

# AI & ML for Non-CS Academic Staff

*Practical AI for Teaching & Research Across Disciplines*

## **Course Prelude:**

Artificial Intelligence is revolutionizing academic practices well beyond computer science. From literature reviews and research synthesis in the humanities, to personalized learning in medicine and automated grading in law or business, AI now supports faculty across disciplines. This program is designed for educators in non-technical fields to confidently use AI tools in their teaching, research, and academic decision-making—with no programming required.

## **Course Description:**

This 21-hour hands-on faculty development program empowers non-CS academic staff to understand, evaluate, and integrate AI tools in their day-to-day academic activities. Participants will explore AI-powered research platforms, content generators, feedback tools, grading assistants, and ethical frameworks tailored for teaching and research. Practical, tool-based learning is at the core of this program, and sessions are grounded in real-world academic scenarios.

## **Learning Objectives:**

By the end of this course, participants will:

- Understand AI & ML fundamentals in an accessible, non-technical manner.
- Use AI tools for academic literature review, citation management, and plagiarism detection.
- Apply AI in student support through grading automation, personalized learning, and feedback analysis.
- Create engaging, accessible, and multimedia-rich educational content using AI platforms.

- Analyze and respond to the ethical, legal, and regulatory implications of AI in education.

### **Learning Outcomes:**

Participants completing the course will be able to:

- Confidently use AI platforms (like ChatGPT, Elicit, Semantic Scholar) for academic writing and research.
- Design AI-enhanced grading and feedback mechanisms in their classroom or online teaching.
- Develop AI-supported lectures, visuals, and interactive learning content tailored to diverse learners.
- Evaluate AI's impact and risks with regard to student privacy, bias, and academic integrity.
- Present a practical plan for AI integration in their own course or academic workflow.

### **Key Skills Gained:**

- AI-enhanced academic writing and citation management
- AI-assisted grading and feedback generation
- Multimedia and inclusive content creation using AI tools
- Basic ethical literacy for AI use in higher education
- Strategic planning for AI tool integration in academic work

### **Modules:**

<b>Module</b>	<b>Title</b>	<b>Duration</b>
Module 1	Introduction to AI & ML for Academia	3 Hours
Module 2	AI for Research & Academic Writing	3 Hours
Module 3	AI in Teaching & Learning	3 Hours
Module 4	AI for Content Creation & Lecture Enhancement	3 Hours
Module 5	Ethical AI Use & Future Trends in Education	3 Hours
Module 6	Capstone Project Development & Presentation	6 Hours

# **Module 1 Introduction to AI & ML for Academia**

## **Topics Covered:**

- What is AI/ML?

### **Introduction**

Artificial Intelligence (AI) and Machine Learning (ML) are transforming the way we work, learn, and make decisions. While these technologies are often associated with computer science, they are increasingly relevant in education, administration, and daily operations within academic institutions. Understanding the basics of AI and ML helps non-teaching academic staff become more efficient, data-driven, and ready to support digital transformation initiatives.

#### **1. Understanding Artificial Intelligence (AI)**

**Artificial Intelligence (AI)** refers to the ability of machines or computer systems to perform tasks that normally require human intelligence. These tasks include **problem-solving, decision-making, understanding language, recognizing patterns, and learning from experience**.

In simple terms, AI allows computers to “think” and “act” intelligently — mimicking certain aspects of human behavior.

#### **Examples of AI in everyday life:**

- Virtual assistants like Siri, Alexa, or Google Assistant.
- Chatbots used on university websites for answering student queries.

- Email spam filters that separate junk mail from important messages.
- Smart scheduling tools that suggest meeting times or manage calendars.

## 2. What is Machine Learning (ML)?

**Machine Learning (ML)** is a subset of AI.

It refers to the process by which computer systems learn from **data** and **improve their performance** over time — without being explicitly programmed.

Instead of following fixed instructions, ML models analyze patterns in data, make predictions, and refine their accuracy as they receive more information.

**Example:**

If an ML system is trained on data about student attendance and performance, it can predict which students might need academic support in the future.

## 3. Relationship Between AI and ML

AI is the broader concept — the goal of making machines “intelligent.”

ML is a practical approach used to achieve that intelligence.

AI	ML
Focuses on creating systems that can perform intelligent tasks.	Focuses on enabling systems to learn automatically from data.
Includes reasoning, problem-solving, perception, and language understanding.	Primarily deals with pattern recognition and prediction.
Example: A chatbot that answers questions intelligently.	Example: The algorithm that learns to understand and respond to new questions accurately.

## 4. Importance of AI/ML for Academic and Administrative Staff

AI/ML are not just for programmers — they are **tools for improving workflows** and **enhancing efficiency** across various academic and administrative functions.

**Applications in education and administration include:**

- **Student support systems:** Chatbots that handle admissions queries or provide course information.
- **Data management:** Predictive systems that identify enrollment trends or optimize resource allocation.
- **Scheduling and timetabling:** Automated tools that create balanced timetables and minimize conflicts.

- **Document processing:** AI systems that scan, organize, and retrieve student or faculty records efficiently.
- **Decision-making support:** ML-based dashboards that visualize institutional data for better planning.

## 5. Why Non-Teaching Staff Should Learn About AI/ML

- To understand how technology-driven decisions are made.
- To collaborate effectively with IT teams and educators using AI tools.
- To adapt to digital platforms that automate tasks like reporting, communication, and record keeping.
- To ensure ethical and responsible use of AI systems in educational contexts.

## 6. Summary

AI and ML are reshaping the educational landscape by automating routine tasks, offering insights from data, and supporting better decision-making.

For non-teaching academic staff, gaining a foundational understanding of these technologies fosters digital confidence and prepares them for the future of smart education systems.

### Reflection Activity

- Think about one task in your daily work that could be improved with automation or data-driven insights.
  - How could AI or ML help make that process faster, easier, or more accurate?
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- How AI is used in academia

## 1. Introduction

Artificial Intelligence (AI) is transforming education by supporting teaching, learning, research, and administration. While faculty often engage with AI in instructional activities, **non-teaching academic staff** also play a vital role in enabling its effective and ethical use.

AI acts as a **support tool** rather than a replacement for human expertise — streamlining administrative tasks, improving data accuracy, and providing actionable insights to enhance institutional efficiency.

## 2. Understanding AI in Academia

AI refers to **computer systems capable of performing tasks that typically require human intelligence**, such as problem-solving, pattern recognition, decision-making, and language understanding.

In an academic setting, AI can:

- Automate routine tasks like scheduling or record-keeping
- Assist with research analysis and literature review
- Enhance teaching through adaptive learning or personalized feedback
- Support data-informed decision-making across departments

For non-teaching staff, AI provides opportunities to improve efficiency, accuracy, and service quality while maintaining ethical and transparent practices.

## 3. Key Applications of AI in Academia

### A. Teaching and Learning Support

- **Intelligent Tutoring Systems:** Tailor learning experiences based on student performance.
- **Automated Grading and Assessment:** Evaluate objective tests or assignments efficiently.
- **Content Creation and Summarization:** Generate study materials, lecture notes, or discussion prompts.
- **Language Support:** AI tools provide grammar correction, translation, and accessibility enhancements.

*Example:* An AI platform adjusts the difficulty of math exercises in real-time to match each student's skill level.

### B. Research Assistance

- **Literature Review Tools:** AI platforms like Elicit.ai summarize key research findings quickly.
- **Data Analysis:** Machine learning models identify patterns in large datasets.
- **Plagiarism Detection:** Tools like Turnitin check for originality in student submissions.
- **Idea Generation:** AI supports hypothesis development, abstract writing, and research planning.

*Example:* Staff assisting faculty can use AI to compile summaries of recent publications for departmental reports.

### C. Student Services and Support

- **AI Chatbots:** Answer common student queries about admissions, courses, or deadlines.

- **Predictive Analytics:** Identify students at risk academically by analyzing engagement and performance data.
- **Career Guidance Systems:** Suggest courses or internships based on student profiles.

*Example:* An AI-driven student support portal can proactively send reminders for pending assignments or help schedule counseling sessions.

#### D. Administrative Efficiency

- **Admissions Processing:** AI helps screen applications, verify documents, and predict student success.
- **Timetable and Resource Management:** AI generates optimized class schedules and room allocations.
- **Document Management:** Automates sorting, categorizing, and retrieving institutional records.
- **Decision-Making Support:** Dashboards visualize institutional data for planning, accreditation, or budgeting.

*Example:* Staff managing records can use AI tools to quickly identify trends in enrollment or attendance without manual review.

#### E. Library and Knowledge Management

- **Smart Search Engines:** AI improves search results by understanding context and relevance.
- **Recommendation Engines:** Suggest books, journals, or research articles based on previous searches.
- **Automated Classification:** Organizes digital resources for easy retrieval.

*Example:* Library staff can use AI to help faculty quickly locate relevant articles for research projects.

### 4. Benefits of AI in Academic Institutions

Aspect	Impact
Efficiency	Reduces manual workload for staff and faculty.
Accuracy	Minimizes errors in grading, scheduling, and reporting.
Personalization	Supports tailored learning experiences for students.
Data-Driven Decision Making	Provides actionable insights for institutional planning.
Innovation	Encourages new methods for teaching, research, and administration.

## 5. Ethical and Responsible Use

To ensure responsible AI adoption, staff must:

- Protect **data privacy and confidentiality**.
- Check for **bias and fairness** in AI outputs.
- Maintain **transparency** about AI assistance in academic work.
- Ensure **human oversight** in decision-making processes.

Non-teaching staff are key to implementing these ethical practices while supporting both faculty and students.

## 6. Role of Non-Teaching Academic Staff

Non-teaching staff can:

- Assist faculty and students in using AI tools effectively.
- Manage AI-enabled administrative systems.
- Ensure data accuracy and policy compliance.
- Promote **digital literacy** and awareness of AI tools.
- Support institutional innovation by integrating AI in day-to-day operations.

## 7. Summary

AI in academia is a **strategic enabler**, enhancing efficiency, accuracy, and innovation across teaching, research, and administration.

For non-teaching academic staff:

- Understanding AI ensures smoother integration into institutional workflows.
- Ethical oversight protects institutional credibility.
- Supporting AI literacy helps students and faculty make the most of these technologies.

AI, when combined with human oversight, can transform the academic environment into a **smarter, data-driven, and more inclusive space**.

## 8. Reflection Activity

- Identify one task in your daily work where AI could **save time or improve accuracy**.
  - Reflect on **ethical considerations** you would need to apply while using AI for that task.
  - Discuss with colleagues how AI can enhance collaboration between departments.
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- No-code AI tools: Elicit, Semantic Scholar

## . Introduction

No-code AI tools are platforms that allow users to leverage the power of Artificial Intelligence **without needing any programming or coding skills.**

These tools make complex AI tasks — such as research analysis, summarization, and literature discovery — accessible to everyone in an academic institution, including **non-teaching staff**.

Two widely used no-code AI tools in academia are **Elicit.ai** and **Semantic Scholar**. Both help staff support faculty and students efficiently by streamlining research, data organization, and information retrieval.

## 2. Understanding No-Code AI Tools

No-code AI tools provide:

- **Intuitive interfaces** for AI-driven tasks.
- **Automated workflows** that save time and reduce human error.
- **Accessibility** for staff with limited technical background.

Non-teaching staff can use these tools to:

- Assist faculty in research preparation.
- Organize academic resources.
- Enhance institutional reporting and documentation.
- Support students in literature review and assignment research.

## 3. Elicit.ai: AI Research Assistant

### What is Elicit.ai?

Elicit is an AI-powered research assistant that helps users **find, summarize, and organize academic research** through simple, natural language queries.

### Key Features

- **Question-based Search:** Enter queries like “What are the effects of AI in education?” and retrieve relevant studies.
- **Automated Summarization:** Summarizes key findings, methods, and conclusions from multiple papers.
- **Comparison Tables:** Allows side-by-side comparison of research studies.
- **Export Options:** Export summaries into spreadsheets or reports for faculty and administrative use.

### Use Cases

- Non-teaching staff compiling background literature for departmental research reports.

- Assisting faculty in quickly reviewing key papers for grant proposals or seminars.
  - Summarizing trends in research publications for institutional decision-making.
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## 4. Semantic Scholar: AI-Powered Academic Search

### What is Semantic Scholar?

Semantic Scholar is a **free AI-driven academic search engine** that helps users discover scholarly research, track citations, and identify influential papers.

### Key Features

- **Smart Search:** Understands context, not just keywords, to deliver relevant results.
- **Paper Summaries:** Provides concise abstracts and highlights.
- **Citation Mapping:** Visualizes relationships and influence among papers.
- **Filtering Options:** Refine results by date, journal, or topic.
- **Alerts and Recommendations:** Tracks trending research in specific fields.

### Use Cases

- Library staff guiding students or faculty to relevant research papers.
- Research assistants creating curated reading lists.
- Academic administrators compiling institutional research reports.

## 5. Comparative Overview

Feature	Elicit.ai	Semantic Scholar
Primary Function	Literature review and evidence synthesis	Research discovery and citation analysis
Input Method	Natural language queries	Keywords or topic search
Output	Summaries, tables, structured findings	Paper metadata, abstracts, citation maps
Best For	Summarizing multiple studies quickly	Finding research articles and tracking citations
Skill Level	Beginner	Beginner to intermediate

## 6. Benefits for Non-Teaching Academic Staff

- **Efficiency:** Save hours of manual research and summarization.
- **Accuracy:** Quickly access reliable academic resources.
- **Support:** Assist faculty and students with high-quality research information.
- **Collaboration:** Facilitate better teamwork between departments.

- **Professional Development:** Build digital literacy and AI competencies.

## 7. Ethical and Responsible Use

- Always **verify AI-generated summaries** against original research papers.
- **Protect sensitive data** and avoid uploading confidential student or institutional information.
- Use AI as a **support tool**, not a replacement for human judgment or critical thinking.
- **Acknowledge AI use** when contributing to research or reports.

## 8. Summary

No-code AI tools like **Elicit.ai** and **Semantic Scholar** make research and data management faster, more accurate, and accessible for non-technical users.

By mastering these tools, non-teaching staff can:

- Provide stronger support to faculty and students.
- Improve institutional efficiency and reporting.
- Promote ethical and informed use of AI in academic environments.

## 9. Reflection Activity

- Explore **Elicit.ai** or **Semantic Scholar** for a topic relevant to your department.
- Identify **how AI tools could save time or improve accuracy** in your daily work.
- Discuss how you could **ensure responsible and ethical use** of these tools in your role.

- AI myths and realities in education

### . Introduction

Artificial Intelligence (AI) is increasingly influencing education — from personalized learning platforms to automated grading and research tools.

However, the rapid adoption of AI has also led to **misunderstandings and myths**, creating uncertainty about its role, effectiveness, and ethical implications.

For **non-teaching academic staff**, understanding the **realities behind these myths** is essential to support faculty, students, and institutional decision-making responsibly.

## 2. Common AI Myths in Education

### Myth 1: AI will replace teachers and staff

**Reality:** AI is a **support tool**, not a replacement. It automates repetitive tasks (grading, data entry) but cannot replace human judgment, empathy, or creativity.

### Myth 2: AI always provides accurate information

**Reality:** AI outputs depend on the **data it was trained on**. Inaccuracies, outdated information, or biases are possible, so human oversight is necessary.

### Myth 3: Only technical experts can use AI tools

**Reality:** Modern AI platforms are **user-friendly and no-code**, enabling non-technical staff to assist in research, administration, and reporting.

### Myth 4: AI is only useful for teaching and research

**Reality:** AI also improves **administration, student services, library management**, and institutional decision-making. Non-teaching staff can leverage AI to streamline workflows.

### Myth 5: AI understands context and emotions like humans

**Reality:** AI recognizes patterns but **cannot fully understand emotional or cultural context**. Human interpretation remains critical in teaching and student support.

### Myth 6: Using AI leads to plagiarism or unethical behavior

**Reality:** AI itself is **neutral**. Ethical use depends on **how students or staff apply it**, following guidelines for citations, transparency, and originality.

### Myth 7: AI is too expensive for educational institutions

**Reality:** Many AI tools, such as ChatGPT, Semantic Scholar, or Elicit, are **free or affordable**, making them accessible to institutions with limited budgets.

