating a measurable concern regarding overdependence on AI tools.

Effect Size

Cohen's d was also computed to evaluate the magnitude of the observed effect. The value obtained (d = 0.20) indicates a small practical effect, suggesting that although the concern regarding reduced critical thinking is statistically significant, the practical impact may be relatively modest.

Conclusion

It can be concluded that Artificial Intelligence has a statistically significant perceived impact on reducing critical thinking ability among respondents.

Findings

Artificial Intelligence and Learning Improvement

The statistical analysis of 233 responses shows that Artificial Intelligence has a positive influence on learning efficiency. A considerable number of respondents agreed that AI tools assist them in understanding complex topics, organising study materials, and completing academic tasks more effectively. The average score was significantly higher than the neutral midpoint, demonstrating clear support for AI-assisted learning.
These results reflect the growing role of AI as an active academic support system within the learning process.

Frequency of AI Usage and Academic Impact

Although AI tools are commonly used among participants, the correlation analysis did not establish a statistically significant relationship between usage frequency and perceived learning improvement. This means that increased usage alone does not automatically result in higher academic benefit.
The outcome highlights that the effectiveness of AI depends more on purposeful and structured use rather than simple frequency of access.

Educational Level and Perception Differences

The comparison between undergraduate and postgraduate students did not reveal any statistically significant difference in their perception of AI's educational impact. Both groups reported similar views regarding its usefulness and contribution to learning activities.

This observation reflects a consistent experience of AI integration across different academic levels.

Usage Category Differences

When respondents were grouped according to AI usage frequency (daily, weekly, occasionally, rarely, and never), no statistically significant variation was observed in their overall learning impact scores.
The similarity across categories demonstrates that perceptions of AI-supported learning remain stable regardless of usage pattern.

Artificial Intelligence and Academic Confidence

The findings confirm that AI plays a meaningful role in enhancing academic confidence. Many respondents acknowledged that AI tools help them complete assignments accurately, resolve doubts efficiently, and feel better prepared academically. The statistical evidence supports the view that AI contributes positively to students' confidence levels in learning environments.

Artificial Intelligence and Critical Thinking Concerns

While AI is appreciated for its convenience and efficiency, the analysis also identified a statistically significant concern regarding its possible influence on critical thinking ability. Several respondents expressed that excessive reliance on AI may affect independent reasoning and problem-solving skills.
This aspect introduces a balanced perspective, emphasising the importance of mindful and controlled use of AI tools in education.

Statistical Significance and Practical Significance

While several findings in the present study were found to be statistically significant, it is important to distinguish between statistical significance and practical significance. Statistical significance indicates that the observed patterns in the data are unlikely to have occurred by chance, whereas practical significance reflects the magnitude or real-world importance of the effect. In some cases, such as the perceived reduction in critical thinking ability, the statistical test indicated significance, but the effect size suggests that the practical influence may be relatively modest. Therefore, the results should be interpreted with careful consideration of both statistical evidence and practical implications.

Overall Interpretation

Taken together, the findings portray Artificial Intelligence as a supportive educational tool that enhances learning efficiency and academic confidence across diverse groups. At the same time, the presence of concern regarding overdependence highlights the necessity of responsible and guided integration.

The overall pattern reflects a balanced understanding: AI strengthens personalised learning, yet its implementation must preserve independent analytical thinking.

Conclusion

Changing Educational Landscape

The study reflects the growing integration of Artificial Intelligence within the educational ecosystem. AI is no longer limited to experimental or theoretical discussions; it has become part of daily academic practices among students and working individuals. The overall pattern of responses suggests that learners are actively engaging with AI tools as part of their study routines.

Supportive Role in Learning

The overall evidence from the study highlights AI as a supportive mechanism in academic environments. It contributes to smoother access to information, quicker clarification of doubts, and improved task management. The perception of AI as a learning assistant rather than a replacement for traditional teaching methods appears consistent among respondents.

Uniform Experience Across Groups

An important observation of the study is that perceptions regarding AI are relatively consistent across different educational levels and usage categories. This indicates that AI-based tools are influencing learners in a broadly similar manner, regardless of academic background or frequency of usage.

Need for Balanced Integration

Despite the recognised advantages, the study also reflects a cautious awareness among respondents. The concern that excessive dependence may influence independent reasoning suggests the need for mindful and structured use of AI tools. Educational systems must ensure that AI enhances learning without weakening analytical thinking abilities.

Concluding Perspective

Overall, the study presents a balanced understanding of Artificial Intelligence in education. AI is viewed as an enabling technology that supports personalised learning and academic development. However, its long-term effectiveness depends on responsible implementation, ethical awareness, and the continued importance of human guidance in the learning process.

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