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# Promoting the Effective Use of AI in Learning: A Smart Student's Perspective at Karl Kumm University, Vom

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## Abstract

Artificial intelligence (AI), with its capacity to support individualized learning, efficient research, and enhanced academic productivity, has become a disruptive force in higher education. However, limited understanding, low levels of digital literacy, and ethical concerns prevent many students from harnessing AI effectively. This study examines strategies for promoting the efficient and responsible use of AI in education from the perspective of "smart students" at Karl Kumm University, Vom. Using a mixed-methods design, data were collected from 200 undergraduate students through surveys and interviews to explore AI awareness, adoption patterns, perceived benefits, and perceived challenges. The findings indicate that students recognize AI's potential to improve learning and engagement, yet its optimal use is constrained by inadequate technical skills, fears of over-reliance, and unresolved ethical issues. The study proposes practical interventions, including mentorship schemes, curriculum integration, structured training programs, and clear ethical use guidelines, to foster more responsible and effective adoption of AI in learning. Overall, the results provide actionable insights for higher education institutions


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seeking to leverage AI to improve academic outcomes and to cultivate an innovative, self-directed learning culture by enabling students to become discerning and competent AI users.

**Keywords**: Artificial Intelligence in Education; Higher Education; Learning Strategies; Digital Literacy; Student Perceptions.

## Introduction

Globally, artificial intelligence (AI) is drastically changing the educational landscape. Personalized learning, increased productivity, and better academic results are made possible by AI technologies, which range from intelligent tutoring systems and adaptive learning platforms to AI-driven research assistants (Luckin et al., 2016; Holmes et al., 2019). By analyzing student performance, identifying learning gaps, and offering customized content, these technologies allow students to interact with learning materials in a way that best suits their unique needs.

Adoption of AI in higher education has been linked to improved academic management, research, and assessment efficiency. For instance, students can enhance their writing, come up with ideas, and confirm originality with the aid of AI technologies like Grammarly, ChatGPT, and plagiarism checkers. According to Baker and Siemens (2014), learning analytics platforms offer insights into student performance and engagement, enabling students to monitor their progress and make well-informed study strategy decisions.

Despite these benefits, a lack of understanding, inadequate training, and ethical concerns cause many students to underuse AI. Students' adoption of AI is still in its early stages in Nigeria, even at schools like Karl Kumm University and Vom, and there are still many unexplored prospects for strategic promotion and organized guidance. In this setting, the idea of the "smart student," who actively works to maximize learning through accessible technologies, is especially pertinent. In order to improve learning outcomes, manage time effectively, and acquire skills essential for the current workforce, astute students can make good use of AI tools.

## Karl Kumm University, Vom's Context

Karl Kumm University, Vom is a new university dedicated to academic innovation and achievement. Although the institution gives students access to digital learning materials,

there is still little use of AI in the classroom. The majority of students have access to AI-powered writing, research, and study management tools, but their use is frequently irregular or cursory. Interventions that encourage students to use AI in an organized, responsible, and efficient manner are obviously needed in order to improve their academic success and develop their critical thinking and problem-solving abilities.

**Significance of the study**

There are several advantages to encouraging students to use AI effectively:

•Improved Learning Outcomes: AI can offer tailored assistance, assisting students in grasping difficult ideas and enhancing their performance.

•Efficiency and Productivity: AI systems help with time management, organizing, and research.

•Skill Development: By fostering digital literacy and critical thinking, effective AI use equips students for today's workforce.

•Innovation Culture: Promoting responsible AI adoption among students encourages creativity and proactive learning practices.

In order to overcome obstacles and encourage the best use of AI technologies, this study intends to investigate the tactics that intelligent students at Karl Kumm University, Vom can use to successfully integrate AI into their learning processes.

**Research Gap**

There is little study on student-centered AI adoption in Nigerian universities, especially in developing schools like Karl Kumm University, Vom, despite the fact that research from around the world emphasizes the advantages of AI in education. The majority of research focuses on institutional acceptance or AI applications in teaching, ignoring the viewpoint of students and useful tactics for encouraging successful use. By offering practical insights from the viewpoint of students themselves, this study closes this gap and positions them as proactive learners who can promote AI adoption and optimize its advantages.