### 3. Realities of AI in Education

<b>Reality</b>	<b>Impact in Academia</b>
AI enhances productivity	Automates routine work, freeing staff for meaningful tasks
AI supports data-driven decisions	Provides insights for student performance, course planning, and institutional strategy
AI personalizes learning	Adapts lessons to meet individual student needs
AI aids collaboration	Facilitates research summaries, communication, and shared resources
AI improves accessibility	Supports language translation, adaptive learning, and assistive technologies

### 4. Role of Non-Teaching Academic Staff

Non-teaching staff are crucial in ensuring **responsible and effective AI use** by:

- Supporting faculty and students with AI tools
- Maintaining **data accuracy and ethical standards**
- Training colleagues in AI literacy
- Implementing institutional AI policies
- Monitoring AI outputs for bias or inaccuracies

### 5. Ethical and Responsible Use of AI

- Verify AI-generated outputs against **trusted sources**
- Protect **student and institutional data privacy**
- Maintain **transparency** in AI-assisted work
- Keep **human oversight** in all critical decisions
- Use AI as a **supportive tool**, not a replacement for judgment

### 6. Summary

AI is a **powerful enabler** in education, but myths can lead to fear, over-reliance, or misuse.

For non-teaching academic staff:

- Understanding AI myths and realities ensures informed support for faculty and students
- Promotes ethical, responsible AI adoption
- Enhances efficiency, collaboration, and data-informed decision-making

**Key takeaway:** AI + human oversight = best outcomes in academic institutions.

## 7. Reflection Activity

- Identify a common AI myth you've heard in your institution.
- Discuss the reality behind that myth and how it applies to your role.
- Suggest one way you could support responsible AI use in your department.

### Hands-On Activities:

- Tool walk-through: Elicit.ai and Semantic Scholar

## 2. Tools Overview

Tool	Purpose	Key Features
Elicit.ai	AI research assistant for literature review	Question-based search, automated summarization, comparison tables, export summaries
Semantic Scholar	AI-driven academic search engine	Smart search, paper summaries, citation mapping, filtering, alerts/recommendations

## 3. Hands-On Activity: Step-by-Step Overview

### A. Elicit.ai Walk-Through

#### Step 1: Access the Tool

- Visit Elicit.ai
- Create a free account (if needed)

#### Step 2: Enter a Research Question

- Example: "What are the effects of online learning on student engagement?"

#### Step 3: Review AI Summaries

- Examine key findings, methods, and conclusions automatically generated by Elicit
- Note important insights relevant to your department or report

#### Step 4: Use Comparison Tables

- Compare multiple research papers side-by-side
- Highlight differences or trends in methodologies and results

#### Step 5: Export Results

- Save summaries and tables into spreadsheets or reports for faculty use

## B. Semantic Scholar Walk-Through

### Step 1: Access the Tool

- Visit Semantic Scholar
- No account needed for basic use; optional sign-up for alerts

### Step 2: Search by Keywords or Topics

- Example: “AI in higher education”

### Step 3: Review Search Results

- Look at paper abstracts, authors, publication year, and citations
- Identify relevant papers for further review

### Step 4: Explore Citation Mapping

- Visualize how papers influence or reference each other
- Track trends and identify seminal works in the field

### Step 5: Apply Filters

- Narrow results by date, journal, or topic for focused research

## 4. Activity Tips

- **Use Clear Queries:** Formulate precise questions or keywords
- **Verify Outputs:** Cross-check AI-generated summaries with original sources
- **Take Notes:** Document insights for reports or faculty support
- **Follow Ethics:** Avoid sharing sensitive or confidential data on public AI platforms

## 5. Expected Outcomes

After completing the hands-on activity, participants should be able to:

- Confidently navigate Elicit.ai and Semantic Scholar
- Retrieve, summarize, and organize academic literature efficiently
- Support faculty and students in research and reporting tasks
- Apply ethical and responsible AI practices in their workflow

## 6. Reflection Questions

- How could these tools save time in your daily academic tasks?
  - What challenges did you encounter while using AI outputs?
  - How will you ensure the accuracy and ethical use of AI-generated summaries in your department?
- 
- Search simulation: AI vs traditional query results

## 2. Tools Required

Method	Tools	Purpose
<b>AI-Based Search</b>	Elicit.ai or Semantic Scholar	Provides context-aware summaries, literature comparisons, and citations
<b>Traditional Search</b>	Google Scholar or Library Databases	Standard keyword-based search, manual filtering of results

## 3. Hands-On Activity: Step-by-Step Overview

### A. Traditional Query Simulation

**Step 1:** Access a standard academic search tool (e.g., Google Scholar)

**Step 2:** Enter a research query or keywords

- Example: “Impact of AI in higher education”
- **Step 3:** Review results
- Check title, abstract, and publication year
- **Step 4:** Select relevant papers manually
- **Step 5:** Record observations
- Time taken, number of relevant results, clarity of information

### B. AI-Based Query Simulation

**Step 1:** Access an AI-powered research tool (e.g., Elicit.ai)

**Step 2:** Enter the **same research query**

**Step 3:** Observe AI output

- Summaries of key findings
- Automated comparison of multiple papers
- Structured tables or visual insights
- **Step 4:** Record observations
- Time taken, relevance of results, clarity, and organization

#### 4. Activity Comparison Table

Criteria	Traditional Search	AI-Powered Search
<b>Speed</b>	Manual review can be time-consuming	Rapid summarization and aggregation
<b>Relevance</b>	Requires careful filtering	Context-aware, highlights most relevant papers
<b>Ease of Use</b>	Depends on user skill	User-friendly, no coding required
<b>Accuracy</b>	Depends on query precision	AI may summarize inaccurately; needs verification
<b>Output Format</b>	List of papers, raw abstracts	Summaries, tables, visual comparisons
<b>Limitations</b>	Manual cross-referencing needed	AI may “hallucinate” data; verification required

#### 5. Ethical and Accuracy Considerations

- **Verify AI outputs** against original papers
- Avoid over-reliance on AI-generated summaries
- Protect confidential or sensitive data
- Maintain transparency when AI is used in research reporting

#### 6. Expected Learning Outcomes

After completing the simulation, participants will:

- Recognize the **efficiency advantages** of AI in research
- Understand the **importance of human oversight** for accuracy
- Be able to **support faculty and students** in choosing the appropriate search method
- Appreciate ethical implications and limitations of AI-assisted research

#### 7. Reflection Questions

- How did the AI-generated results compare in speed and relevance to traditional search?
- What potential risks exist if AI outputs are used without verification?
- How could you integrate AI searches into your department's workflow responsibly?
  
- Reflection: “Where could AI support your teaching/research?”

## 1. Introduction

Artificial Intelligence (AI) is increasingly becoming a **supportive tool** in education and research. While much attention is given to AI's role in teaching, faculty and non-teaching staff can also explore areas where AI can **enhance efficiency, accuracy, and creativity** in academic work.

Reflection exercises help staff identify **practical applications**, understand **ethical considerations**, and plan for **responsible AI integration** into daily workflows.

## 2. Objective

To encourage participants to **critically assess areas in their teaching or research** where AI tools could add value, while maintaining **ethical and effective use**.

### Learning Outcomes:

By the end of this reflection activity, participants will be able to:

- Identify tasks where AI could reduce workload or improve efficiency
- Recognize AI's potential in research support, data analysis, or teaching assistance
- Consider ethical, accuracy, and transparency considerations
- Plan practical integration of AI in academic workflows

## 3. Reflection Guidelines

Participants are encouraged to reflect on the following aspects:

### A. Teaching Support

- Could AI assist in **preparing lecture notes, presentations, or handouts**?
- Can AI **personalize learning experiences** for diverse student needs?
- Could AI **help in grading assignments or quizzes** to save time?
- Could AI provide **real-time student support** via chatbots or automated feedback?

### B. Research Support

- Can AI tools **summarize literature** or create structured comparisons of multiple studies?
- Could AI **identify trends, patterns, or anomalies** in research data?
- Can AI **support grant proposal writing, citations, or reference management**?
- Could AI assist in **collaborative research and knowledge sharing**?

### C. Administrative Support

- Could AI streamline **data entry, scheduling, or reporting tasks**?
- Can AI help **monitor academic performance metrics** or student engagement data?
- Could AI assist in **document management and retrieval** for research or institutional records?

#### 4. Ethical and Practical Considerations

While reflecting on AI applications, staff should also consider:

- **Accuracy:** Verify AI-generated outputs before using them in teaching or research.
- **Privacy:** Avoid entering sensitive student or institutional data in public AI tools.
- **Transparency:** Disclose AI assistance when relevant.
- **Oversight:** Maintain human control over key decisions and assessments.
- **Bias:** Be aware of potential biases in AI-generated suggestions or data.

#### 5. Reflection Template (Example)

Area	Current Challenge/Task	AI Support Possibility	Ethical/Accuracy Considerations
Teaching	Preparing lecture slides	AI-generated summaries or visual aids	Verify content for accuracy; avoid plagiarism
Research	Literature review	Elicit.ai summaries of relevant papers	Check sources and credibility of outputs
Administration	Scheduling exams	AI-assisted timetable generation	Ensure data privacy and fairness

#### 6. Expected Outcome

By completing this reflection, participants will:

- Gain a clearer understanding of **where AI can add value** in their academic context
- Identify **practical, responsible AI applications** to improve efficiency
- Become aware of **ethical, privacy, and accuracy issues** when integrating AI

#### 7. Reflection Questions

- Which task in your teaching or research could **most benefit from AI support?**
  - How would you **ensure accuracy and ethical use** in that task?
  - What AI tool or platform could you explore first to support this task?
  - How could you **share best practices** with colleagues for responsible AI integration?
- 
- Group challenge: Map AI use to a specific academic scenario

## 2. Activity Overview

### Step 1: Form Groups

- Divide participants into **small groups** (3–5 members each).

### Step 2: Assign Scenarios

- Each group is assigned a specific academic scenario. Examples include:
  - Preparing a **department research report**
  - Assisting students in **literature review**
  - Managing **exam scheduling and grading**
  - Supporting **library services and resource discovery**
  - Monitoring **student engagement and attendance**

### Step 3: Map AI Use

- Groups discuss and identify:
  - Tasks within the scenario** that could benefit from AI
  - Suitable AI tools** for each task (e.g., Elicit.ai, Semantic Scholar, ChatGPT)
  - Expected benefits** (efficiency, accuracy, personalization, insight generation)
  - Ethical considerations** (accuracy, privacy, transparency)

## 3. Activity Template

Scenario Task	AI Tool / Platform	How AI Helps	Ethical / Accuracy Considerations
Example: Literature review for research report	Elicit.ai	Summarizes multiple papers, generates comparison tables	Verify summaries against original papers; avoid plagiarism
Example: Student query handling	ChatGPT or AI Chatbot	Provides instant responses to common questions	Ensure no personal student data is shared; review AI answers for accuracy

## 4. Group Discussion and Presentation

- Each group presents:
  - Their **scenario and mapped AI tools**
  - How AI improves efficiency or outcomes
  - Key **ethical and accuracy safeguards**
- Other groups provide feedback and suggestions, fostering collaborative learning.

## 5. Expected Learning Outcomes

After completing the challenge, participants will:

- Develop practical understanding of **AI applications in academic settings**
- Understand the importance of **human oversight, ethics, and verification**
- Gain skills in **collaborative problem-solving** with AI tools
- Be able to support **faculty and students** in integrating AI responsibly

## 6. Reflection Questions

- Which AI tools seemed most versatile across scenarios?
- What challenges or limitations did your group identify in using AI?
- How could your department implement these AI solutions in real workflows?
- What steps would you take to ensure **ethical and accurate use** of AI in these scenarios
- Journal prompt: "What's one thing you could automate?"

### 1. Introduction

Artificial Intelligence (AI) and automation tools have the potential to **reduce repetitive tasks, save time, and improve accuracy** in academic settings.

Reflecting on tasks that could be automated allows staff to **identify opportunities for efficiency**, while also considering **ethical, accuracy, and privacy concerns**.

This journaling exercise encourages **self-reflection, critical thinking, and proactive planning** for integrating AI responsibly into daily workflows.

### 2. Objective

To help participants:

- Identify routine or repetitive tasks in their academic or administrative roles
- Explore **AI or automation tools** that could support those tasks
- Reflect on **benefits and challenges** of automating tasks
- Consider **ethical and accuracy implications** in implementing automation

### 3. Journal Prompt Activity

#### **Prompt:**

"*What is one task in your daily work that you could automate using AI or technology? How would you do it, and what benefits or challenges might arise?*"

#### **Instructions:**

1. Take 5–10 minutes to write down your thoughts individually.
2. Consider these guiding questions:
  - o Which tasks are **repetitive, time-consuming, or prone to errors?**
  - o Could AI tools (e.g., Elicit.ai, Semantic Scholar, ChatGPT) **assist in this task?**
  - o What **ethical considerations** must you keep in mind? (privacy, accuracy, transparency)
  - o How would automation **improve efficiency** or enhance outcomes?
3. Optional: Share insights with a colleague or in a small group discussion for feedback.

#### 4. Example Responses

Task	Potential AI/Automation Tool	Expected Benefit	Ethical/Accuracy Considerations
Summarizing research papers	Elicit.ai	Saves hours in literature review	Verify summaries; ensure proper citations
Scheduling student appointments	AI calendar assistant	Reduces manual coordination	Avoid sharing sensitive student info publicly
Responding to common student queries	ChatGPT or AI chatbot	Provides instant responses	Check accuracy of AI answers; maintain transparency
Compiling administrative reports	Excel macros or AI data tools	Minimizes errors, saves time	Ensure correct data input; review AI-generated summaries

#### 5. Expected Learning Outcomes

After completing the journal prompt, participants will:

- Recognize tasks suitable for AI-assisted automation
- Understand the **benefits and limitations** of automation
- Consider **ethical responsibilities** when automating academic tasks
- Identify opportunities to **support faculty, students, and institutional processes** efficiently

#### 6. Reflection Questions

- Which automation idea seems most **impactful or feasible** in your daily work?
- What steps would you take to ensure **accuracy and ethical use**?
- How could automation **enhance your productivity and professional role**?
- Are there any potential **risks or unintended consequences** of automating this task?

#### Case Studies:

- Humanities: ChatGPT in historical analysis

## 1. Context

Historical research and analysis often involve **sifting through large volumes of texts, documents, and secondary sources** to identify patterns, narratives, and insights. Traditionally, this process is **time-consuming**, requiring extensive reading, summarization, and cross-referencing.

Recent advances in AI, particularly **language models like ChatGPT**, offer opportunities to **augment historical research** by generating summaries, analyzing textual patterns, and assisting with preliminary interpretations.

## 2. Objective

This case study explores how ChatGPT can support **historical analysis** in the humanities, highlighting:

- Applications in **research support**
- Potential **benefits and limitations**
- Considerations for **ethical and accurate AI use**

## 3. Scenario

A history department is preparing a research project on **the economic and social impacts of industrialization in 19th-century Europe**.

**Challenges for researchers include:**

- Large volumes of historical texts and archival records
- Need for quick identification of key events, trends, and patterns
- Balancing accuracy with interpretive analysis

## 4. AI Application: ChatGPT

**How ChatGPT was used:**

1. **Summarization:** Condensed multiple historical documents into concise summaries
2. **Thematic Analysis:** Identified recurring themes, such as labor reforms, urban migration, and technological adoption
3. **Contextual Queries:** Staff could ask ChatGPT to explain complex historical events in plain language
4. **Reference Assistance:** Suggested potential sources and citations (to be verified)

**Workflow Example:**

- Upload primary and secondary source excerpts
- Ask ChatGPT: "Summarize the key social changes during industrialization in Britain"
- Generate structured output with themes and bullet points for faculty review

## 5. Benefits Observed

Benefit	Impact in Humanities Research
<b>Efficiency</b>	Reduced initial reading and summarization time by 50%
<b>Insight Generation</b>	Highlighted themes and patterns not immediately evident
<b>Accessibility</b>	Assisted staff with limited historical expertise in understanding complex texts
<b>Collaboration</b>	Provided a foundation for faculty and students to build upon for in-depth analysis

## 6. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Accuracy</b> – AI may misinterpret context	Always verify AI outputs against primary sources
<b>Bias</b> – Training data may reflect historical biases	Use AI as a <b>support tool</b> , not sole authority
<b>Over-reliance</b> – Reduces critical thinking	Encourage human-led interpretation and analysis
<b>Citation Errors</b> – AI may suggest incorrect references	Cross-check all references before inclusion

## 7. Ethical Considerations

- Maintain **academic integrity** by acknowledging AI assistance in research outputs
- Protect **copyright and intellectual property** when using digital sources
- Use AI to **support human insight**, not replace critical historical reasoning

## 8. Key Takeaways

1. **AI as a Research Assistant:** ChatGPT can accelerate preliminary analysis and summarization in historical research.
2. **Human Oversight is Essential:** Staff must verify facts, context, and interpretations to maintain academic rigor.
3. **Skill Development:** Non-teaching staff supporting humanities research can use AI to manage data and provide summaries, freeing faculty to focus on deeper analysis.
4. **Ethical Use Matters:** Transparency, verification, and critical thinking ensure responsible AI adoption in humanities research.

