

**GANDAKI UNIVERSITY**  
**BACHELOR OF INFORMATION TECHNOLOGY**



**A RESEARCH PROPOSAL ON**

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**IMPACT OF ARTIFICIAL INTELLIGENCE ON ACADEMIC  
PERFORMANCE OF STUDENTS OF GANDAKI UNIVERSITY**

**SUBMITTED BY**

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**Gyankunja, Pokhara**  
**2024**

## **ABSTRACT**

This research will investigate the impact of Artificial Intelligence (AI) on the academic performance of students at Gandaki University. With the rise of AI technologies, their impact on the education sector needs to be studied. The study aims to determine if AI usage correlates with academic performance and how it affects students' grades. A mixed-methods approach will be used in which quantitative data will be gathered through surveys and academic records, while qualitative data will be obtained from student interviews. The research will focus on undergraduates from multiple faculties of Gandaki University. The findings of this study are expected to reveal a positive correlation between AI usage and academic performance and frequency of usage of AI tools. This study will contribute to understanding AI's role in education and guide future research on integrating AI tools in academic settings.

**Keywords:** Artificial Intelligence, Impact of AI, Academic performance, AI tools, AI chatbots, Ai integration in Academia, AI and education

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## **Abbreviations**

1. AI: Artificial intelligence

# **1. INTRODUCTION**

## **1.1 Background**

Artificial intelligence is a field of science concerned with building computers and machines that can reason, learn, and act in a way that would normally require human intelligence or involve data whose scale exceeds what humans can analyze (Google Cloud, n.d.). Many companies have developed different AI chatbots which respond to the questions provided to them. ChatGPT, Google Gemini, Claude, etc. are some of the major chatbots available currently. The use of AI in daily life increased with the development of AI chatbots. Academic performance refers to the extent to which students achieve educational goals. Typically, this is operationalized through measures such as grades or the highest level of educational attainment (Martín et al., 2017). This Study aims to investigate the impact of AI on the education sector specifically the academic performance of the students.

## **1.2 Problem and Motivation**

Usage of AI and AI chatbots is rising day by day in different sectors. Students are also utilizing this new technology in their academic activities. This Study Aims to find a conclusion on whether AI is affecting the academic performance of students or not. The Research question of this study is “*What is the impact of AI on the academic performance of the students*”. The capability and trend of the current AI technology motivated us to find the impact of AI on academic performance of students.

## **1.3 Significance of the Research**

This research aims to provide valuable findings and insights about the relationship between AI and academic performance. This study will also help to contribute to educational research and may enhance learning experiences. This study will also address the impact of technology on education.

## **1.4 Scope of the Research**

The study will be conducted exclusively at Gandaki university. This research will include under-graduates' students of Gandaki University. The research will cover multiple faculties like science, technology, management, humanities and social science,

## **1.5 Limitations**

The Study is only limited to students of Gandaki University. The research highly depends on available data and participation of students. As AI is evolving on a rapid scale and with new technology advancement this study may not cover every aspect of AI usage due to time constraints.

## **2. Literature review**

Artificial intelligence (AI) has significantly influenced higher education, with studies examining its potential to transform learning experiences, teaching methodologies, and administrative processes. Khatri and Karki (2024) explored the evolving role of AI in academia, emphasizing its ability to personalize learning and improve efficiency. However, they also highlighted challenges such as ethical concerns, including risks of plagiarism, reduced critical thinking, and compromised academic integrity. The authors underscored the importance of transparency, accountability, and informed consent in AI's implementation within educational settings.

Tahiru (2021) conducted a systematic review to analyze the opportunities, benefits, and challenges of AI in education. The study revealed that AI promotes collaborative learning, eases administrative burdens for educators, and increases interaction between students and teachers. However, it also pointed out challenges stemming from environmental, technological, and organizational factors, such as ethical issues related to data ownership and concerns over AI replacing human roles. Despite providing a comprehensive view of AI's potential, this study did not directly examine the impact of AI on students' academic performance.

Similarly, Tlili et al. (2023) examined the application of ChatGPT, an AI-driven chatbot, in educational settings. The study acknowledged its value as a tool for facilitating learning but raised concerns about its accuracy, privacy implications, and the potential for misuse, such as encouraging rote learning at the expense of critical thinking. The authors emphasized the need for guidelines to ensure the responsible integration of such tools into academic environments.

Another study by Mahaini (2024) focused on the impact of generative AI (GenAI) on computer science students' academic performance. The findings indicated a positive correlation between the use of GenAI tools and improved coding capabilities. However, concerns regarding over-reliance on these tools and their potential to compromise academic integrity were also noted. While this research provides insights into how AI can enhance specific skill sets, it does not address its broader impact on overall academic outcomes.

### **2.1 Conclusion**

While these studies provide valuable insights into the use of AI in education, there is a noticeable gap in literature. Specifically, there is a lack of research investigating the direct impact of AI on students' academic performance. Given the increasing integration of AI tools in education, it is crucial to understand how these tools affect students' academic outcomes.