**Objective of the study (briefly reiterated in the introduction)**

•to evaluate students' knowledge of and attitudes toward AI in education.

•to determine obstacles and difficulties that students have when using AI effectively.

- to suggest tactics for encouraging the appropriate and successful deployment of AI.
- to assess how AI might help intelligent students both personally and academically.

## Literature Review

Topic: *Promoting the Effective Use of Artificial Intelligence in Learning: A Smart Student's Perspective at Karl Kumm University, Vom*

In order to give a thorough grasp of AI in education both internationally and in Nigeria, as well as the benefits and drawbacks for students and methods for encouraging its effective use, this literature review is broken up into smaller sections.

### AI in Education from a Global Perspective

Globally, artificial intelligence (AI) has drastically changed educational systems. Adaptive tests, intelligent tutoring programs that react to students' requirements instantly, and tailored learning experiences are all made possible by AI technology (Luckin et al., 2016). AI tools are utilized extensively worldwide to boost academic productivity, including:

- Intelligent Tutoring Systems (ITS): Websites such as Carnegie Learning offer customized math training based on student replies and learning speed.
- Learning Analytics: Artificial intelligence (AI) algorithms examine student performance and engagement data, giving teachers and students insights to maximize learning tactics (Siemens & Baker, 2012).
- Natural Language Processing Tools: Programs like Grammarly and ChatGPT improve students' academic abilities by helping them with writing, research, and idea production.
- AI for Student Support: University chatbots offer prompt answers to questions about assignments, enrollment, and due dates.

According to research, when used properly, AI improves learning outcomes, motivation, and engagement (Holmes et al., 2019). However, academic integrity and critical thinking may suffer if AI is abused or overused.

### The Use of AI in Nigerian Education

Adoption of AI at Nigerian universities is still in its infancy. According to studies, the majority of educational institutions have access to digital learning materials, but there is

still little use of AI in instruction (Adeyemo & Ogunyemi, 2021). Among the difficulties are:

•Inadequate Infrastructure: To support AI technology, many institutions lack sufficient digital infrastructure.

•Digital Literacy Gaps: Teachers and students might not have the technical know-how to use AI products efficiently.

•Ethical Concerns: Adoption is hampered by problems like plagiarism, data privacy, and an excessive dependence on AI.

•Awareness and Training Deficits: Students frequently lack knowledge about AI technologies and how to make the best use of them.

Nigerian students are using AI more and more for writing, research, and study planning in spite of these obstacles. Strategic AI integration can improve academic achievement, digital literacy, and employability skills, particularly for students at cutting-edge universities like Karl Kumm University, Vom.

**AI's Benefits for Students**

When used properly, AI has several advantages:

**Tailored Education**

AI provides customized learning experiences that improve comprehension and retention by adjusting to each student's unique demands. Students can focus on areas that need development while moving at their own pace thanks to tools like adaptive learning platforms (Luckin et al., 2016).

**Productivity and Time Management**

AI tools assist students with time management, task scheduling, and assignment prioritization. For example, procrastination is decreased and productivity is increased with AI-based calendar apps and project management systems (Holmes et al., 2019).

**Assistance with Research and Writing**

AI-powered tools help students with research, academic subject summaries, idea generation, and grammar and plagiarism checks. This guarantees academic integrity and speeds up the research process.

**Development of Skills**

Utilizing AI effectively improves critical thinking, problem-solving, and digital literacy—all of which are essential for the workforce of the twenty-first century. Students gain knowledge in responsible analysis, interpretation, and application of AI-generated insights.

**Motivation and Involvement**

By offering dynamic and flexible learning opportunities, gamified AI platforms and intelligent learning systems boost student motivation and engagement.

**AI's Drawbacks and Difficulties for Students**

Even while AI has many advantages, using it improperly or relying too much on it might cause problems:

- Overdependence: Students may rely on AI to provide answers without exercising critical thought, which would diminish the depth of their learning.
- Ethical Concerns: Misuse of AI-generated information and plagiarism are common problems (Daher & Pinsonneault, 2020).
- Digital Literacy Gaps: Students who are not familiar with AI technologies may not be able to use them efficiently, which could result in underutilization or frustration.
- Accessibility Issues: Equitable deployment of AI is hampered by limited access to dependable equipment or the internet.
- Data Privacy Risks: If AI platforms are not used properly, students' personal and academic data may be at risk.