## 9. Reflection Questions

- How can AI tools like ChatGPT **enhance efficiency** in humanities research without compromising rigor?
  - What strategies would you implement to **verify AI-generated historical summaries**?
  - In your role, how could non-teaching staff **support faculty in ethical AI use** for historical analysis?
- 
- Business: AI tools for market trend prediction

### 1. Context

In the business and commerce domain, understanding **market trends** is critical for decision-making, strategic planning, and competitive advantage. Traditionally, trend analysis relied on **manual research, surveys, and historical data review**, which is often **time-consuming and prone to human error**.

AI offers powerful capabilities for **analyzing large datasets, identifying patterns, and predicting future trends**, enabling faster and more data-driven decisions in business environments.

### 2. Objective

This case study explores how AI tools can support **market trend prediction**, highlighting:

- Practical applications in business analysis
- Benefits and limitations
- Ethical considerations for AI-driven insights

### 3. Scenario

A business analytics department in a university is supporting a student project on **predicting consumer behavior in the e-commerce sector**.

**Challenges include:**

- Large volumes of historical sales and customer data
- Identifying emerging trends from multi-source data
- Translating insights into actionable business strategies

### 4. AI Application: Market Trend Prediction Tools

**Tools Used:**

- **Tableau + AI Analytics** – For predictive dashboards and visualizations

- **Python ML libraries (no-code platforms like DataRobot or RapidMiner)** – For pattern detection and forecasting
- **ChatGPT or AI assistants** – For summarizing reports and generating business insights

#### **Workflow Example:**

1. Collect historical sales data from multiple sources
2. Use AI tool to **identify patterns in purchasing behavior**
3. Predict future market trends based on seasonality, demand, and competitor data
4. Visualize insights through dashboards for faculty and students

#### **5. Benefits Observed**

<b>Benefit</b>	<b>Impact in Business Analysis</b>
<b>Efficiency</b>	AI accelerates data processing and forecasting, reducing manual effort
<b>Accuracy</b>	Predictive models identify patterns not easily visible to humans
<b>Insight Generation</b>	Supports strategic decision-making and proactive planning
<b>Visualization</b>	Dashboards provide clear, actionable insights for presentations and reports
<b>Collaboration</b>	Non-teaching staff can assist faculty and students in data preparation and interpretation

#### **6. Limitations and Risks**

<b>Limitation/Risk</b>	<b>Mitigation Strategy</b>
<b>Data Quality Issues</b> – Incomplete or biased data may affect predictions	Validate and clean data before using AI tools
<b>Over-reliance on AI</b> – Decisions based solely on AI outputs	Combine AI insights with human judgment
<b>Model Misinterpretation</b> – Misreading predictive trends	Provide training for staff on interpreting AI-generated results
<b>Privacy Concerns</b> – Using sensitive customer or student data	Ensure compliance with data privacy regulations

#### **7. Ethical Considerations**

- Ensure **transparency** in how AI predictions are generated
- Avoid using AI outputs **unverified** for decision-making
- Protect **data privacy and confidentiality**
- Use AI as a **support tool**, complementing human expertise

## 8. Key Takeaways

1. **AI as a Business Analyst Assistant:** AI tools can process large datasets, uncover trends, and provide actionable forecasts.
2. **Human Oversight is Essential:** Staff must verify results and interpret predictions responsibly.
3. **Skill Development:** Non-teaching staff supporting business research can **prepare, clean, and organize data**, enabling faculty and students to focus on analysis.
4. **Ethical AI Use Matters:** Data privacy, accuracy, and transparency are key in predictive analytics.

## 9. Reflection Questions

- Which tasks in market analysis could benefit most from AI support?
- How can non-teaching staff **verify and validate AI-generated predictions**?
- How would you **integrate AI insights into reports and presentations** while maintaining transparency and accuracy?
  
- Medicine: Semantic Scholar in clinical research review

### 1. Context

Clinical research involves **reviewing vast amounts of scientific literature**, including journal articles, clinical trials, and systematic reviews. Traditionally, this process is **time-intensive** and requires careful cross-referencing to ensure accuracy and relevance.

AI-powered tools like **Semantic Scholar** can support researchers and academic staff by **streamlining literature review, identifying key papers, and highlighting trends**, enabling faster, more efficient clinical research.

### 2. Objective

This case study explores how Semantic Scholar can assist in **clinical research reviews**, highlighting:

- Practical applications in medical research
- Benefits and limitations
- Ethical considerations for AI-supported literature review

### 3. Scenario

A medical department is conducting a research review on **novel therapies for Type 2 Diabetes**.

**Challenges include:**

- Large volume of research publications
- Need to identify **high-impact studies** quickly
- Extracting relevant data for systematic review or meta-analysis

#### 4. AI Application: Semantic Scholar

##### How Semantic Scholar was used:

1. **Advanced Search Queries:** Input keywords such as “Type 2 Diabetes therapies clinical trials”
2. **Paper Filtering:** Narrow results by publication year, journal, and citations
3. **Summarization:** Quickly access abstracts and key highlights
4. **Citation Mapping:** Identify influential studies and trending research topics
5. **Export Tools:** Collect references for reports and presentations

##### Workflow Example:

- Staff conduct initial searches using Semantic Scholar
- AI highlights highly cited or recent papers
- Non-teaching staff compile structured summaries for faculty review
- Faculty focus on interpretation, methodology evaluation, and drafting conclusions

#### 5. Benefits Observed

Benefit	Impact in Clinical Research Review
<b>Efficiency</b>	Speeds up literature review and resource identification
<b>Relevance</b>	Filters papers by impact, citations, and recency
<b>Insight Generation</b>	Highlights trends and gaps in clinical research
<b>Accessibility</b>	Assists staff with limited domain expertise in understanding complex medical literature
<b>Collaboration</b>	Non-teaching staff can provide structured summaries for faculty review

#### 6. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Accuracy Issues</b> – AI may misinterpret abstracts or context	Staff cross-check findings with full-text papers
<b>Incomplete Coverage</b> – Some studies may not be indexed	Combine Semantic Scholar with other databases like PubMed
<b>Over-reliance</b> – Risk of skipping critical evaluation	Faculty must interpret and validate results

Limitation/Risk	Mitigation Strategy
<b>Citation Errors</b> – AI may misrepresent references	Verify all citations before use

## 7. Ethical Considerations

- Ensure **academic integrity** by properly citing AI-assisted research outputs
- Protect **patient confidentiality** when using clinical datasets
- Maintain **human oversight** to evaluate methodological quality and relevance
- Use AI as a **support tool**, complementing expert judgment

## 8. Key Takeaways

1. **AI as a Literature Review Assistant:** Semantic Scholar helps staff efficiently identify and organize relevant clinical research.
  2. **Human Oversight is Crucial:** Staff must verify AI-generated summaries and citations.
  3. **Role of Non-Teaching Staff:** Organizing, summarizing, and curating research resources frees faculty to focus on analysis and interpretation.
  4. **Responsible Use:** Ethical, accurate, and transparent AI use enhances research quality and institutional credibility.
- 

## 9. Reflection Questions

- How could Semantic Scholar reduce workload in clinical research reviews?
- What steps should staff take to **ensure accuracy and reliability** of AI-generated outputs?
- How can non-teaching staff support faculty in **ethical and effective AI-assisted literature reviews?**

### Scenario-Based Discussions:

- “Should students use AI to assist their essays?”

## 1. Introduction

The rise of AI tools, like ChatGPT, has created opportunities for students to **enhance their essays** through research summaries, drafting ideas, and improving writing quality.

However, it also raises **ethical, academic integrity, and critical thinking concerns**. Scenario-based learning helps staff explore real-world dilemmas and **develop strategies to guide students responsibly**.

## 2. Objective

To help participants:

- Understand the **ethical, practical, and academic implications** of AI-assisted essay writing
- Analyze **realistic scenarios** involving AI use in student assignments
- Develop **strategies to support faculty and students** in responsible AI usage
- Reflect on the role of **non-teaching academic staff** in promoting AI literacy

## 3. Scenario-Based Learning Structure

### Scenario 1: AI-Assisted Drafting

**Situation:** A student uses ChatGPT to draft the introduction of an essay.

**Questions for Reflection:**

- Is it acceptable for students to use AI for idea generation?
- How can staff ensure the student understands and **originally develops the content**?
- What guidance can be given to promote **academic integrity**?

### Scenario 2: Complete Essay Generation

**Situation:** A student submits an essay largely generated by an AI tool.

**Questions for Reflection:**

- How does this affect **learning outcomes** and critical thinking?
- What policies or guidelines should be in place to address AI overuse?
- How can non-teaching staff support faculty in **identifying and preventing plagiarism**?

### Scenario 3: AI for Editing and Proofreading

**Situation:** A student uses AI to **check grammar, sentence structure, and clarity**.

**Questions for Reflection:**

- Is this considered ethical academic support?
- How can staff guide students to use AI as a **supportive tool, not a replacement** for learning?
- What are the potential benefits in **skill development and writing improvement**?

### Scenario 4: Collaborative AI Use

**Situation:** A group of students uses AI to **research sources and organize content** for a group essay.

**Questions for Reflection:**

- How can staff encourage **responsible collaboration** with AI tools?
- What safeguards should be in place to maintain **original contributions**?
- How can AI enhance learning **without undermining evaluation**?

#### 4. Activity Instructions for Staff

1. **Divide into Small Groups:** Assign each scenario to a group.
2. **Analyze the Scenario:** Identify ethical, academic, and practical implications.
3. **Develop Recommendations:** Suggest policies, guidance, or interventions for students.
4. **Present Solutions:** Share your findings and discuss with other groups.
5. **Facilitator Summary:** Highlight best practices for responsible AI use in essays.

#### 5. Key Learning Points

- AI can **enhance learning** if used as a **supportive tool**, not a replacement for critical thinking.
- Academic integrity and originality remain essential in essay writing.
- Non-teaching staff can play a role in:
  - o Guiding students on **ethical AI use**
  - o Supporting faculty in **monitoring and verifying work**
  - o Promoting **AI literacy** across the institution
- Clear policies and awareness campaigns are crucial to prevent misuse.

#### 6. Reflection Questions

- What scenarios of AI misuse have you observed or anticipate in your institution?
- How can staff **balance encouragement of AI tools with academic integrity**?
- What strategies can you implement to help students **use AI responsibly** for essay writing?
- “How would your dean react to AI-assisted teaching?”

#### 1. Introduction

AI-assisted teaching, using tools like ChatGPT, AI tutors, or automated grading systems, is becoming more common in academic institutions. However, administrators, such as deans, may have **mixed reactions** depending on institutional policies, ethical concerns, and teaching goals.

Non-teaching academic staff need to understand these perspectives to **support faculty, ensure compliance, and promote responsible AI integration**.

## 2. Objective

To help participants:

- Explore **administrative perspectives** on AI-assisted teaching
- Anticipate concerns, questions, and potential support from deans
- Identify ways non-teaching staff can **facilitate AI integration** responsibly
- Encourage reflective thinking about **ethical and effective AI use**

## 3. Scenario Exploration

### Scenario 1: Dean is Supportive

**Situation:** The dean encourages the use of AI tools for personalized learning and efficiency.

**Discussion Points:**

- How would AI tools **enhance teaching outcomes**?
- What support would faculty need from non-teaching staff?
- How could staff **document and monitor AI usage** for accountability?

### Scenario 2: Dean is Cautious

**Situation:** The dean is cautious about AI due to concerns about academic integrity, bias, or quality of learning.

**Discussion Points:**

- What **policies or safeguards** could address these concerns?
- How can non-teaching staff **help faculty use AI responsibly**?
- What training or awareness programs could be implemented?

### Scenario 3: Dean is Resistant

**Situation:** The dean opposes AI-assisted teaching, fearing over-reliance or devaluation of traditional pedagogy.

**Discussion Points:**

- How can staff **support faculty in demonstrating AI's value** without overstepping policies?
- How can pilot programs or case studies be used to **show evidence of AI's benefits**?
- What ethical considerations must be emphasized in reporting AI usage?

## 4. Role of Non-Teaching Academic Staff

- **Facilitate Communication:** Act as a bridge between faculty and administration regarding AI adoption
- **Document AI Usage:** Track how AI tools are used in teaching to provide reports for administrative review
- **Support Training:** Help organize workshops or resources for responsible AI integration

- **Promote Policy Compliance:** Ensure that AI tools are used ethically and according to institutional guidelines

## 5. Reflection and Discussion Questions

- How might your dean's **perspective influence AI adoption** in your department?
- What strategies can non-teaching staff use to **address concerns about AI-assisted teaching?**
- How could staff **support faculty while ensuring compliance** with academic standards?
- What evidence or pilot initiatives could **demonstrate AI's positive impact** on teaching and learning?

## 6. Key Takeaways

1. **AI in teaching is context-sensitive:** Reactions from administrators may vary based on policies, ethical concerns, and institutional priorities.
2. **Non-teaching staff play a critical role** in supporting faculty while ensuring responsible AI use.
3. **Communication and documentation** are key to aligning AI initiatives with administrative expectations.
4. **Pilot projects and evidence-based reporting** can help overcome resistance and encourage responsible adoption.

# Module 2 AI for Research & Academic Writing

## Part 1: Topics Covered:

- AI in academic writing

### 1. Introduction

Academic writing is a core activity in higher education, encompassing **research papers, essays, reports, and grant proposals**. AI tools, particularly large language models like ChatGPT, are increasingly used to assist with drafting, editing, summarizing, and referencing.

For **non-teaching academic staff**, understanding AI's role in academic writing is essential to:

- Support faculty and students efficiently
- Ensure ethical and responsible use of AI tools
- Maintain academic integrity while leveraging technology

### 2. Objective

By the end of this section, participants will be able to:

- Recognize how AI can assist in academic writing
- Identify the benefits and limitations of AI in writing tasks
- Understand ethical considerations and best practices
- Support faculty and students in using AI responsibly

### 3. Applications of AI in Academic Writing

AI Application	Description	Use Cases for Staff Support
Drafting Assistance	AI generates initial text based on prompts	Help faculty or students create outlines or draft sections for essays, reports, or proposals
Editing and Proofreading	Grammar, punctuation, and style suggestions	Support in improving readability and professional formatting of documents
Summarization	Condenses long texts into concise summaries	Summarize research articles, reports, or meeting notes for faculty review
Citation and Reference Management	Suggests references, formats citations	Assist in organizing bibliographies and ensuring correct citation formats
Plagiarism Detection	Checks for originality	Support faculty in maintaining academic integrity by screening AI-assisted content
Idea Generation	Provides topic ideas or research questions	Facilitate brainstorming sessions for research or student assignments

### 4. Benefits of AI in Academic Writing

- **Efficiency:** Reduces time spent on repetitive tasks like formatting or summarizing
- **Quality Improvement:** Enhances grammar, clarity, and structure of written content
- **Accessibility:** Supports staff or students with varying writing skills
- **Idea Support:** Helps generate initial ideas or perspectives for research or assignments
- **Collaboration:** Facilitates shared writing projects with AI-generated outlines or summaries

### 5. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Accuracy</b> – AI may produce factual errors or misleading content	Always verify AI outputs against credible sources
<b>Over-Reliance</b> – May reduce critical thinking and learning	Encourage human review and active engagement with content

Limitation/Risk	Mitigation Strategy
<b>Ethical Concerns</b> – Potential plagiarism or misuse	Establish clear guidelines for AI-assisted writing
<b>Bias</b> – AI reflects biases present in training data	Cross-check AI suggestions and ensure diverse perspectives
<b>Confidentiality</b> – Risk of exposing sensitive data	Avoid entering confidential or unpublished information in AI platforms

## 6. Ethical Considerations

- Always **cite AI assistance** when relevant
- Maintain **academic integrity**; AI should support, not replace, human writing
- Ensure **human oversight** for interpretation, argumentation, and conclusions
- Protect **student and institutional data** when using AI tools

## 7. Role of Non-Teaching Academic Staff

- Train faculty and students on **AI writing tools and best practices**
- Assist in **document formatting, summarization, and reference management**
- Monitor AI outputs for **accuracy, relevance, and ethical compliance**
- Support the development of **AI literacy programs** within the institution

## 8. Reflection Questions

- Which aspects of academic writing could **benefit most from AI support** in your department?
- How can staff ensure **accuracy and originality** when using AI tools?
- What strategies could you implement to **encourage ethical AI use** among students and faculty?
- How can non-teaching staff **balance AI assistance with human oversight**?

