

GROUP ACTIVITY: RESEARCH DESIGN AIMS, OBJECTIVES, AND METHODOLOGY

Research Topic: IMPROVING AI FACILITIES FOR STUDENTS

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1. INTRODUCTION

Artificial Intelligence (AI) is becoming increasingly important in education and can help students with learning, research, writing, problem-solving, and developing new skills. However, students may face difficulties such as limited access to AI tools, lack of training, insufficient university facilities, or uncertainty about how to use AI responsibly and effectively.

This research will investigate students' current access to AI facilities, their experiences and needs, and the ways in which educational institutions can improve AI facilities and support. The research will collect feedback from students to identify the most useful AI resources, training, and facilities that could improve their learning experience.

2. IDENTIFYING THE AIM

Research Aim

The aim of this research is to **investigate students' current access to and use of AI facilities and identify improvements that can provide better AI resources, training, and support for students' learning and academic development.**

3. BREAKING DOWN INTO OBJECTIVES

The research will have the following objectives:

1. To identify the AI facilities and tools currently available to students within the educational institution.
 2. To measure students' satisfaction with the existing AI facilities and resources.
 3. To identify the main difficulties students experience when accessing or using AI tools for educational purposes.
 4. To determine which AI facilities and resources students would find most useful, such as AI software, AI-enabled computers, online platforms, or dedicated AI learning spaces.
 5. To assess students' interest in AI training and workshops to improve their knowledge and responsible use of AI.
 6. To develop practical recommendations for improving AI facilities and support based on students' feedback.
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4. SELECTING THE METHODOLOGIES

A **mixed-methods approach** will be used, combining quantitative and qualitative research methods.

4.1 Questionnaire/Survey – Quantitative Method

An online questionnaire will be given to approximately **50–100 students**.

The questionnaire will ask students about:

- How often they use AI tools.
- Which AI tools they use.
- How easy AI facilities are to access.
- Their satisfaction with current AI resources.
- Problems they experience when using AI.
- Whether they would attend AI training sessions.
- Which new AI facilities they would like the institution to provide.

Students can rate their satisfaction using a **1–5 scale**, from very dissatisfied to very satisfied.

The results will be analysed using **percentages, averages, tables, and charts**.

4.2 Student Interviews – Qualitative Method

Short interviews will be conducted with approximately **5–10 students**.

Students will be asked questions such as:

- How do you currently use AI for your studies?
- What problems do you experience when using AI?
- Do you think your institution provides enough AI support?
- What AI facilities would you like the institution to provide?
- Would AI training or workshops be useful to you?
- What could the institution do to help students use AI responsibly?

The interview responses will be analysed by identifying common **themes, opinions, and suggestions**.

4.3 Observation – Qualitative Method

The research group will observe the existing facilities available to students.

The researchers will consider:

- Availability of computers and devices.
- Access to AI software and platforms.
- Internet/Wi-Fi quality.
- Availability of study spaces.
- Availability of AI-related learning resources.
- Accessibility of facilities.
- Availability of technical support.

The observations will be recorded and compared with students' feedback.

5. DISCUSSION AND REFLECTION

5.1 How Does the Methodology Support the Objectives?

The methodology supports the objectives by collecting both **quantitative and qualitative information**.

The survey will allow the researchers to collect information from a large number of students and measure their satisfaction with existing AI facilities. For example, researchers could determine what percentage of students believe that the institution provides sufficient AI resources.

The interviews will provide more detailed information about students' experiences. While a survey may show that students are dissatisfied with AI facilities, interviews can help explain **why** they are dissatisfied and what improvements they would like.

Observation will allow researchers to examine the facilities directly and determine whether the available resources meet students' needs.

Together, these methods provide a more complete understanding of students' experiences with AI facilities.

5.2 How Do the Objectives Align With the Aim?

The objectives clearly align with the research aim because they focus on understanding students' current access to AI facilities and identifying ways to improve them.

For example:

- Identifying existing AI facilities shows what resources are currently available.
- Measuring student satisfaction shows whether current facilities meet students' expectations.
- Identifying difficulties highlights areas that need improvement.
- Finding out which facilities students want helps the institution prioritise future investments.
- Investigating interest in AI training identifies the type of support students require.
- Developing recommendations provides practical solutions based on the research findings.

Therefore, the objectives work together to achieve the overall aim of **improving AI facilities and support for students**.

5.3 How Did We Choose Between Quantitative and Qualitative Methodologies?

We chose a **mixed-methods approach** because both quantitative and qualitative information are important.

The **quantitative survey** provides measurable data from a larger number of students. This makes it possible to identify trends and compare students' levels of satisfaction.

The **qualitative interviews** provide detailed opinions and experiences that cannot easily be represented through numbers. Students can explain their problems and suggest specific improvements.

Observation provides additional evidence about the actual facilities available to students.

Using both approaches will make the research more comprehensive because it answers two important questions:

“How many students experience a particular problem?”

This is answered mainly through quantitative research.

“Why do students experience this problem, and how could it be improved?”

This is answered mainly through qualitative research.

6. EXPECTED OUTCOME

The research is expected to identify the main areas where AI facilities and support could be improved.

Possible recommendations may include:

- Providing access to more AI tools and software.
 - Creating dedicated AI learning spaces.
 - Providing AI training workshops for students.
 - Improving computer and internet facilities.
 - Providing guidance on the responsible and ethical use of AI.
 - Offering technical support for students using AI tools.
 - Providing online resources and tutorials about AI.
 - Increasing awareness of the AI facilities already available.
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7. CONCLUSION

AI can provide significant benefits to students when it is used effectively and responsibly. However, students need appropriate facilities, resources, training, and support to make the most of AI technology.

This research will use **surveys, interviews, and observation** to understand students' current experiences and identify areas for improvement. The findings will be used to develop practical recommendations for providing better AI facilities and support, ultimately helping students improve their learning and academic development.

8. SUMMARY

Topic	Improving AI Facilities for Students
Aim	To investigate students' access to AI facilities and identify improvements
Objectives	Identify facilities, measure satisfaction, identify problems, determine student needs, assess training needs, and develop recommendations
Quantitative Method	Online questionnaire/survey
Qualitative Methods	Student interviews and observation
Participants	Approximately 50–100 survey participants and 5–10 interview participants
Data Analysis	Percentages, averages, tables, charts, and thematic analysis
Expected Outcome	Practical recommendations for improving AI facilities, resources, training, and support