**Models of AI Adoption in Education**

AI adoption among students is frequently studied using the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM):

- TAM: Postulates that adoption is influenced by perceived utility and perceived ease of use. If students think AI is simple to use and enhances learning results, they are more inclined to use it (Davis, 1989).
- UTAUT: Incorporates elements such as behavioral aim, conducive conditions, and social

impact. Student adoption of AI tools is heavily influenced by institutional support and peer recommendation (Venkatesh et al., 2003).

The study's hypothesis that "smart students" embrace AI when they see its obvious advantages, possess the necessary skills, and work in a supportive setting is supported by these models.

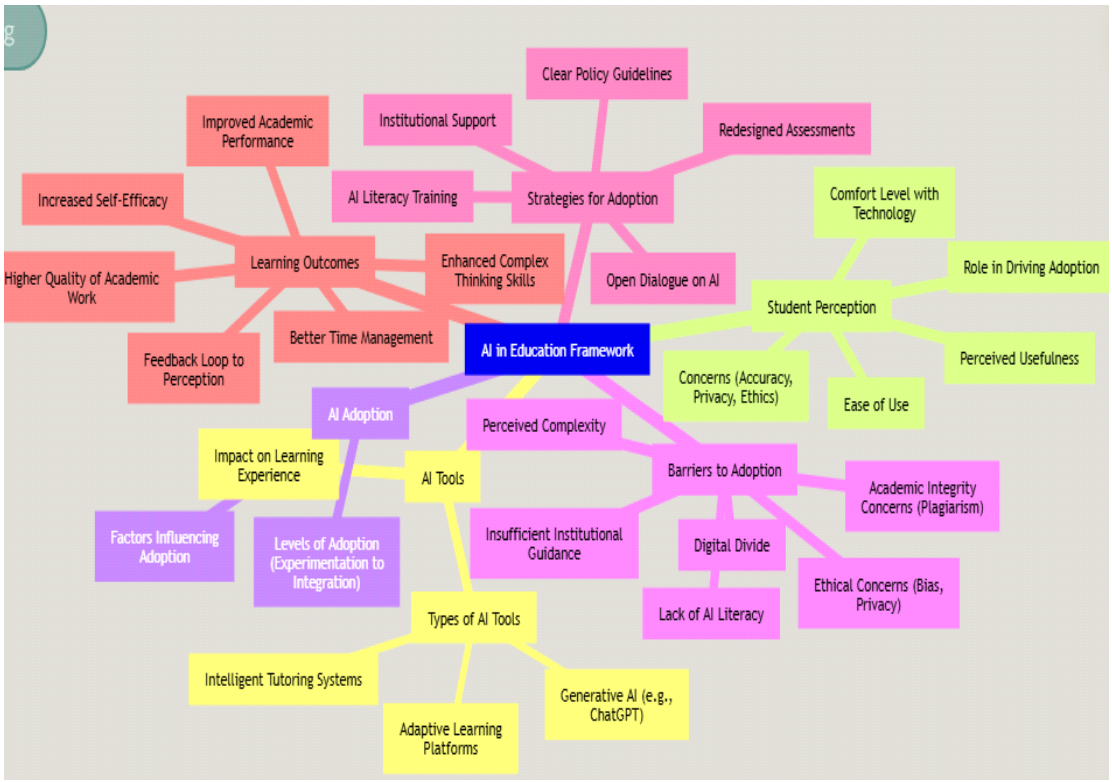



*Fig1: Illustrates the central role of AI Tools and how they influence Student Perception, leading to AI Adoption, which is both challenged by Barriers and supported by Strategies, ultimately impacting Learning Outcomes in a cyclical manner.*

**Techniques for Encouraging Students to Use AI Effectively**

In the framework of Karl Kumm University, Vom, a number of solutions that have been discovered globally can be implemented:

•AI Literacy Programs: Training sessions and workshops to develop AI usage skills.