## **3. Objective of the Research**

### **3.1. General Objective**

To analyze the impact of AI on academic performance of students of Gandaki University.

### **3.2 Specific Objectives:**

1. To determine whether AI impacts on academic performance of students or not.
2. To analyze how AI affects academic grades of the students.
3. To observe the relationship between AI and Academic Performance.
4. To calculate the frequency of Ai usage among students.

## **4. Methodology**

### **4.1. Research Design:**

The mixed-methods design will be chosen to comprehensively understand the impact of AI on academic performance. This design will help to collect quantitative data using surveys and questionnaires which will provide insights about the relation between AI and academic performance while qualitative data collected from interviews will be helpful to explore the relationship deeply.

### **4.2 Research Method:**

This research will follow the Mixed – method approach.

#### **4.2.1 Quantitative Method**

This method will be used to collect statistical data through survey questionnaires and academic records

#### **4.2.2 Qualitative Method**

This method will be used to find perception and experience of students from interviews which may not be provided from qualitative data.

### **4.3 Sampling:**

#### **4.3.1 Population**

The Total Student population of Gandaki university is approximately 500.

#### **4.3.2 Sampling Technique**

Yamane Method is used for calculation of sample size with population size = 500 and margin of error 8%.

#### **4.3.3 Sample Size**

After calculation using Yamane method the sample size was found to be 119.

### **4.4 Data Collection Method**

#### **4.4.1 Quantitative Data:**

- Survey: An e-survey will be conducted to collect data from students.



- Academic Records: Academic records of students will be collected from administrators with permission of administrators and consent of students.

#### 4.4.2 Quantitative Data:

- Interview: An interview will be conducted among selected students from different faculty about their perception and experience with ai and how it impacts their academic performance.

### 4.5 Data Analysis

#### 4.5.1 Quantitative Data Analysis

The Quantitative Data will be analyzed using different statistical techniques such as mean, median, mode, standard deviation, ANOVA, correlation and regression analysis to identify statistical correlations and relationships between AI usage and academic performance.

#### 4.5.2 Qualitative Data analysis

Qualitative data collected from interviews will be analyzed using thematic analysis and content analysis to find common themes and insights.

### 4.6 Ethical Considerations

- Informed Consent: The students will be provided with a consent form which they will need to sign before answering the survey questionnaires.
- Confidentiality: The students' name and any associated identity information will not be recorded, and every participant will be given an identity code for anonymity.
- Voluntary participation: The student will have a right to refuse to participate in the survey.

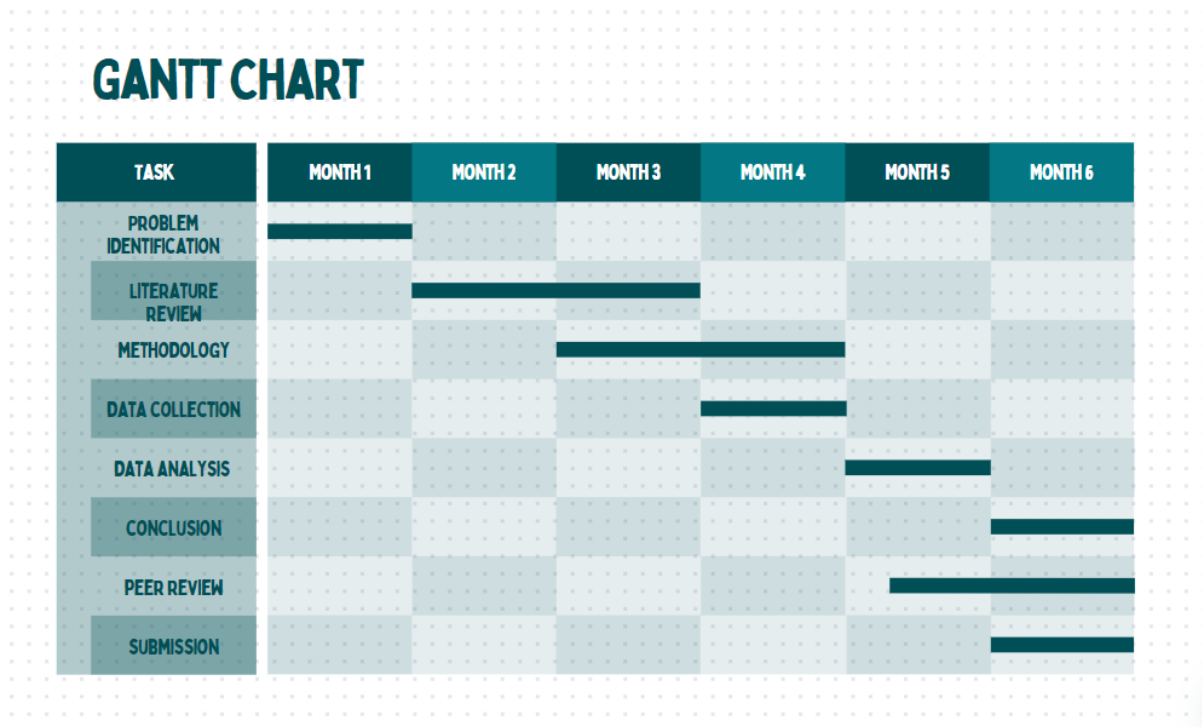
### 4.7 Limitations

- The study is only specific to students of Gandaki University
- As the study relies on collected data from students so it may be subjected to biasness.