## 9. Key Takeaways

1. AI can **enhance efficiency, quality, and accessibility** in academic writing.
  2. **Human oversight remains essential** to ensure accuracy, critical thinking, and originality.
  3. Non-teaching staff play a critical role in **supporting, monitoring, and training** faculty and students in responsible AI-assisted writing.
  4. Ethical use, transparency, and verification are crucial for **maintaining academic integrity**.
- Literature review automation

## 1. Introduction

A **literature review** is a critical component of academic research, involving the **collection, evaluation, and synthesis of existing studies**. Traditionally, this process is **time-consuming**, requiring extensive reading, note-taking, and summarization.

AI-powered tools now allow researchers and academic staff to **automate parts of the literature review**, such as identifying relevant papers, summarizing findings, and organizing references efficiently.

## 2. Objective

By the end of this section, participants will be able to:

- Understand how AI can **assist and automate literature reviews**
- Identify **tools and techniques** for efficient literature synthesis
- Recognize the **benefits and limitations** of automated reviews
- Support faculty and students in using AI ethically and effectively

## 3. Applications of Literature Review Automation

AI Application	Description	Use Cases for Staff Support
Automated Search	AI tools scan databases for relevant articles	Help staff quickly gather relevant literature for research projects
Summarization	Condenses articles into concise summaries	Produce structured summaries for faculty or students to review
Thematic Analysis	Identifies recurring themes and patterns across papers	Assist in organizing research findings and highlighting trends
Reference Management	Suggests and formats citations	Support creation of bibliographies and ensure citation accuracy
Comparison Tables	AI generates side-by-side comparisons of studies	Facilitate evaluation of methods, findings, and gaps in research
Gap Analysis	Detects under-researched areas	Assist faculty in identifying potential research opportunities

## 4. Benefits of Automated Literature Reviews

- **Efficiency:** Reduces time spent manually searching, reading, and summarizing papers
- **Comprehensiveness:** AI can scan large volumes of literature across multiple sources
- **Organization:** Structured outputs like tables, charts, and summaries enhance clarity

- **Support for Collaboration:** Facilitates joint research projects and shared understanding of the literature
- **Accessibility:** Helps staff or students with limited domain expertise understand complex studies

## 5. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Accuracy Issues</b> – AI may misinterpret study findings	Always verify summaries against original papers
<b>Incomplete Coverage</b> – AI may miss relevant articles	Combine AI-assisted search with manual checks in databases
<b>Over-Reliance</b> – Can reduce critical engagement with sources	Encourage human review and interpretation
<b>Bias</b> – AI reflects biases in source materials	Use multiple sources and verify conclusions
<b>Ethical Concerns</b> – Plagiarism or misrepresentation of sources	Ensure proper citations and transparency about AI assistance

## 6. Ethical Considerations

- Cite AI-generated summaries when used to support research
- Maintain **academic integrity**; AI should **assist, not replace, critical analysis**
- Protect **sensitive or unpublished data** when inputting into AI platforms
- Use AI outputs as **starting points**, not final conclusions

## 7. Role of Non-Teaching Academic Staff

- Assist faculty and students in **using AI tools for literature review**
- Help in **organizing, summarizing, and formatting outputs** for reports
- Verify the **accuracy and relevance** of AI-generated summaries
- Train users on **ethical, responsible, and effective AI practices**

## 8. Reflection Questions

- Which parts of the literature review process could be **most efficiently automated** in your department?
- How can staff ensure AI-generated summaries are **accurate and unbiased**?
- What strategies could you implement to **support faculty and students** in responsible AI-assisted reviews?
- How might automated literature reviews **change the workflow** of research projects?

## 9. Key Takeaways

1. AI can **significantly accelerate and streamline** literature reviews.
  2. Human oversight is essential to ensure **accuracy, relevance, and integrity**.
  3. Non-teaching staff play a vital role in **supporting faculty and students** with AI-assisted research workflows.
  4. Ethical and transparent use of AI is critical to maintain **academic standards and credibility**.
- AI-based citation and reference tools

### 1. Introduction

Accurate citation and referencing are **essential components of academic writing**, ensuring credit to original authors and maintaining **academic integrity**. Traditionally, managing references manually is **time-consuming and prone to errors**.

AI-based citation tools now allow researchers, faculty, and students to **automate the creation, organization, and formatting of references**, saving time and improving accuracy.

### 2. Objective

By the end of this section, participants will be able to:

- Understand the **role of AI in citation and reference management**
- Identify popular AI tools for citations
- Recognize the **benefits and limitations** of using AI for referencing
- Support faculty and students in using AI ethically and efficiently

### 3. Applications of AI in Citation and References

AI Application	Description	Use Cases for Staff Support
Automatic Citation Generation	Generates citations in various styles (APA, MLA, Chicago)	Assist faculty and students in quickly formatting references for papers or reports
Reference Organization	Maintains databases of sources	Help organize literature for ongoing research projects or departmental resources
Plagiarism Prevention	Cross-checks sources and references	Support verification of originality and proper attribution in student and faculty work
Bibliography Creation	Compiles references automatically from documents or PDFs	Create ready-to-use bibliographies for faculty or student submissions
Citation Suggestion	Recommends additional relevant	Aid in enhancing research quality by

AI Application	Description	Use Cases for Staff Support
	references based on content	suggesting related studies
<b>Integration with Writing Tools</b>	Works with Word, Google Docs, or LaTeX	Streamline workflow for drafting, editing, and submitting academic papers

#### 4. Benefits of AI-Based Citation Tools

- Efficiency:** Reduces time spent manually formatting references
- Accuracy:** Minimizes errors in citation styles and numbering
- Consistency:** Ensures uniformity across documents and publications
- Ease of Use:** User-friendly interfaces for faculty and students with varying expertise
- Research Support:** Suggests additional relevant sources to strengthen academic work

#### 5. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Incorrect Formatting</b> – AI may misapply citation rules	Verify formatting manually or through style guides
<b>Incomplete Source Recognition</b> – AI may miss some references	Cross-check AI-generated lists with original sources
<b>Over-Reliance</b> – Students may skip learning citation rules	Encourage understanding of citation principles alongside AI use
<b>Data Privacy</b> – Using sensitive or unpublished sources	Avoid inputting confidential information into AI tools
<b>Ethical Misuse</b> – Using AI to fabricate or manipulate references	Maintain academic integrity by reviewing all AI suggestions

#### 6. Ethical Considerations

- Ensure all AI-generated citations are **verified for accuracy**
- Maintain **academic integrity**; AI is a tool, not a replacement for proper research practice
- Avoid **inputting sensitive or proprietary content** into AI platforms
- Use AI outputs as **supportive aids**, not as final, unchecked content

#### 7. Role of Non-Teaching Academic Staff

- Train faculty and students on **AI citation tools and best practices**
- Assist in **organizing and formatting references** for research papers and reports

- Verify the **accuracy and completeness** of AI-generated citations
- Promote **ethical and responsible AI use** in academic writing

## 8. Reflection Questions

- Which AI-based citation tool could **best support your department's research and writing needs?**
- How can staff ensure AI-generated citations are **accurate and complete?**
- What strategies could be implemented to **teach students ethical use of AI in referencing?**
- How might AI citation tools **change workflow efficiency** in academic writing?

## 9. Key Takeaways

1. AI-based citation tools **streamline referencing and improve accuracy**, saving time for faculty and students.
2. **Human oversight is essential** to ensure correctness, relevance, and academic integrity.
3. Non-teaching staff can **support faculty and students** by training, verifying, and organizing AI-generated references.
4. Ethical use, transparency, and verification are crucial for **maintaining credibility in academic outputs.**

- AI for plagiarism detection and feedback

## 1. Introduction

Maintaining **academic integrity** is a cornerstone of higher education. Plagiarism—whether intentional or unintentional—can compromise learning outcomes and institutional credibility.

AI-based tools now provide **efficient plagiarism detection, similarity checking, and feedback** mechanisms, helping faculty and staff identify potential issues and guide students toward proper citation and original work.

## 2. Objective

By the end of this section, participants will be able to:

- Understand the **role of AI in detecting plagiarism**
- Identify tools that provide plagiarism detection and feedback
- Recognize **benefits, limitations, and ethical considerations**
- Support faculty and students in using AI responsibly for academic integrity

### 3. Applications of AI in Plagiarism Detection and Feedback

AI Application	Description	Use Cases for Staff Support
<b>Similarity Checking</b>	Compares student submissions against databases and online sources	Assist faculty in identifying potential plagiarism in assignments
<b>Feedback Generation</b>	Provides suggestions to improve originality and paraphrasing	Guide students on proper citation and academic writing practices
<b>Reference Verification</b>	Checks if cited sources are accurate and properly formatted	Support students and faculty in maintaining correct citations
<b>Pattern Detection</b>	Identifies repeated phrases or structural similarities across documents	Helps faculty understand trends or recurring issues in submissions
<b>Integration with LMS</b>	Works with Learning Management Systems for streamlined submission analysis	Enables staff to monitor and provide feedback efficiently across multiple courses

### 4. Benefits of AI in Plagiarism Detection

- Efficiency:** Speeds up the review of large volumes of student work
- Accuracy:** Detects textual similarities that may be missed manually
- Consistency:** Provides uniform evaluation across multiple assignments or courses
- Educational Feedback:** Offers constructive guidance to improve writing and originality
- Support for Faculty:** Freed up time for instructors to focus on teaching and mentoring

### 5. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>False Positives</b> – AI may flag common phrases or correctly cited text	Review flagged content manually before taking action
<b>Incomplete Database Coverage</b> – Not all sources may be indexed	Use multiple AI tools or databases for comprehensive checks
<b>Over-Reliance</b> – Students may depend solely on AI feedback	Encourage active learning and understanding of proper citation
<b>Data Privacy</b> – Submitting student work to online AI tools	Ensure compliance with privacy policies and institutional guidelines
<b>Ethical Misuse</b> – Misinterpretation of AI reports may lead to unfair consequences	Always pair AI analysis with human judgment and faculty review

## 6. Ethical Considerations

- AI should **support academic integrity**, not replace human oversight
- Ensure **confidentiality and privacy** of student work
- Provide **constructive feedback**, avoiding punitive approaches without verification
- Promote **responsible AI use** among students for learning and development

## 7. Role of Non-Teaching Academic Staff

- Assist in **running plagiarism checks** and generating reports for faculty
- Help students understand **AI feedback and improve originality**
- Train faculty and students on **best practices for AI-assisted plagiarism detection**
- Ensure compliance with **ethical guidelines and privacy regulations**

## 8. Reflection Questions

- How can AI-based plagiarism detection **enhance learning rather than just policing?**
- What steps should staff take to **verify AI results before acting on them?**
- How can non-teaching staff **support faculty in providing constructive feedback** based on AI reports?
- What policies could be implemented to ensure **responsible AI use in plagiarism detection?**

## 9. Key Takeaways

1. AI tools **improve efficiency and accuracy** in plagiarism detection and feedback.
2. **Human oversight is essential** to interpret AI results and provide constructive guidance.
3. Non-teaching staff play a critical role in **supporting faculty and students**, training, and ensuring ethical use.
4. Responsible AI use enhances **academic integrity, learning, and credibility**.

### Hands-On Activities:

- Use Scite.ai to generate citation trees

### Tools Required

- Computer or laptop with internet access
- Scite.ai account (free or institutional access)
- Example research article DOI or title

### 3. Overview of Activity Steps

#### Step 1: Access Scite.ai

- Navigate to [Scite.ai](#)
- Log in or create an account

#### Step 2: Search for a Research Article

- Enter the **DOI, title, or keywords** of a relevant article
- Open the article page to access citation details

#### Step 3: Generate Citation Tree

- Click on “**Citation Map**” or “**Citation Tree**” option
- Scite.ai will display a **visual map of how the article is cited** by other research
- Nodes may indicate:
  - o Supporting citations
  - o Contrasting citations
  - o Mentioning citations

#### Step 4: Explore the Tree

- Navigate through **layers of citations** to see influence and relationships
- Identify **key papers**, research clusters, and trends
- Observe how AI classifies citation types (supporting, contrasting, mentioning)

#### Step 5: Export and Share

- Use Scite.ai options to **export citation data** or **capture images of the tree**
- Use exported maps for **research summaries, presentations, or reports**

### 4. Learning Outcomes

After completing this activity, participants will be able to:

- Understand the concept of **citation mapping and citation trees**
- Use Scite.ai to **visualize citation relationships** efficiently
- Identify **key supporting or contrasting studies** for research projects
- Support faculty and students in **navigating academic literature effectively**

### 5. Tips for Non-Teaching Staff

- Encourage faculty to **start with key seminal papers** for citation mapping
- Use citation trees to **track research impact over time**
- Highlight **trends and gaps** in literature for curriculum or research support
- Emphasize **accuracy by cross-checking references** before reporting

## 6. Reflection Questions

- How could citation trees help in **preparing literature reviews or research reports?**
  - What are the **advantages of visualizing citation relationships** compared to traditional reference lists?
  - How can non-teaching staff use citation mapping to **support faculty and students** effectively?
- 
- Input sample paragraph into AI writing tools for improvement

### Tools Required

- Computer or laptop with internet access
- AI writing tool (e.g., ChatGPT, Grammarly, Quillbot, or Jasper AI)
- Sample paragraph (provided by instructor or created by participant)

## 3. Overview of Activity Steps

### Step 1: Prepare Sample Paragraph

- Use a **short paragraph (4–6 sentences)** that contains:
  - o Grammatical errors
  - o Awkward phrasing
  - o Repetitive words or unclear ideas

#### Example:

"AI can help students write essays. It makes their writing better. But students need to check the work. They should not rely too much. AI is useful."

### Step 2: Access AI Writing Tool

- Open the selected AI tool in a browser or app
- Log in if required

### Step 3: Input the Paragraph

- Paste the sample paragraph into the input field
- Select **desired improvement options** if available (e.g., clarity, grammar, tone)

### Step 4: Generate AI Suggestions

- Ask the AI to **rewrite, improve, or enhance** the paragraph
- Review the AI output carefully
- Compare with the original text to identify improvements

### Step 5: Evaluate the Output

- Assess improvements in:
  - o Grammar and punctuation
  - o Sentence structure and flow
  - o Vocabulary and style
  - o Overall clarity and coherence

### Step 6: Discuss Ethical Use

- Emphasize that AI should **assist, not replace** human writing
- Encourage **review and verification** of AI outputs before submission

## 4. Learning Outcomes

After completing this activity, participants will be able to:

- Use AI tools to **improve writing quality**
- Identify areas where AI assistance is **beneficial versus inappropriate**
- Support faculty and students in **ethical and responsible AI-assisted writing**
- Compare AI outputs with original content to **enhance learning**

## 5. Tips for Non-Teaching Staff

- Encourage faculty to use AI for **draft improvement, proofreading, and brainstorming**
- Highlight that AI suggestions may **require human review** for accuracy and appropriateness
- Use small practice exercises to help students **understand AI capabilities and limitations**
- Record examples to **demonstrate AI-assisted improvements in workshops**

## 6. Reflection Questions

- How did AI improve the sample paragraph in terms of **clarity, grammar, and style**?
- Which types of errors are AI tools **most effective at correcting**?
- How can staff ensure that students **use AI responsibly** for writing assistance?
- How could this activity be **integrated into faculty training or student workshops**?

## Case Studies:

- Law: AI tools for case law summarization

## Introduction

Legal research often involves reviewing **voluminous case laws, statutes, and judicial opinions**. Traditionally, this process is **time-consuming and complex**, requiring careful reading and synthesis of legal language.

AI-powered tools now allow law faculty, students, and support staff to **summarize case law, extract key points, and organize legal information efficiently**, helping make research and teaching more productive.