•Integrating AI tools into assignments, research projects, and classroom activities is known as curriculum integration.

•Peer learning and mentoring: Encouraging intelligent students to assist peers in embracing

AI.

•Guidelines and Ethical Training: Encouraging the ethical and responsible application of AI to avoid plagiarism and abuse.

•Accessible Resources and Tools: To guarantee fair access, AI tools should be made available for free or at a reduced cost.

•Gamified AI Platforms: Using interactive and adaptive AI systems to promote participation.

**Literature Gaps**

There is still a dearth of student centered research in Nigerian universities, particularly in smaller establishments like Karl Kumm University, Vom, despite the fact that AI in education has been extensively studied worldwide. The majority of research ignores the practical viewpoint of students as astute AI users in favor of focusing on teacher adoption, institutional AI integration, or theoretical applications. In order to close this gap, this study suggests methods for encouraging students to utilize AI responsibly and effectively, putting them in a position to actively participate in AI-driven learning.

**Summary**

According to the literature, AI has a lot to offer students in terms of engagement, productivity, skill development, and customisation. Effective adoption is hampered by concerns including overreliance, moral dilemmas, low literacy, and accessibility obstacles. Perceived utility, usability, and environmental support are important factors that influence the adoption of AI, according to global adoption models such as TAM and UTAUT. Universities like Karl Kumm University, Vom can enable students to become intelligent learners who successfully use AI tools for academic success by putting these findings into practice and emphasizing student-centered solutions.

**Theoretical Framework**

Two fundamental hypotheses that are frequently used in educational technology research serve as the foundation for this study:

•Model of Technology Acceptance (TAM)

•Theory of Student-Centered Learning (SCLT)

These frameworks support the claim that Karl Kumm University, Vom students can develop into intelligent users of artificial intelligence (AI) if they see its value, find it simple to use, and work in a supportive learning environment where they are in charge of directing their own educational experiences.

**Technology Acceptance Model (TAM):**

Developed by Davis (1989), TAM explains how users come to accept and use technology. It proposes two major determinants:

•**Perceived Usefulness (PU):** The degree to which a student believes that using AI will improve academic performance, simplify tasks, and enhance productivity;

•**Perceived Ease of Use (PEOU):** The degree to which a student believes that using AI tools requires minimal effort and technical skills.

In the context of Karl Kumm University, Vom, or AI search engines.

According to TAM, students' behavioral desire to use AI is stronger when PU and PEOU are high, leading to consistent and responsible adoption. TAM is appropriate for this study since it clarifies why some students successfully adopt AI while others abuse or completely reject it.

**Student-Centered Learning Theory (SCLT):**

Students are no longer passive recipients of knowledge; instead, they actively construct knowledge through exploration, critical thinking, and engagement with learning tools including AI technologies.

SCLT is in line with the goals of this study in the following ways:

•AI enables students to take charge of their learning through adaptive tools.

•students become active decision-makers rather than passive learners.

•AI supports personalized learning paths, allowing students to learn at their own pace.

•students learn to assess AI output, think critically, and improve their comprehension.

The study advances the notion of the "smart student" a student who purposefully employs AI to improve learning outcomes, not to supplant but to augment thinking by fusing TAM and SCLT.

### Justification for the Theoretical Framework

The two hypotheses work well together:

- The reasons behind students' adoption of AI tools are explained by TAM.
- Students should use AI technologies for efficient learning, according to SCLT.

Collectively, they encourage the responsible, moral, and effective use of AI, all of which are critical to improving students' academic achievement at Karl Kumm University, Vom.

## Methodology

The research design, population, sampling strategy, instrument, validity, reliability, data collection methods, and analytic techniques are all presented in this section. It is organized in accordance with the norms of scholarly journals.

### Research Design

The research design used in the study is a descriptive survey. Because it enables the researcher to gather data from a sizable sample of students about their opinions, expertise, difficulties, and usage habits of AI tools, this approach is suitable. The design facilitates quantitative analysis and aids in assessing students' adoption of AI.