### 4.8 Validation Technique

A pilot test will be conducted to ensure the validity of the of survey questions and an analysis of the study will be conducted by various experts to ensure the validity of the study.

## 5. Timeline



**Figure 5.1 Timeline**

## 6. Budget

The proposed budget of this study is mentioned below:

Survey Tools: 1000

Data Analysis Software: 5000

Personal Expenses: 5000

Miscellaneous Expenses: 1000

Total Budget: 12000

## 7. Expected Results and Implications

This research is expected to find the extent to which AI impacts the academic performance of the students at Gandaki university. The expected results may include:

- A positive correlation between the use of AI and improved academic performance.
- Insights on frequency of usage of AI tools.
- Level of Dependency of students on AI tools

Implications:

- The finding may aid students for better learning experiences and new methods of learning.
- The finding may contribute to the guidelines in usage of ai in academic settings.
- The finding may contribute to discovering new insights on the impact on new tools in the academic sector.

## **8. Discussion and Conclusion**

This research will provide an understanding of the impact of AI on the academic performance of students at Gandaki University. The mixed-method approach will provide insights into both qualitative and quantitative data highlighting the impact of AI.

Discussion:

The quantitative data analysis is expected to reveal the statistical correlation between AI usage and academic performance. Qualitative data from interviews will provide deeper understanding of the impact using thematic and content analysis.

Conclusion:

This study will be done using a mixed-method approach. The quantitative data will be collected from survey and qualitative data will be collected from interview with strict ethical consideration. The study will provide valuable insights on relationships between AI and academic performance. The findings from this research can be valuable for new research and can be used by educators and educational institutions for effective integration of AI on teaching and learning activities. This research may aid researchers exploring the long-term impacts of AI on education.

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## Annexes

### Annex A: Survey Questionnaire

#### 1. Demographic Information

- ☐ Age: \_\_\_\_\_
- ☐ Gender: \_\_\_\_\_
- ☐ Faculty: \_\_\_\_\_
- ☐ Year of Study: \_\_\_\_\_

#### 2. How often do you use AI tools (e.g., ChatGPT, Google Gemini)?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Rarely
- ☐ Never

#### 3. Which AI tools do you use most frequently? (List all that apply)

- ☐ ChatGPT
- ☐ Google Gemini
- ☐ Claude
- ☐ Others (Please specify): \_\_\_\_\_

### Academic Performance

#### 1. What was your GPA/Grade Point Average last semester? \_\_\_\_\_

#### 2. Do you believe your academic performance has improved since you started using AI tools?

- ☐ Yes
- ☐ No
- ☐ Unsure

If yes, in what ways has AI helped improve your academic performance? (Select all that apply)

- ☐ Better understanding of course material
- ☐ Improved grades on assignments
- ☐ Enhanced research capabilities
- ☐ Others (Please specify): \_\_\_\_\_

### Perception of AI Tools

#### 1. On a scale of 1-5, how helpful do you find AI tools for your studies?

- ☐ 1 (Not helpful)
- ☐ 2
- ☐ 3
- ☐ 4

- 5 (Very helpful)
- 2. Do you have any concerns about using AI tools in your studies?
  - Yes
  - No

#### Ethical Considerations

1. Do you think the use of AI tools raises ethical issues (e.g., cheating, plagiarism)?
  - Yes
  - No

### **Annex B: Interview Guide**

#### Introduction

Thank you for participating in this interview. Your insights are valuable for our research on the impact of AI on academic performance. The interview will take approximately 30 minutes.

#### 1. AI Usage

Can you describe how you use AI tools in your academic activities?

How frequently do you use these tools?

#### 2. Academic Performance

Have you noticed any changes in your academic performance since you started using AI tools?

Can you provide specific examples of how AI tools have helped or hindered your academic work?

#### 3. Perception of AI Tools

How do you feel about the role of AI in your education?

Are there any features of AI tools that you find especially useful or problematic?

#### 4. Ethical Considerations

Do you think the use of AI tools presents any ethical challenges in an academic setting?

How do you think these challenges can be addressed?

#### 5. Conclusion

Is there anything else you would like to add about your experience with AI tools and their impact on your academic performance?

### **Annex C: Consent Form:**

6. Introduction

Explanation of the study with purpose, procedure and duration of study.

7. Confidentiality

Assurance of anonymity and brief detail of process of data collection and storage.

8. Consent

Participants signature and date

### **Annex D: Tools**

1. For analysis:

- MS -Excel

2. For data collection:

- Google forms