## 2. Objective

By the end of this section, participants will be able to:

- Understand how AI can **assist in summarizing case law**
- Identify **AI tools suitable for legal research**
- Recognize the **benefits and limitations** of AI-assisted legal summaries
- Support faculty and students in **using AI responsibly and ethically** in legal research

## 3. Applications of AI in Case Law Summarization

AI Application	Description	Use Cases for Staff Support
Case Summarization	AI extracts key facts, issues, and rulings	Assist faculty in preparing summaries for teaching or research
Issue Identification	Highlights legal issues or arguments in cases	Support students in understanding complex legal reasoning
Citation Tracking	Identifies precedent and references in judgments	Help organize case law references for assignments or publications
Legal Brief Drafting	Generates structured outlines from case facts	Aid faculty in preparing teaching notes or research drafts
Comparison Across Cases	Detects similarities and differences in rulings	Assist in thematic or doctrinal analysis across multiple cases

## 4. Benefits of AI in Legal Research

- **Efficiency:** Speeds up the review of lengthy case judgments
- **Clarity:** Simplifies complex legal language into digestible summaries
- **Consistency:** Provides standardized summaries across multiple cases
- **Support for Learning:** Helps students grasp key legal concepts quickly
- **Collaboration:** Assists non-teaching staff in supporting faculty with **research and teaching preparation**

## 5. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Accuracy Issues</b> – AI may misinterpret legal reasoning	Always cross-check AI-generated summaries with full judgments
<b>Over-Reliance</b> – May reduce critical reading skills	Encourage human review and understanding of legal texts
<b>Ethical Concerns</b> – Misrepresentation of legal content	Ensure AI outputs are used <b>as a support tool</b> , not a substitute for professional analysis
<b>Confidentiality</b> – Risk when inputting sensitive case information	Avoid using unpublished or confidential materials in AI tools
<b>Bias</b> – AI may reflect bias present in training data	Verify outputs and consider multiple sources for balanced summaries

## 6. Ethical Considerations

- AI should **support human legal analysis**, not replace it
- Maintain **accuracy and integrity** when summarizing legal content
- Avoid sharing **confidential or sensitive legal materials** with AI platforms
- Clearly indicate **AI-assisted summaries** in teaching or research materials

## 7. Role of Non-Teaching Academic Staff

- Assist faculty in **inputting cases and generating summaries**
- Organize and maintain **structured case law databases**
- Verify AI outputs for **accuracy, completeness, and ethical compliance**
- Provide training and guidance for faculty and students on **responsible AI use in legal research**

## 8. Reflection Questions

- How can AI-assisted case law summaries **reduce workload** for faculty and staff?
- What steps should staff take to **verify AI outputs for accuracy and context**?
- How can non-teaching staff help students **understand key legal issues without over-relying on AI**?
- What ethical guidelines should be emphasized when using AI in legal research?

## 9. Key Takeaways

1. AI tools can **streamline the summarization and analysis of case law**, saving time for research and teaching.
2. **Human oversight is essential** to ensure accuracy, legal context, and ethical compliance.
3. Non-teaching staff play a critical role in **supporting faculty and students** with AI-assisted legal research.
4. Responsible use of AI enhances **learning, research quality, and institutional credibility**.

- Medicine: Literature review with Scite.ai

## Introduction

Conducting a **literature review in medical research** involves analyzing a vast number of publications, including clinical trials, systematic reviews, and journal articles. Traditionally, this process is **time-consuming and labor-intensive**, requiring careful organization and evaluation of research quality.

Scite.ai, an AI-powered platform, allows researchers and support staff to **analyze citation networks, summarize studies, and track research trends**, making literature reviews faster, more accurate, and insightful.

## 2. Objective

By the end of this section, participants will be able to:

- Understand how Scite.ai can **support medical literature reviews**
- Identify ways to **visualize citation networks and extract key information**
- Recognize the **benefits, limitations, and ethical considerations** of AI-assisted literature review
- Assist faculty and students in **efficient and responsible use** of Scite.ai

## 3. Applications of Scite.ai in Medical Literature Review

Application	Description	Use Cases for Staff Support
Citation Analysis	Maps how studies are cited (supporting, contrasting, mentioning)	Identify influential papers and research trends in medicine
Summarization	Provides concise summaries of papers	Help faculty/students quickly grasp key findings
Research Gap Identification	Detects under-researched areas or conflicting results	Assist in designing new studies or projects
Reference Management	Organizes relevant literature efficiently	Compile structured bibliographies for reports or presentations

Application	Description	Use Cases for Staff Support
Trend Analysis	Highlights emerging topics in medical research	Support faculty in curriculum updates or grant proposals

#### 4. Benefits of Using Scite.ai

- **Efficiency:** Speeds up the review of large volumes of medical publications
- **Accuracy:** Highlights reliable, highly cited, and influential studies
- **Insight Generation:** Reveals trends, gaps, and supporting/contrasting evidence
- **Collaboration:** Enables staff to prepare organized summaries for faculty and student use
- **Enhanced Decision-Making:** Supports evidence-based teaching, research proposals, and systematic reviews

#### 5. Limitations and Risks

Limitation/Risk	Mitigation Strategy
<b>Incomplete Coverage</b> – Not all journals or studies are indexed	Supplement with manual searches in PubMed, MEDLINE, or other databases
<b>Misinterpretation of AI outputs</b> – AI may oversimplify complex findings	Staff should verify summaries against original papers
<b>Over-Reliance</b> – May reduce critical evaluation skills	Encourage faculty and students to critically analyze AI-assisted outputs
<b>Data Privacy</b> – Using unpublished or sensitive data	Avoid uploading confidential datasets to the platform
<b>Bias</b> – Citation metrics may favor older or highly cited studies	Cross-check multiple sources to ensure balanced analysis

#### 6. Ethical Considerations

- Ensure AI is **used to support, not replace, critical analysis**
- Verify outputs for **accuracy and completeness**
- Protect **confidential or unpublished research data**
- Clearly indicate when AI tools are used in summaries or reports

#### 7. Role of Non-Teaching Academic Staff

- Assist in **inputting search queries and organizing outputs** from Scite.ai
- Summarize key findings and **prepare citation maps or structured literature tables**

- Train faculty and students on **effective use of Scite.ai**
- Monitor and verify outputs to **ensure accuracy, relevance, and ethical compliance**

## 8. Reflection Questions

- How can Scite.ai **reduce time and effort** in medical literature reviews?
- What steps should staff take to **verify AI-generated summaries and citation maps**?
- How can non-teaching staff help students **interpret trends and gaps** identified by Scite.ai?
- What ethical guidelines are important when using AI-assisted literature review tools in medicine?

## 9. Key Takeaways

1. Scite.ai **enhances efficiency, insight, and organization** in medical literature reviews.
2. Human oversight is essential to **verify accuracy and ensure critical analysis**.
3. Non-teaching staff play a critical role in **supporting faculty and students** in AI-assisted research workflows.
4. Responsible AI use ensures **integrity, reliability, and credibility** in medical research and teaching.

### Scenario-Based Discussions:

- “Would you accept an AI-written thesis intro?”

### Introduction

With the rise of AI tools capable of generating sophisticated text, students may be tempted to **use AI to draft parts of their thesis**, including the introduction. This raises questions about **academic integrity, originality, and learning outcomes**.

Scenario-based learning helps staff **explore the implications, evaluate risks, and develop strategies** to guide students responsibly.

## 2. Objective

Participants will be able to:

- Analyze scenarios where AI is used in thesis writing
- Consider **ethical, academic, and practical implications**
- Develop strategies for **policy, guidance, and monitoring**
- Understand the role of non-teaching staff in **supporting responsible AI use**

### 3. Scenario Exploration

#### Scenario 1: Fully AI-Written Introduction

**Situation:** A student submits a thesis introduction generated entirely by ChatGPT.

**Questions for Reflection:**

- Should this be accepted as original work?
- How might this impact learning outcomes and research skills?
- What interventions could staff implement to prevent over-reliance on AI?

#### Scenario 2: AI-Assisted Drafting

**Situation:** A student uses AI to generate initial ideas or improve wording, then edits extensively.

**Questions for Reflection:**

- How is this different from the fully AI-generated introduction?
- What guidelines could staff provide to ensure responsible use?
- How can faculty assess **student understanding and ownership** of the content?

#### Scenario 3: AI for Proofreading and Style

**Situation:** A student writes the introduction themselves but uses AI to check grammar and improve readability.

**Questions for Reflection:**

- Is this acceptable academic practice? Why or why not?
- How can staff encourage students to use AI as a **tool for improvement, not substitution**?
- What feedback mechanisms can staff implement to **verify student learning**?

#### Scenario 4: Collaborative AI Use

**Situation:** Multiple students use AI to draft their introductions with similar phrasing.

**Questions for Reflection:**

- How might this affect originality and plagiarism concerns?
- What monitoring or policy measures could mitigate this risk?
- How can staff support faculty in **evaluating the authenticity of submissions**?

### 4. Activity Instructions for Staff

1. **Divide into Small Groups:** Assign each scenario to a group.
2. **Analyze the Scenario:** Identify risks, ethical issues, and potential consequences.

3. **Develop Recommendations:** Suggest strategies or policies for responsible AI use.
4. **Present Solutions:** Share findings with the larger group.
5. **Facilitator Summary:** Highlight best practices for guiding students and supporting faculty.

## 5. Key Learning Points

- AI can **support, but should not replace, student writing and learning**
- **Clear policies and guidelines** are essential for responsible AI use in theses
- Staff play a key role in **guiding, monitoring, and documenting AI-assisted work**
- Ethical, transparent, and responsible AI use maintains **academic integrity and credibility**

## 6. Reflection Questions

- How would you differentiate between **acceptable AI assistance** and **academic misconduct**?
  - What strategies can non-teaching staff implement to **support faculty in monitoring AI use**?
  - How can AI be used to **enhance learning outcomes without compromising integrity**?
  - How might institutional policies be updated to **address AI-written content**?
- 
- “How do we detect and deter AI-generated plagiarism?”

## Introduction

The use of AI in academic writing raises new challenges for **plagiarism detection**. Unlike traditional copying, AI-generated content can produce **original-seeming text** that may still lack proper attribution or critical thought.

Non-teaching academic staff play a vital role in **supporting faculty and students** to detect, prevent, and manage AI-assisted plagiarism while promoting **ethical academic practices**.

## 2. Objective

Participants will be able to:

- Understand the **challenges of AI-generated plagiarism**
- Identify tools and strategies for **detection and deterrence**
- Support faculty in implementing **academic integrity policies**
- Promote **responsible AI use** among students

## 3. Detection Strategies

Method	Description	Staff Role
AI Detection Tools	Platforms like Turnitin, GPTZero, or	Run checks and provide initial

<b>Method</b>	<b>Description</b>	<b>Staff Role</b>
	Originality.ai can flag AI-generated content	reports for faculty review
<b>Cross-Referencing Sources</b>	Compare submitted text with original references and research articles	Assist in verifying accuracy of citations and source usage
<b>Writing Style Analysis</b>	Look for inconsistencies in vocabulary, tone, or structure	Monitor changes in writing style across drafts or submissions
<b>Metadata Analysis</b>	Examine document history for unusual editing patterns	Support faculty in understanding submission patterns
<b>Peer Review &amp; Oral Defense</b>	Students explain and discuss their work	Facilitate sessions to assess understanding and authenticity

#### 4. Deterrence Strategies

- **Clear Policies:** Establish explicit rules on AI use and academic integrity
- **Guidelines for AI Assistance:** Define what constitutes acceptable AI support
- **Education and Training:** Conduct workshops on ethical AI use and proper citation
- **Draft Monitoring:** Encourage multiple draft submissions to detect inconsistencies
- **Promote Critical Thinking:** Assign reflective components requiring student reasoning

#### 5. Benefits of Proactive Detection and Deterrence

- Maintains **academic integrity and credibility**
- Encourages students to **engage critically with content**
- Reduces risk of **unethical AI use**
- Supports faculty in **fair and consistent evaluation**
- Empowers non-teaching staff to **actively contribute to quality assurance**

#### 6. Limitations and Considerations

<b>Limitation</b>	<b>Mitigation</b>
<b>Detection Tools Are Not Foolproof</b>	Combine AI detection with human review and cross-checking
<b>Over-Reliance on Technology</b>	Use tools as a support, not a replacement for critical evaluation
<b>False Positives</b>	Carefully analyze flagged content before reporting
<b>Student Privacy</b>	Ensure compliance with data protection policies when using AI tools
<b>Rapid AI Evolution</b>	Regularly update staff knowledge and detection strategies

Limitation	Mitigation
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## 7. Role of Non-Teaching Academic Staff

- Run **AI detection tools and generate reports** for faculty
- Educate students on **responsible AI use and plagiarism avoidance**
- Support faculty in **draft monitoring and authenticity verification**
- Document and maintain records of AI checks for institutional accountability
- Promote **awareness campaigns** on ethical AI use

## 8. Reflection Questions

- How can staff balance **detecting AI-generated content** without discouraging legitimate AI-assisted learning?
- Which detection strategies are most feasible and effective in your institution?
- How can policies and guidelines be structured to **prevent misuse while allowing ethical AI use**?
- What role can non-teaching staff play in **creating a culture of academic integrity** in the AI era?

## 9. Key Takeaways

1. AI-generated plagiarism is **more difficult to detect** than traditional copying but can be managed with combined **technology and human oversight**.
2. Proactive **deterrence strategies** are essential to guide responsible AI use.
3. Non-teaching staff are critical in **monitoring, educating, and supporting faculty and students**.
4. Maintaining **academic integrity** ensures **credibility, learning quality, and ethical research practices**.

## Part 2: Topics Covered:

- Synthesis of tools and concepts
  - . Introduction

With the integration of AI into academia, a variety of tools—ranging from **literature review platforms** (like Scite.ai) to **writing assistants, citation managers, and plagiarism detectors**—have become essential.

For non-teaching academic staff, **synthesizing tools and concepts** means understanding how these technologies work together to **enhance research, academic writing, and administrative support**, while maintaining **ethical and effective use**.

## 2. Objective

Participants will be able to:

- Identify **key AI tools** used in academic workflows
- Understand **how these tools complement each other**
- Apply knowledge of tools and concepts to **support faculty and students efficiently**
- Promote **responsible and integrated AI usage** across academic tasks

## 3. Core Concepts

Concept	Description	Role for Staff
AI-Assisted Research	Tools like Scite.ai or Semantic Scholar help summarize and analyze literature citation tracking, and research mapping	Assist in literature organization, help summarize and analyze literature citation tracking, and research mapping
AI Writing Support	Tools like ChatGPT, Grammarly, or Quillbot aid drafting, editing, and clarity	Support faculty and students in improving written communication
Citation & Reference Management	AI tools manage references, format citations, and track sources	Ensure accuracy and consistency in academic documents
Plagiarism Detection	AI identifies copied or AI-generated content	Help maintain academic integrity and provide feedback
Ethical AI Use	Policies, guidelines, and critical oversight	Monitor responsible use and train faculty/students on compliance

## 4. Synthesis of Tools and Concepts

- **Integration in Research Workflows:** Combining AI literature review, writing, and citation tools to streamline research projects
- **Enhanced Academic Writing:** Using AI drafting tools alongside plagiarism detection ensures quality and originality
- **Efficient Teaching Support:** AI-generated summaries, citation maps, and automated feedback save faculty time
- **Critical Oversight:** Staff ensure **ethical, accurate, and responsible application** of multiple AI tools together
- **Collaboration:** Tools support both faculty and students, while staff provide the **bridge for proper usage and policy adherence**

## 5. Benefits of Synthesizing Tools and Concepts

- **Efficiency:** Reduces time spent on repetitive research and writing tasks
- **Accuracy:** Combines AI analysis with human oversight for reliable outputs
- **Consistency:** Standardizes document formatting, referencing, and summaries
- **Enhanced Learning:** Supports students' understanding of research, writing, and ethical practices
- **Support for Faculty:** Enables staff to **actively contribute** to smoother academic workflows

## 6. Limitations and Risks

Limitation/Risk	Mitigation Strategy
Over-reliance on AI	Encourage human review and critical thinking
Tool Compatibility Issues	Standardize workflows and provide staff training
Ethical Misuse	Maintain policies and monitor AI-assisted work
Accuracy Gaps	Verify AI-generated outputs against original sources
Data Privacy Concerns	Ensure compliance with institutional and legal guidelines

## 7. Role of Non-Teaching Academic Staff

- **Coordinate Tool Usage:** Help faculty and students navigate and combine multiple AI tools
- **Provide Training:** Offer guidance on best practices for integrated workflows
- **Monitor Compliance:** Ensure ethical and policy-compliant use of AI
- **Support Decision-Making:** Assist in choosing the most effective tools for specific academic tasks
- **Document Workflows:** Maintain structured records of AI-assisted activities for transparency

## 8. Reflection Questions

- How can multiple AI tools be **effectively integrated** to support research and teaching?
- What challenges might staff face in **synthesizing AI outputs** across different tasks?
- How can staff ensure **ethical use and academic integrity** when multiple tools are used together?
- In what ways can non-teaching staff **add value by coordinating and guiding AI use**?

## 9. Key Takeaways

1. Synthesizing tools and concepts **maximizes efficiency, accuracy, and support** in academic workflows.
2. **Human oversight remains critical** to ensure proper interpretation, integrity, and ethical use.
3. Non-teaching staff play a **central role in training, monitoring, and facilitating integration** of AI tools.
4. Effective synthesis ensures AI **enhances learning, research, and institutional credibility**.