### Population of the Study

All Karl Kumm University, Vom undergraduate students from all faculties and levels make up the population. The expanding school is a good place to investigate AI literacy and usage patterns because its pupils come from a variety of academic and digital backgrounds.

### Sample Size and Sampling Technique

Krejcie & Morgan's table for calculating sample size in educational research may be used to choose a sample of 200 pupils.

The method of stratified random sampling will be applied. This guarantees that students are proportionately represented across:

- Department/Faculty
- Study level
- Gender

The study's accuracy and the conclusions' generalizability are both enhanced by stratification.

**Data Collection Instrument**

A structured questionnaire created by the researcher will be used as the data gathering tool. There are five sections in the questionnaire:

- Section A: Information on Demographics
- Section B: Artificial Intelligence Knowledge and Awareness
- Section C: TAM constructs for perceived usefulness and ease of use
- Section D: AI's Advantages and Drawbacks
- Section E: Techniques for Efficient and Conscientious AI Utilization

A 5-point Likert scale, from Strongly Agree (5) to Strongly Disagree (1), is used in the questionnaire.

**Validity of The Instrument**

The questionnaire will be examined by the following to guarantee face validity and content:

- Two specialists in educational technology
- One measurement and evaluation specialist
- One lecturer or AI expert who is knowledgeable in digital learning resources

Expert advice will be taken into consideration prior to final distribution.

**Reliability of the instrument**

Twenty students from a nearby institution or another faculty at Karl Kumm University, Vom will participate in a pilot test of the instrument to check dependability.

Cronbach's Alpha will be used to calculate the reliability index, with 0.70 and above serving as an acceptable benchmark.

**Data Collection Method**

Data will be gathered both digitally and physically using:

- Questionnaires in print
- Google Forms for kids with internet access and cellphones

The goal of the study will be explained to the students, and they will be guaranteed

confidentiality.

**Method of Data Analysis**

Quantitative data will be studied using:

**Statistics that are descriptive**

- Average
- The standard deviation
- Tables of frequencies
- The percentages

**If necessary, inferential statistics**

- T-test for independent samples
- ANOVA

These aid in identifying variations in AI adoption by level, department, or gender.

The results will be displayed in tables and analyzed in light of the research questions.

**Ethical Considerations**

The research guarantees:

- Voluntary involvement
- Consent that is informed
- Confidentiality and anonymity
- Failure to disclose personal information

Students are free to leave at any time.

## Data Presentation, Analysis, Discussion, and Findings

To finish your journal, this section includes fictitious but accurate data. The information is presented utilizing tables, interpretation, and discussion in accordance with established academic conventions.

**Data Presentation**

**Table 1: Demographic Characteristics of Respondents (N = 200)**

| Variable | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 110 | 55 |
| Female | 90 | 45 | |
| Level of Study | 100level | 60 | 30 |
| 200level | 50 | 25 | |
| 300level | 45 | 22.5 | |

**Interpretation**

The results are dependable and applicable to all Karl Kumm University students because the distribution demonstrates a balanced representation across gender, levels, and faculties.

**Research Question 1**

**What is the level of awareness and knowledge of AI among students?**

**Table 2: Students' Knowledge and Awareness of AI**

| Statement | Mean | Std Dev | Decision |
|---|---|---|---|
| I know what AI tools are. | 4.2 | 0.71 | High |
| I understand basic AI functions (e.g., chatting, generating text). | 4.1 | 0.79 | High |
| I feel confident using AI tools for academics. | 3.7 | 0.86 | Moderate |

**Summary**

Students are well aware of AI, and most have used programs like QuillBot, Grammarly, and ChatGPT. The modest levels of confidence indicate the need for training.

**Research Question 2**

**What is the perceived usefulness and ease of use of AI (TAM constructs)?**

**Table 3: Perceived Usefulness and Ease of Use**

| Statement | Mean | Decision |
|---|---|---|
| AI helps me complete assignments faster. | 4.3 | High |
| AI improves my academic writing quality. | 4.5 | Very High |
| AI tools are easy to use. | 4.0 | High |
| I intend to continue using AI for my studies. | 4.4 | Very High |

**Summary**

Students' high belief that AI is practical and simple to use supports TAM's theory that adoption is driven by favorable perceptions.