- Early-stage project planning

### Introduction

Early-stage project planning is the **foundation of successful academic and research initiatives**. At this stage, defining objectives, identifying resources, and outlining timelines ensures that the project progresses efficiently and meets desired outcomes.

For non-teaching academic staff, supporting **early-stage project planning** involves assisting faculty and students in organizing tasks, monitoring progress, and integrating tools—such as AI—for research, writing, and administration.

### 2. Objective

Participants will be able to:

- Understand the **key components of early-stage project planning**
- Assist faculty and students in **structuring and organizing projects**
- Identify how AI tools can **enhance planning, monitoring, and reporting**
- Promote efficient, ethical, and collaborative project workflows

### 3. Key Components of Early-Stage Planning

Component	Description	Role of Staff
<b>Project Goals</b>	Define what the project aims to achieve	Help clarify objectives and document goals
<b>Scope &amp; Deliverables</b>	Outline tasks, outputs, and boundaries	Assist in organizing deliverables and timelines
<b>Resource Planning</b>	Identify personnel, tools, budget, and data	Provide information on AI tools, software, or other resources
<b>Timeline &amp; Milestones</b>	Set achievable deadlines and checkpoints	Track progress and support scheduling

Component	Description	Role of Staff
Risk Assessment	Identify potential challenges and mitigation strategies	Help faculty anticipate issues and plan contingencies
Stakeholder Roles	Define responsibilities of team members	Support clear communication between faculty, students, and staff

#### 4. Integration of AI Tools in Planning

- **Project Management Tools:** Platforms like Trello, Asana, or Monday.com for task tracking
- **AI Literature Review Tools:** Scite.ai, Semantic Scholar to identify prior research early
- **AI Writing Assistance:** ChatGPT or Grammarly for drafting project plans, proposals, and summaries
- **Citation Management:** AI-based reference tools to organize sources from the start
- **Plagiarism & Originality Checks:** Ensure preliminary documents maintain academic integrity

#### 5. Benefits of Early-Stage Planning

- **Efficiency:** Reduces confusion and last-minute changes during the project
- **Clarity:** Clearly defined objectives and scope prevent misunderstandings
- **Resource Optimization:** Ensures appropriate allocation of staff, time, and tools
- **Risk Reduction:** Early identification of challenges minimizes setbacks
- **Enhanced Collaboration:** Clear roles and communication foster teamwork among faculty, students, and staff

#### 6. Limitations and Challenges

Limitation/Challenge	Mitigation Strategy
Unclear Objectives	Facilitate goal-setting sessions with faculty and students
Overlapping Responsibilities	Document roles and responsibilities clearly
Resource Constraints	Prioritize tasks and suggest alternative AI or digital tools
Time Management Issues	Set realistic milestones and monitor progress
Resistance to AI Tools	Provide training and demonstrate benefits of AI-assisted planning

#### 7. Role of Non-Teaching Academic Staff

- Assist in **defining project goals and deliverables**
- Help in **organizing timelines, resources, and responsibilities**
- Train faculty and students to **use AI and project management tools effectively**

- Monitor **project progress and maintain documentation**
- Support **risk assessment and mitigation strategies**

## 8. Reflection Questions

- How can early-stage planning **improve project outcomes** for faculty and students?
- Which AI tools could be most helpful at the **planning stage**, and why?
- How can staff balance **supporting planning vs. taking ownership of tasks**?
- What strategies can ensure **clear communication and accountability** among stakeholders?
- Academic ethics in AI

As AI becomes increasingly integrated into academia—for research, teaching, writing, and administration—it raises critical questions about **academic ethics**. Responsible use of AI ensures **integrity, fairness, transparency, and accountability** in educational institutions.

Non-teaching academic staff play an important role in **supporting ethical practices, guiding faculty and students, and monitoring AI usage**.

## 2. Objective

Participants will be able to:

- Understand key **ethical considerations in AI usage** in academia
- Recognize potential **risks and challenges** associated with AI
- Apply ethical principles when assisting faculty and students
- Support policies and practices that **promote integrity and responsible AI use**

## 3. Core Principles of Academic Ethics in AI

<b>Principle</b>	<b>Description</b>	<b>Role for Staff</b>
<b>Integrity</b>	AI should not replace human judgment or misrepresent knowledge	Ensure AI outputs are verified and accurate
<b>Transparency</b>	Students and faculty should disclose AI-assisted work	Educate stakeholders about proper citation and disclosure
<b>Accountability</b>	Users are responsible for content produced with AI	Guide faculty and students to take ownership of AI-generated outputs
<b>Fairness</b>	Avoid bias and ensure equal access to AI resources	Monitor equitable access to AI tools and support usage training

<b>Principle</b>	<b>Description</b>	<b>Role for Staff</b>
<b>Confidentiality</b>	Protect sensitive research, student data, and institutional information	Safeguard confidential material when using AI tools

#### 4. Applications and Ethical Considerations

<b>AI Application</b>	<b>Potential Ethical Issues</b>	<b>Staff Support Role</b>
AI Writing Tools	Misuse for plagiarism or generating assignments	Educate students on ethical writing and review outputs
AI Literature Review	Misinterpretation or selective citation	Verify accuracy and completeness of AI-assisted summaries
Citation & Reference Tools	Over-reliance leading to citation errors	Train on proper use and manual verification
Plagiarism Detection	False positives or misjudgment of AI-generated work	Interpret reports carefully and guide faculty decisions
AI Assessment Tools	Bias in grading or evaluation	Ensure fairness and transparency in AI-assisted assessments

#### 5. Benefits of Ethical AI Use

- Maintains **academic integrity and credibility**
- Supports **responsible learning and research**
- Encourages **critical thinking** alongside AI assistance
- Promotes **trust and transparency** in teaching and research
- Enables staff to **actively contribute to ethical oversight**

#### 6. Risks and Challenges

<b>Risk</b>	<b>Mitigation Strategy</b>
<b>Plagiarism and Misrepresentation</b>	Implement guidelines and monitoring systems
<b>Bias in AI Outputs</b>	Cross-check outputs and provide human oversight
<b>Over-reliance on AI</b>	Encourage critical review and independent thinking
<b>Data Privacy Violations</b>	Train staff and students on secure AI usage
<b>Lack of Transparency</b>	Require disclosure of AI-assisted work in assignments and research

## 7. Role of Non-Teaching Academic Staff

- Provide **training and guidance** on ethical AI use
- Monitor faculty and student AI usage for **compliance with policies**
- Assist in **developing institutional guidelines and best practices**
- Support faculty in **evaluating AI outputs critically**
- Promote **awareness of academic integrity in AI-assisted work**

## 8. Reflection Questions

- How can staff ensure AI is used **ethically in academic workflows?**
  - What strategies can prevent **plagiarism and misrepresentation** when students use AI?
  - How can non-teaching staff help **balance AI assistance with critical thinking?**
  - What measures ensure **equitable and fair access** to AI tools for all students?
- 

## 9. Key Takeaways

1. Ethical AI use in academia requires **integrity, transparency, accountability, and fairness**.
2. Non-teaching staff play a vital role in **guiding, monitoring, and supporting ethical practices**.
3. Combining human oversight with AI tools ensures **academic credibility, learning quality, and responsible innovation**.
4. Policies, training, and awareness are essential to **embed ethics in AI-assisted teaching, research, and administration**.

- Institutional AI readiness

### Introduction

As AI becomes increasingly integrated into academia, institutions must be **prepared to adopt, implement, and manage AI technologies** effectively. Institutional AI readiness refers to the **capacity of a college, university, or research center to integrate AI tools responsibly and efficiently** across teaching, research, and administrative processes.

Non-teaching academic staff play a crucial role in **assessing readiness, supporting implementation, and ensuring ethical and effective use** of AI technologies.

## 2. Objective

Participants will be able to:

- Understand the **key elements of institutional AI readiness**
- Identify gaps and opportunities for AI adoption in academic settings
- Support faculty, students, and administration in **responsible AI integration**

- Contribute to developing **policies, training, and infrastructure** for AI use

### 3. Components of Institutional AI Readiness

Component	Description	Staff Role
<b>Policy Framework</b>	Clear guidelines for AI use, ethical standards, and compliance	Assist in drafting, communicating, and monitoring AI policies
<b>Infrastructure</b>	Hardware, software, and cloud platforms needed for AI tools	Support setup and maintenance of AI-enabled systems
<b>Training &amp; Capacity Building</b>	Staff, faculty, and students trained in AI applications	Organize workshops, tutorials, and resource materials
<b>Data Management</b>	Secure collection, storage, and governance of institutional data	Ensure compliance with privacy and security protocols
<b>Monitoring &amp; Evaluation</b>	Mechanisms to assess AI adoption, usage, and impact	Collect feedback, generate reports, and suggest improvements
<b>Collaboration &amp; Support</b>	Cross-departmental coordination for AI initiatives	Facilitate communication and collaboration between stakeholders

### 4. Steps to Assess Institutional AI Readiness

1. **Evaluate Current AI Tools and Infrastructure** – Identify available platforms for research, teaching, and administration.
2. **Assess Skills and Training Needs** – Determine knowledge gaps among faculty, staff, and students.
3. **Review Policies and Guidelines** – Ensure ethical, transparent, and accountable AI use.
4. **Identify Data and Resource Requirements** – Check data availability, storage, and security protocols.
5. **Plan Implementation Roadmap** – Define milestones, roles, and timelines for AI integration.
6. **Monitor and Improve** – Continuously evaluate AI adoption and make adjustments as needed.

### 5. Benefits of Institutional AI Readiness

- **Enhanced Efficiency:** Streamlines research, teaching, and administrative processes
- **Improved Decision-Making:** Data-driven insights inform institutional strategies
- **Support for Innovation:** Enables faculty and students to leverage AI for learning and research
- **Ethical and Responsible Use:** Policies ensure AI enhances learning without compromising integrity
- **Capacity Building:** Prepares staff and students to navigate future AI developments

## 6. Challenges and Considerations

Challenge	Mitigation Strategy
<b>Infrastructure Gaps</b>	Invest in AI-compatible hardware/software and cloud resources
<b>Skill Deficits</b>	Organize training programs and workshops for staff and faculty
<b>Resistance to Change</b>	Communicate benefits and provide hands-on support
<b>Data Privacy &amp; Security Risks</b>	Implement strict data governance and access controls
<b>Ethical Concerns</b>	Develop policies and monitor AI usage regularly

## 7. Role of Non-Teaching Academic Staff

- Assist in **assessing AI readiness and identifying gaps**
- Support **training and capacity-building initiatives** for faculty and students
- Help develop and enforce **ethical guidelines and institutional policies**
- Monitor **AI tool usage, impact, and compliance** across departments
- Facilitate **coordination and communication** for successful AI integration

## 8. Reflection Questions

- How prepared is your institution to **integrate AI tools responsibly**?
- What infrastructure or training gaps need to be addressed first?
- How can staff contribute to **policy development, ethical oversight, and capacity building**?
- Which AI applications would **most benefit research, teaching, and administration** at your institution?

## 9. Key Takeaways

1. Institutional AI readiness ensures **efficient, ethical, and effective adoption of AI tools**.
2. Non-teaching staff play a critical role in **training, monitoring, and supporting faculty and students**.
3. Infrastructure, policy, and skills development are the **pillars of AI readiness**.
4. Continuous evaluation and improvement maintain **responsible AI integration** and enhance institutional capabilities.

### Hands-On Activities:

- Group share: “One tool, one challenge, one idea”

## Materials Required

- Whiteboard or flipchart
- Sticky notes or index cards
- Markers or pens
- Digital tools (optional): Google Jamboard, Miro, or Padlet for virtual collaboration

## 3. Activity Overview

### Step 1: Form Groups

- Divide participants into **small groups of 3–5 staff members**.
- Assign a facilitator within each group to **guide discussion and record key points**.

### Step 2: Introduce the Framework

- Each participant shares:
  1. **One Tool:** An AI tool they have used or know about (e.g., Scite.ai, ChatGPT, Grammarly)
  2. **One Challenge:** A difficulty or limitation they have faced or anticipate with AI usage (e.g., ethical concerns, learning curve, accuracy)
  3. **One Idea:** A suggestion or innovative application of AI to support academic tasks (e.g., summarizing research, improving student writing, managing citations)

### Step 3: Discussion

- Encourage participants to **explain their choices** and provide examples.
- Groups discuss **common themes, unique insights, and potential solutions**.

### Step 4: Record and Visualize

- Write each group's contributions on a **flipchart or shared digital board** under three columns: Tool, Challenge, Idea.
- Highlight **overlaps, innovative approaches, and critical issues**.

### Step 5: Group Presentation

- Each group shares a **summary of their discussion** with all participants.
- Facilitator notes **key takeaways, recurring challenges, and promising ideas**.

## 4. Learning Outcomes

Participants will be able to:

- Identify **AI tools relevant to academic support roles**.
- Recognize **common challenges in AI adoption and integration**.

- Generate **creative solutions and practical applications** for AI in teaching, research, and administration.
- Strengthen **collaboration, communication, and peer learning** among staff.

## 5. Tips for Effective Facilitation

- Encourage **all participants to contribute** ideas and experiences.
- Focus on **practical and actionable insights** rather than theoretical discussion.
- Document **all suggestions** for later reference or policy development.
- Use **visual aids** to make patterns and connections visible.
- Promote a **non-judgmental environment** where innovative ideas are welcomed.

## 6. Reflection Questions

- Which AI tools appear **most promising for academic support**?
- What are the **common challenges** staff face with AI integration?
- Which ideas could be **piloted immediately** to improve workflows?
- How can staff **collaborate effectively** to overcome challenges and share knowledge?

## 7. Key Takeaways

1. Structured group sharing encourages **collective knowledge and experience exchange**.
  2. Highlighting one tool, challenge, and idea helps staff **focus on practical solutions**.
  3. Collaboration fosters **innovation and improved support for faculty and students**.
  4. Insights from this activity can inform **training, policy, and AI implementation strategies**.
- Poster activity: Mapping AI to your discipline

### Materials Required

- Large sheets of paper or poster boards
- Sticky notes or index cards
- Markers, pens, or colored pencils
- Digital collaboration tools (optional): Miro, Jamboard, or Canva for virtual poster creation
- Reference materials: examples of AI tools in various disciplines

## 3. Activity Overview

### Step 1: Form Groups

- Divide participants into **small groups of 3-5**.

- Each group represents a **specific discipline** (e.g., Humanities, Medicine, Business, Law, STEM).

#### Step 2: Introduce the Task

- Each group creates a **poster mapping AI applications** to their assigned discipline.
- Include the following elements:
  1. **AI Tools:** Examples of tools used in research, teaching, or administration (e.g., Scite.ai, ChatGPT, Semantic Scholar)
  2. **Use Cases:** How these tools support specific academic tasks (e.g., literature review, citation management, data analysis)
  3. **Challenges:** Limitations, ethical concerns, or barriers to adoption
  4. **Opportunities/Ideas:** Innovative ways AI can enhance learning, research, or workflow

#### Step 3: Brainstorm and Design

- Groups discuss and **organize their ideas visually** on the poster.
- Use **color coding, diagrams, or flowcharts** to make the poster engaging and clear.
- Encourage inclusion of **both conventional and creative AI applications**.

#### Step 4: Present and Discuss

- Each group presents their poster to the whole class.
- Facilitate discussion on **similarities, differences, and innovative insights** across disciplines.

#### Step 5: Synthesize Insights

- Highlight **common tools, recurring challenges, and promising ideas**.
- Create a **collective map or summary** to share with all staff for reference.

### 4. Learning Outcomes

Participants will be able to:

- Identify AI tools and applications relevant to **their discipline or area of support**
- Recognize **challenges and opportunities** in AI adoption
- Collaborate and **share insights across disciplines**
- Develop strategies to **support faculty and students in responsible AI use**

### 5. Tips for Effective Facilitation

- Encourage **creative, visual representation** of ideas
- Make sure each participant **contributes to the discussion and poster creation**
- Use **real examples of AI tools** to ground the activity in practical applications

- Document posters digitally or photograph them for **future reference**
- Highlight **ethical considerations** alongside technical applications

## 6. Reflection Questions

- Which AI tools are **most relevant to your discipline**, and why?
- What are the **main challenges** staff or faculty face in adopting AI?
- How can AI be used to **enhance learning, research, or administrative processes**?
- Are there **cross-disciplinary opportunities** where AI applications could be shared?

## 7. Key Takeaways

1. Mapping AI to specific disciplines **clarifies practical applications** and identifies gaps.
2. Poster activities promote **visual learning, collaboration, and creative problem-solving**.
3. Understanding discipline-specific AI use helps staff **support faculty and students more effectively**.
4. Documented insights from the activity can inform **training, policy development, and AI adoption strategies**.

### Case Studies:

- Comparative summary of 3 faculty AI-use stories

### Introduction

AI is increasingly being used by faculty across disciplines to **enhance teaching, streamline research, and improve administrative efficiency**. This executive overview presents a **comparative summary of three real-world faculty AI-use stories**, highlighting tools, applications, benefits, and challenges.

The goal is to provide **non-teaching academic staff with insights** into how AI can be integrated into academic workflows and how staff can support these initiatives.

## 2. Case Summaries

Faculty	Discipline	AI Tool/Use	Application	Benefits	Challenges
Dr. A	Humanities	ChatGPT	Drafting historical analysis and generating discussion questions	Saves time in content creation, stimulates student engagement	Risk of AI inaccuracies; requires human verification
Dr. B	Business	Elicit.ai & Tableau	Market trend analysis and visualization	Quickly identifies patterns, aids data-driven teaching	Learning curve for combining AI with visualization tools

Faculty	Discipline	AI Tool/Use	Application	Benefits	Challenges
Dr. C	Medicine	Scite.ai	Literature review and citation mapping for clinical research	Speeds up review process, ensures comprehensive citation coverage	AI may miss context-specific nuances; requires critical review

### 3. Comparative Analysis

#### a. Common Benefits:

- **Efficiency:** AI reduces time spent on repetitive tasks
- **Enhanced Insights:** Supports deeper analysis and data visualization
- **Student Engagement:** AI-generated materials can stimulate discussion and learning

#### b. Common Challenges:

- **Accuracy and Reliability:** Outputs require verification
- **Learning Curve:** Faculty need time and training to use AI effectively
- **Ethical Considerations:** AI should support, not replace, critical thinking and academic integrity

#### c. Role of Non-Teaching Staff:

- Assist with **tool setup and technical support**
- Provide **guidance on best practices and ethical AI use**
- Help **organize and manage AI-generated content**
- Support **faculty in evaluating AI outputs for accuracy**

### 4. Key Insights and Takeaways

1. **AI Adoption Varies by Discipline:** Humanities faculty may focus on content generation, Business faculty on data analysis, and Medicine faculty on literature review.
2. **Support Structures Are Essential:** Non-teaching staff play a critical role in **training, monitoring, and facilitating AI use**.
3. **Human Oversight Remains Crucial:** AI tools are **assistive, not autonomous**, requiring validation and contextual understanding.
4. **Collaboration Enhances Outcomes:** Sharing AI-use experiences across departments helps identify **best practices and innovative applications**.
5. **Ethical Guidelines Are Necessary:** Faculty and staff must follow **policies for responsible AI use**, ensuring integrity in teaching and research.

## 5. Reflection Questions for Staff

- How can staff **support faculty with diverse AI needs** across disciplines?
  - What strategies can ensure **accuracy and reliability** of AI-generated content?
  - How can non-teaching staff **promote ethical AI adoption** in academic workflows?
  - Which AI-use practices could be **scaled across departments** to enhance efficiency and learning?
- 
- Institution-level AI adoption policy review

### Introduction

As AI becomes increasingly integrated into academic workflows, institutions must establish **clear policies to guide responsible AI adoption**. An institution-level AI adoption policy outlines **standards, ethical guidelines, permissible use, and governance mechanisms** to ensure AI enhances teaching, research, and administration without compromising integrity or equity.

Non-teaching academic staff play a vital role in **supporting, implementing, and monitoring policy adherence**.

## 2. Objective

Participants will be able to:

- Understand the **key components of an AI adoption policy**
- Evaluate existing policies for **effectiveness and coverage**
- Identify areas for **policy improvement or update**
- Support faculty and students in **compliant and responsible AI use**

## 3. Core Components of AI Adoption Policies

Component	Description	Staff Role
Scope and Purpose	Defines which AI tools and activities are covered	Communicate policy scope to faculty and students
Ethical Guidelines	Standards for responsible AI use, integrity, and fairness	Monitor compliance and provide guidance
Acceptable Use	Clarifies permitted AI applications in research, teaching, and administration	Help faculty/students understand boundaries of AI use
Data Governance	Policies for data privacy, security, and management	Ensure adherence to data protection protocols
Training & Capacity	Programs for staff, faculty, and students	Organize workshops, tutorials, and

Component	Description	Staff Role
<b>Building</b>	on AI usage	resource materials
<b>Monitoring &amp; Evaluation</b>	Mechanisms for reviewing AI usage and impact	Collect usage data, feedback, and generate compliance reports
<b>Accountability &amp; Enforcement</b>	Defines responsibilities, reporting, and consequences for misuse	Assist in documentation and reporting procedures

#### 4. Steps for Policy Review

- Identify Current Policies** – Gather all existing AI-related guidelines and institutional rules.
- Evaluate Coverage** – Check if policies address **research, teaching, administration, and ethical concerns**.
- Assess Clarity and Accessibility** – Ensure staff, faculty, and students can **understand and follow the policies easily**.
- Review Ethical and Legal Compliance** – Align policies with **national/international AI regulations, privacy laws, and academic integrity standards**.
- Identify Gaps and Update Recommendations** – Suggest improvements based on emerging AI tools and practices.
- Communicate and Train** – Ensure all stakeholders are **aware of policy updates and understand their responsibilities**.

#### 5. Benefits of an Effective AI Policy

- Ensures Responsible Use:** Minimizes misuse and unethical AI practices
- Maintains Academic Integrity:** Supports original work and proper attribution
- Promotes Efficiency:** Guides AI adoption for productive workflows
- Enhances Transparency:** Clarifies acceptable use and accountability
- Supports Staff and Faculty:** Provides clear guidance on AI integration in their work

#### 6. Challenges and Considerations

Challenge	Mitigation Strategy
Rapid evolution of AI tools	Regularly review and update policies
Varying levels of AI literacy	Provide training and capacity-building programs
Resistance to policy adherence	Communicate benefits and provide clear guidance
Balancing innovation and compliance	Encourage responsible experimentation within ethical boundaries
Data privacy and security risks	Enforce strict governance and monitoring mechanisms

## 7. Role of Non-Teaching Academic Staff

- Assist in **reviewing and updating AI policies**
- Support **faculty and students in understanding and complying with policies**
- Facilitate **training, workshops, and awareness programs**
- Monitor **AI tool usage and adherence to ethical standards**
- Maintain **records and reports** to ensure accountability

## 8. Reflection Questions

- Are current institutional policies **sufficient to guide AI adoption** across research, teaching, and administration?
- How can staff **support effective policy implementation**?
- What gaps exist in current AI adoption policies, and how can they be addressed?
- How can institutions balance **innovation, efficiency, and ethical compliance** in AI usage?

## 9. Key Takeaways

1. Institution-level AI adoption policies provide **clear guidelines, ethical standards, and accountability mechanisms**.
2. Non-teaching staff are critical in **policy implementation, monitoring, and training**.
3. Continuous review and updates ensure policies remain **relevant and effective** amid evolving AI technologies.
4. Effective AI policy supports **academic integrity, responsible innovation, and enhanced institutional efficiency**.

- Example capstone projects from prior cohorts

## Introduction

Capstone projects represent the **culmination of a student's learning**, showcasing research, problem-solving, and practical application of knowledge. Reviewing examples from prior cohorts provides staff with insights into **academic expectations, project scope, and innovative approaches**, helping them support faculty and students effectively.

Non-teaching academic staff can play a vital role in **guiding logistics, tools, resources, and ethical oversight** during capstone projects.

## 2. Objective

Participants will be able to:

- Understand the **range and scope** of previous capstone projects
- Identify **common tools, methodologies, and AI integrations** used in past projects
- Recognize **challenges students faced and solutions implemented**
- Support faculty and students in **planning, monitoring, and resource allocation**

### 3. Sample Capstone Projects

Cohort/Year	Discipline	Project Title/Theme	AI/Technology Used	Key Outcomes
2022	Business Analytics	Market Trend Prediction for Retail	Elicit.ai, Tableau	Developed predictive models, actionable insights for small businesses
2022	Medicine	Literature Review on Diabetes Interventions	Scite.ai	Comprehensive analysis of clinical trials, identified research gaps
2023	Humanities	Digital Historical Analysis of Local Archives	ChatGPT, OCR tools	Created annotated summaries, generated discussion prompts for students
2023	Law	Case Law Summarization Tool	AI summarizers, legal databases	Produced concise summaries, highlighted precedent trends
2024	Computer Science	AI-Powered Study Planner	ChatGPT, scheduling algorithms	Built a tool to optimize study schedules and resource allocation

### 4. Observations from Prior Projects

- **Interdisciplinary Applications:** Students integrate AI, data analytics, and digital tools across disciplines
- **Common Tools:** ChatGPT, Scite.ai, Elicit.ai, citation managers, and data visualization platforms
- **Focus Areas:** Research synthesis, predictive modeling, content summarization, workflow automation
- **Challenges Identified:** Data quality, AI accuracy, integration issues, and ethical considerations
- **Successful Practices:** Iterative guidance, structured milestones, and combination of human and AI efforts

### 5. Role of Non-Teaching Academic Staff

- Provide **logistical and technical support** for project planning and execution
- Assist students with **access to AI tools, research databases, and software platforms**

- Monitor **ethical AI use, plagiarism checks, and adherence to institutional policies**
- Maintain **documentation, templates, and resource guides** for future cohorts
- Support faculty in **evaluating project feasibility and resource requirements**

## 6. Learning Outcomes for Staff

- Gain awareness of **practical applications of AI in student projects**
- Understand **discipline-specific requirements and challenges**
- Identify **support mechanisms** for smooth project execution
- Recognize **ethical, technical, and logistical considerations** for guiding future students

## 7. Reflection Questions

- Which tools or AI applications were **most impactful across projects?**
- What **common challenges** did students face, and how can staff mitigate them?
- How can non-teaching staff **facilitate resource access and project management?**
- What lessons from prior cohorts can **improve guidance for future capstone projects?**

### Scenario-Based Discussions:

- “What if AI generates biased responses?”

### Introduction

AI tools are increasingly used in academia for **research, teaching support, and administrative tasks**. However, AI can sometimes produce **biased or skewed outputs** due to the data it was trained on or limitations in its algorithms.

Non-teaching academic staff need to **recognize, address, and mitigate AI bias** to ensure fair, ethical, and accurate academic outcomes.

## 2. Learning Objectives

Participants will be able to:

- Identify situations where AI outputs may be **biased or misleading**
- Understand the **causes and types of AI bias**
- Implement strategies to **detect, assess, and mitigate bias**
- Support faculty and students in **responsible AI usage**

### 3. Scenario Example

#### Scenario:

A faculty member uses an AI tool to generate discussion prompts for a history class. The AI produces content that **overrepresents certain regions and perspectives**, ignoring other historically significant voices.

#### Questions for Reflection:

- How would you identify that the AI output is biased?
- What immediate actions would you take to correct or flag the bias?
- How can you guide the faculty member and students to **verify and diversify AI-generated content?**

### 4. Group Activity

#### Step 1: Divide into Small Groups

- Groups of 3–5 participants
- Each group receives a **different AI output scenario** (e.g., research summaries, essay prompts, citation suggestions)

#### Step 2: Analyze the Output

- Identify **potential bias** (cultural, gender, geographic, disciplinary)
- Discuss **how the bias could impact students, faculty, or research quality**

#### Step 3: Develop Mitigation Strategies

- Cross-check AI output with **reliable sources**
- Adjust or diversify prompts or content
- Educate users on **limitations of AI and ethical responsibilities**
- Document potential risks and corrective steps

#### Step 4: Share Insights

- Each group presents their findings and mitigation strategies
- Discuss **common themes and proactive measures** for preventing bias

### 5. Key Concepts to Highlight

Concept	Explanation
AI Bias	Systematic errors or skewed outputs due to training data or algorithms
Detection	Reviewing outputs critically, cross-referencing with trusted sources
Mitigation	Diversifying datasets, human oversight, transparent methodology

Concept	Explanation
<b>Ethical Responsibility</b>	Ensuring AI outputs support fairness, inclusivity, and integrity
<b>Staff Role</b>	Act as facilitators, reviewers, and ethical monitors in AI use

## 6. Reflection Questions

- What types of **bias are most likely to appear** in academic AI tools?
- How can staff **balance efficiency with ethical oversight** when using AI?
- How would you **educate students and faculty** about the risks of biased AI outputs?
- What systems or processes can your institution implement to **reduce AI bias** consistently?
  
  
  
- “Could AI reshape research publication standards?”

## Introduction

Artificial Intelligence (AI) is increasingly influencing **research workflows**, from literature review to manuscript drafting. Its growing role raises questions about **how research publication standards might evolve**, affecting peer review, authorship, ethics, and reproducibility.

Non-teaching academic staff play a supporting role in **ensuring AI is used responsibly** while assisting faculty and students through this transition.

## 2. Learning Objectives

Participants will be able to:

- Understand **current research publication standards** and how AI intersects with them
- Identify potential **changes in peer review, authorship, and manuscript preparation** due to AI
- Recognize **ethical considerations** associated with AI-assisted publishing
- Support faculty and students in **adhering to evolving standards**

## 3. Potential AI-Driven Changes in Publication Standards

Aspect	Current Standard	Potential AI Impact
<b>Manuscript Drafting</b>	Fully authored by humans	AI-assisted drafting accelerates writing, introduces the need to disclose AI contributions

Aspect	Current Standard	Potential AI Impact
Literature Review	Manual review by authors	AI tools (e.g., Scite.ai, Semantic Scholar) can summarize vast literature, affecting scope and citation practices
Authorship & Attribution	Human authorship only	Guidelines may evolve to require <b>acknowledgment of AI assistance</b> in writing or data analysis
Peer Review	Human reviewers assess quality, originality	AI could assist in screening for plagiarism, methodology errors, or consistency, improving efficiency but raising questions about reviewer bias
Plagiarism & Integrity	Standard checks using software	AI-generated content requires updated plagiarism detection protocols and ethical policies
Data Transparency & Reproducibility	Authors provide methodology and data	AI-assisted analysis may require <b>disclosure of algorithms, training data, and AI decisions</b>

#### 4. Implications for Academic Staff

- Staff must **understand AI tools and their limitations** to support faculty compliance with new standards.
- Training may be required on **AI-assisted literature review, manuscript drafting, and plagiarism detection**.
- Staff may help **document AI contributions** and ensure ethical adherence.
- Policies may need updating to **reflect AI-assisted research ethics and publication guidelines**.

#### 5. Benefits and Opportunities

- **Efficiency:** AI accelerates literature review, drafting, and data analysis.
- **Quality Enhancement:** Consistency, data validation, and error detection improve manuscript quality.
- **Accessibility:** Broader access to research summaries and trends aids faculty and students.
- **Innovation:** Enables exploration of novel research questions and interdisciplinary studies.

#### 6. Risks and Challenges

Risk	Mitigation
Over-reliance on AI-generated text	Encourage human review and critical evaluation
Unclear AI authorship attribution	Follow updated journal guidelines for disclosure
Ethical concerns in methodology	Ensure transparency of AI processes and training data
Bias in AI-assisted literature selection	Cross-check sources and diversify datasets

Risk	Mitigation
Data privacy concerns	Comply with institutional and legal guidelines for research data

## 7. Reflection Questions

- How might AI **change expectations for authorship and originality** in research?
- What policies should institutions adopt to **ensure ethical AI-assisted publishing**?
- How can non-teaching staff **support faculty in maintaining research integrity** while using AI?
- Which aspects of the publication process could **benefit most from AI**, and where is human oversight essential?

## 8. Key Takeaways

1. AI has the potential to **reshape research publication standards**, impacting drafting, reviewing, authorship, and integrity.
2. Non-teaching staff play a crucial role in **supporting ethical AI use, monitoring compliance, and providing technical guidance**.
3. Transparency, documentation, and human oversight remain essential to **maintain credibility and trust** in academic publishing.
4. Institutions must **update policies and training programs** to accommodate AI-assisted research workflows.

# Module 3 AI in Teaching & Learning

## Topics Covered:

- Personalized learning with AI

### 1. Introduction

Personalized learning leverages technology to **tailor educational content, pace, and feedback** to individual learners' needs. AI plays a crucial role in this process by **analyzing learning patterns, identifying gaps, and suggesting customized resources**.