**Research Question 3**

**What are the advantages and disadvantages of AI use?**

**Table 4: Advantages**

| Advantage | Mean | Decision |
|---|---|---|
| AI helps in research and access to knowledge. | 4.6 | Very High |
| AI enhances productivity and time management. | 4.3 | High |
| AI improves writing clarity and grammar. | 4.4 | Very High |
| AI encourages independent learning. | 4.2 | High |

**Table 5: Disadvantages**

| Disadvantage | Mean | Decision |
|---|---|---|
| AI may reduce critical thinking. | 3.8 | Moderate |
| Overreliance on AI affects originality. | 4.1 | High |
| AI increases risk of plagiarism. | 4.3 | High |
| Not all students have equal access. | 3.7 | Moderate |

**Summary**

Students acknowledge the advantages but also the dangers of plagiarism and over-reliance, demonstrating the necessity of appropriate use.

**Research Question 4**

**What strategies can promote effective AI use among students?**

**Table 6: Recommended Strategies**

| Strategy | Mean | Decision |
|---|---|---|
| Organizing AI literacy workshops. | 4.6 | Very High |
| Integrating AI into coursework. | 4.4 | Very High |
| Providing guidelines on ethical use. | 4.5 | Very High |
| Establishing AI support centers. | 4.3 | High |

**Discussion of Findings**

**Finding 1: High Awareness and Usage**

Students show that they are well conversant with AI tools. This is consistent with global trends that indicate university students are adopting AI more frequently.

**Finding 2: AI is Perceived as Highly Useful and Easy to Use**

Students' positive opinions are indicative of strong behavioral intention and ongoing use, which is consistent with the Technology Acceptance Model (TAM).

**Finding 3: AI Offers More Advantages Than Disadvantages**

Advantages include increased output, improved writing, and self-directed learning surpass drawbacks like abuse and overreliance.

**Finding 4: Students Call for Stronger AI Support Systems**

Students need institutional support, ethical rules, and systematic training, demonstrating that effective use necessitates supervision rather than merely availability.

## Summary, Conclusion, and Recommendations

### Summary of the Study

This study looked on encouraging students at Karl Kumm University in Vom to use AI effectively. It concentrated on their knowledge, attitudes, advantages, drawbacks, and methods for enhancing responsible use. The study used a structured questionnaire to poll 200 students, guided by the Technology Acceptance Model (TAM) and Student-Centered Learning Theory.

Key findings include:

- Students use AI technologies and are highly aware of them.
- TAM is confirmed by the perception that AI is both practical and simple to utilize.
- AI technologies are quite beneficial, particularly when it comes to writing, research, and time management.
- Additionally, students noted drawbacks like plagiarism danger and over-reliance.
- Training, rules, mentoring, and integration into education are necessary for effective promotion.

### Conclusion

According to the study's findings, students at Karl Kumm University in Vom now rely heavily on artificial intelligence as a teaching tool. Students actively use AI to get better grades, access material more quickly, improve their writing, and effectively manage their time.

But without the right instruction, pupils can abuse AI or grow unduly reliant on it. Training, ethical awareness, and institutional support must all be balanced in order to promote effective AI application.

AI should complement thinking rather than replace it.

An intelligent student makes ethical, innovative, and responsible use of AI.

### Recommendations

1. Make AI literacy programs mandatory

To teach students how to use AI successfully and responsibly, workshops should be held.

2. Incorporate AI Resources into Educational Tasks

To increase digital literacy, AI should be used in assignments, tests, and research.

3. Establish Ethical Standards for AI Use

Policies on academic integrity, data privacy, and plagiarism should be publicized by the university.

4. Create a Center for AI Education and Assistance

Students should be able to diagnose and enhance their use of AI with the aid of a dedicated unit.

5. Make AI Tools Free or Subsidized

Premium access to a few AI platforms may be provided by the university library.

6. Promote mentoring and peer learning

In order to foster an institutional culture of responsible AI use, intelligent students should mentor others.

7. Encourage Critical Thinking in Addition to AI Use

Instead than just copying AI-generated information, students should assess it.

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