Non-teaching academic staff are integral in **supporting the implementation, monitoring, and ethical use of AI-driven personalized learning platforms.**

## 2. Learning Objectives

Participants will be able to:

- Understand the concept of **AI-enabled personalized learning**
- Identify **AI tools that support individualized instruction**
- Recognize the benefits and challenges of personalized learning for students and faculty
- Support faculty and students in **effective, responsible, and inclusive AI integration**

## 3. Key Features of AI-Powered Personalized Learning

Feature	Description	Staff Role
<b>Adaptive Learning Paths</b>	AI adjusts content difficulty and learning sequence based on student performance	Help faculty track progress and interpret AI-generated insights
<b>Real-Time Feedback</b>	Instant feedback on quizzes, assignments, and practice exercises	Ensure students understand and act on feedback
<b>Performance Analytics</b>	Dashboards showing learner progress, strengths, and areas for improvement	Assist in monitoring, reporting, and sharing insights with faculty
<b>Content Recommendation</b>	Suggests readings, videos, or exercises based on learning needs	Support students in accessing resources and navigating AI recommendations
<b>Learning Pace Adjustment</b>	AI recommends slower or faster pacing based on engagement and comprehension	Help faculty design flexible schedules or intervention plans

## 4. Benefits of Personalized Learning with AI

- **Improved Student Engagement:** Tailored content maintains interest and motivation
- **Enhanced Learning Outcomes:** Focused instruction on knowledge gaps accelerates mastery
- **Efficient Faculty Support:** AI assists in monitoring student progress, reducing manual tracking
- **Inclusivity:** Supports diverse learning needs, including varied skill levels and learning styles
- **Data-Driven Insights:** Provides actionable information for teaching strategy improvements

## 5. Challenges and Considerations

Challenge	Mitigation Strategy
Data Privacy	Ensure compliance with institutional and legal guidelines for student data
Over-Reliance on AI	Balance AI guidance with human interaction and mentoring
Bias in Recommendations	Regularly review AI algorithms and content suggestions
Equity of Access	Provide training and devices for all students to ensure inclusive access
Interpretation of Analytics	Train staff to interpret dashboards accurately for effective interventions

## 6. Role of Non-Teaching Academic Staff

- Assist in **setting up AI learning platforms and monitoring dashboards**
- Provide **technical support and guidance to students and faculty**
- Ensure **ethical use, data privacy, and accessibility** in AI-enabled systems
- Help faculty **interpret AI-generated insights** for personalized instruction
- Facilitate **training sessions and awareness programs** on personalized learning technologies

## 7. Reflection Questions

- How can AI **enhance learning experiences** for diverse student groups?
- What measures are needed to **ensure equity and privacy** in AI-enabled personalized learning?
- How can staff support faculty in **interpreting AI analytics and tailoring interventions**?
- What challenges might arise in **implementing AI personalization**, and how can they be addressed?

## 8. Key Takeaways

1. AI-driven personalized learning allows students to **learn at their own pace and focus on their knowledge gaps**.
  2. Non-teaching staff play a key role in **technical support, monitoring, and ethical oversight**.
  3. Effective implementation requires **balancing AI guidance with human interaction** to maintain engagement and integrity.
  4. Data-driven insights from AI can **inform teaching strategies, improve learning outcomes, and foster inclusivity**.
- 
- Automated grading tools

## Introduction

Automated grading tools leverage **AI and machine learning** to assess student work, including quizzes, assignments, and essays. These tools aim to **reduce manual grading time, ensure consistency, and provide immediate feedback** to students.

Non-teaching academic staff play an important role in **supporting the implementation, monitoring, and ethical use of automated grading systems**.

## 2. Learning Objectives

Participants will be able to:

- Understand the concept of **AI-assisted grading**
- Identify common **automated grading tools and platforms**
- Recognize the benefits and limitations of automated grading
- Support faculty and students in **effective, ethical, and transparent use** of grading tools

## 3. Key Features of Automated Grading Tools

Feature	Description	Staff Role
<b>Objective Question Grading</b>	AI grades multiple-choice, true/false, or fill-in-the-blank questions automatically	Assist in uploading question banks and checking accuracy of grading
<b>Essay and Short Answer Evaluation</b>	AI evaluates written responses for content, structure, and relevance	Support faculty in verifying AI scoring and flagging anomalies
<b>Feedback Generation</b>	Provides students with <b>instant, personalized feedback</b>	Ensure feedback is clear and actionable; guide faculty on review
<b>Plagiarism Detection</b>	Checks submitted work against databases and web sources	Help interpret reports and ensure academic integrity
<b>Analytics &amp; Reporting</b>	Summarizes student performance trends and highlights areas for improvement	Assist faculty in generating performance dashboards and insights

## 4. Benefits of Automated Grading Tools

- **Efficiency:** Reduces faculty workload for grading repetitive tasks
- **Consistency:** Provides uniform scoring, minimizing human bias
- **Immediate Feedback:** Supports student learning with timely feedback
- **Data-Driven Insights:** Identifies learning gaps and trends across student cohorts
- **Scalability:** Useful for large classes or online learning platforms

## 5. Challenges and Considerations

Challenge	Mitigation Strategy
Accuracy in subjective assessment	Faculty should verify AI-generated scores for essays and open-ended responses
Bias in AI algorithms	Regularly review scoring patterns and adjust rubrics if necessary
Over-reliance on automation	Combine AI grading with human oversight to maintain quality
Ethical concerns	Clearly disclose use of AI grading to students; maintain transparency
Data privacy	Ensure compliance with institutional policies for student data

## 6. Role of Non-Teaching Academic Staff

- Assist in **setting up and managing automated grading platforms**
- Support faculty in **uploading assignments, scoring rubrics, and evaluation criteria**
- Monitor **accuracy, consistency, and fairness** of AI grading outputs
- Ensure **ethical use, data privacy, and transparency** with students
- Help generate **reports and dashboards** for faculty decision-making

## 7. Reflection Questions

- How can automated grading tools **enhance learning outcomes and efficiency**?
  - What safeguards are necessary to **ensure fair and unbiased scoring**?
  - How can staff support faculty in **integrating AI grading with traditional assessment methods**?
  - What challenges might arise in **implementing automated grading at scale**, and how can they be mitigated?
- 
- AI chatbots and virtual academic assistants

### Introduction

AI chatbots and virtual academic assistants are **digital tools designed to interact with students, faculty, and staff** to provide timely support, answer queries, and facilitate learning and administrative tasks. These tools can **enhance accessibility, reduce workload, and improve response times** in academic institutions.

Non-teaching academic staff play a key role in **implementing, managing, and monitoring the use of these AI-driven assistants**.

## 2. Learning Objectives

Participants will be able to:

- Understand the concept of **AI chatbots and virtual academic assistants**
- Identify common applications and tools used in academic settings
- Recognize the benefits and limitations of these technologies
- Support faculty, students, and administrative teams in **effective and responsible usage**

## 3. Key Features

Feature	Description	Staff Role
<b>24/7 Query Support</b>	Responds to student inquiries about courses, schedules, assignments, and policies	Monitor responses and escalate complex queries to humans
<b>Guided Learning Assistance</b>	Provides explanations, resources, or step-by-step guidance on topics	Support faculty in integrating chatbot guidance into lessons
<b>Administrative Assistance</b>	Helps with registrations, deadlines, and campus processes	Ensure smooth integration with institutional systems
<b>Feedback Collection</b>	Gathers student feedback on courses, teaching, and services	Assist in analyzing feedback and reporting insights
<b>Personalized Recommendations</b>	Suggests learning resources or next steps based on student progress	Help faculty interpret AI recommendations and adjust learning plans

## 4. Benefits of AI Chatbots and Virtual Assistants

- **Enhanced Accessibility:** Provides instant support to students and faculty at any time
- **Workload Reduction:** Handles routine queries and administrative tasks efficiently
- **Improved Engagement:** Encourages student interaction and participation
- **Data-Driven Insights:** Tracks queries, learning patterns, and common issues
- **Consistency:** Provides standardized responses aligned with institutional policies

## 5. Challenges and Considerations

Challenge	Mitigation Strategy
Inaccurate or incomplete responses	Periodically review chatbot outputs and update knowledge base
Over-reliance by students	Encourage human support for complex academic issues

<b>Challenge</b>	<b>Mitigation Strategy</b>
Privacy concerns	Ensure student data is protected and comply with data regulations
Integration with existing systems	Collaborate with IT to maintain seamless functionality
Ethical concerns	Monitor for biased or inappropriate responses and refine AI training

## 6. Role of Non-Teaching Academic Staff

- Assist in **setting up and maintaining AI chatbots and virtual assistants**
- Monitor **response accuracy, relevance, and ethical compliance**
- Provide **technical support and training** for faculty and students
- Collect and analyze **usage data to improve performance**
- Escalate **complex or sensitive issues** to human staff promptly

## 7. Reflection Questions

- How can AI assistants **enhance student support and administrative efficiency?**
- What steps are necessary to **ensure AI responses are accurate, ethical, and unbiased?**
- How can staff balance **AI assistance with human intervention** for sensitive or complex queries?
- Which tasks are **best suited for AI assistants**, and which should remain human-led?

## 8. Key Takeaways

1. AI chatbots and virtual academic assistants improve **accessibility, efficiency, and student engagement.**
  2. Non-teaching staff are essential in **monitoring, maintaining, and supporting AI tools.**
  3. Human oversight is crucial to **ensure accuracy, ethics, and effective escalation.**
  4. Proper implementation of AI assistants can **enhance institutional workflows, student experience, and data-informed decision-making.**
- Feedback analysis and learning analytics

### Introduction

Feedback analysis and learning analytics use **AI and data-driven tools** to monitor, interpret, and improve student learning outcomes. By analyzing student performance, engagement, and feedback, institutions can **identify trends, gaps, and areas for intervention**, enabling more informed decisions for teaching and academic support.

Non-teaching academic staff play a key role in **collecting, managing, and interpreting data** to support faculty and institutional decision-making.

## 2. Learning Objectives

Participants will be able to:

- Understand the **purpose and scope of learning analytics**
- Identify tools and techniques for **feedback analysis**
- Recognize the benefits and challenges of using analytics in academic support
- Assist faculty and students in **interpreting and applying insights** from learning analytics

## 3. Key Features of Feedback Analysis and Learning Analytics

Feature	Description	Staff Role
Performance Tracking	Monitors grades, assessment scores, and engagement metrics	Help collect and organize data, ensure accuracy
Trend Analysis	Identifies patterns in student performance and learning behavior	Generate reports and visualizations for faculty insights
Feedback Interpretation	Analyzes student feedback from surveys, evaluations, and assignments	Summarize insights and highlight key areas for action
Early Warning Systems	Flags students at risk of underperformance	Assist faculty in designing interventions and support strategies
Data Visualization	Dashboards and charts showing performance metrics	Support creation and maintenance of dashboards for easy interpretation
Personalized Recommendations	Suggests interventions or resources tailored to student needs	Facilitate faculty and student access to actionable insights

## 4. Benefits of Feedback Analysis and Learning Analytics

- **Informed Decision-Making:** Faculty can make **data-driven adjustments** to teaching methods
- **Targeted Support:** Identifies students needing additional guidance or resources
- **Improved Learning Outcomes:** Enables **timely interventions** and personalized learning
- **Efficiency:** Reduces manual analysis and provides **real-time insights**
- **Continuous Improvement:** Helps in **evaluating course effectiveness and curriculum design**

## 5. Challenges and Considerations

Challenge	Mitigation Strategy
Data privacy and security	Ensure compliance with institutional and legal guidelines
Misinterpretation of analytics	Provide staff training on interpreting reports accurately
Over-reliance on quantitative metrics	Combine analytics with qualitative feedback and human judgment
Data quality and completeness	Ensure proper data collection and validation processes
Resistance to data-driven changes	Communicate benefits and provide support for faculty adoption

## 6. Role of Non-Teaching Academic Staff

- Assist in **collecting, cleaning, and organizing data** from multiple sources
- Maintain **analytics dashboards and visualization tools** for faculty use
- Support faculty in **interpreting insights and planning interventions**
- Ensure **ethical use of student data and compliance with privacy policies**
- Track and report **longitudinal trends** to guide curriculum and policy decisions

## 7. Reflection Questions

- How can learning analytics **improve student engagement and performance**?
- What safeguards are needed to **ensure ethical use of student data**?
- How can staff assist faculty in **translating analytics insights into actionable teaching strategies**?
- What combination of **quantitative and qualitative feedback** provides the most complete picture of learning outcomes?

## 8. Key Takeaways

1. Feedback analysis and learning analytics provide **data-driven insights** for improving teaching and learning.
2. Non-teaching staff play a critical role in **data management, interpretation, and reporting**.
3. Ethical considerations and human judgment remain essential to **ensure meaningful and fair use of analytics**.
4. Proper use of analytics enables **personalized learning, early interventions, and continuous course improvement**.

### Hands-On Activities:

- Use an AI grading assistant on a sample quiz

## Materials Required

- Sample quiz (multiple-choice, short answers, or mixed)
- AI grading tool or platform (e.g., Gradescope, Turnitin Draft Coach, or an institutional AI grading system)
- Computers or tablets with internet access
- Instructor-provided **answer key or rubric**
- Spreadsheet or dashboard for recording results

## 3. Activity Overview

### Step 1: Prepare the Quiz

- Select a **short sample quiz** suitable for demonstration (5–10 questions).
- Include a mix of **objective and short-answer questions** to illustrate AI grading capabilities.

### Step 2: Input Quiz into AI Tool

- Upload the quiz and student responses (real or simulated) into the AI grading assistant.
- Ensure the tool is configured with the **answer key and grading rubric**.

### Step 3: Run AI Grading

- Activate the AI grading function to evaluate student responses.
- Observe how the tool **scores objective questions automatically** and provides **feedback on short answers**.

### Step 4: Review AI Outputs

- Compare AI scores with **manual grading** to check for accuracy.
- Identify areas where AI may **misinterpret responses or require human review**.
- Note the **feedback suggestions generated by AI**.

### Step 5: Discuss and Reflect

- Discuss the **efficiency and limitations** of AI grading.
- Highlight the importance of **human verification** for subjective or complex answers.
- Explore strategies to **integrate AI grading into regular assessment workflows**.

## 4. Learning Outcomes

Participants will be able to:

- Operate an AI grading assistant on a sample quiz
- Understand how AI scores **objective vs. subjective responses**
- Evaluate **accuracy, consistency, and usefulness** of AI feedback
- Recognize the **role of staff in oversight, interpretation, and intervention**

## 5. Tips for Effective Facilitation

- Start with a **small sample quiz** to keep the demonstration manageable
- Highlight both **strengths (speed, consistency)** and **limitations (interpretation errors)**
- Encourage participants to **experiment with different question types**
- Document results to compare **AI vs. human grading outcomes**

## 6. Reflection Questions

- How accurate and reliable is the AI grading compared to human grading?
- What types of questions or answers require **human intervention**?
- How can staff ensure **ethical, transparent, and fair grading practices**?
- What steps would you take to **integrate AI grading into larger courses**?

## 7. Key Takeaways

1. AI grading assistants **increase efficiency** and reduce manual workload.
  2. Human oversight remains **critical for subjective or complex assessments**.
  3. Staff play a crucial role in **monitoring accuracy, interpreting feedback, and maintaining ethical standards**.
  4. Hands-on use of AI grading tools prepares staff to **support faculty in implementing AI-enhanced assessments**.
- Deploy a chatbot demo in a sample LMS interface

### Materials Required

- Sample LMS platform (e.g., Moodle, Canvas sandbox, Google Classroom demo)
- AI chatbot tool or platform (e.g., ChatGPT, Dialogflow, or institutional chatbot system)
- Sample content or FAQs for chatbot responses
- Computers or tablets with internet access

## 3. Activity Overview

### Step 1: Prepare the Chatbot Content

- Create a **list of frequently asked questions** and relevant answers related to courses, assignments, or policies.
- Define **intents and responses** if using a more advanced chatbot platform.

## Step 2: Integrate Chatbot into LMS

- Add the chatbot widget or plugin to the **sample LMS interface**.
- Configure the chatbot to **respond to student queries** and provide navigation guidance.

## Step 3: Test the Chatbot

- Simulate **student interactions** by asking questions from the prepared FAQ list.
- Observe how the chatbot **retrieves information, provides guidance, or directs users to resources**.

## Step 4: Review and Adjust

- Evaluate the chatbot's **accuracy, response time, and clarity**.
- Identify scenarios where **human intervention is needed** for complex or ambiguous queries.
- Refine responses or workflows to improve **student experience**.

## Step 5: Reflect and Discuss

- Discuss the **benefits and limitations** of deploying chatbots in LMS.
- Explore staff responsibilities for **maintenance, monitoring, and ensuring ethical AI use**.

## 4. Learning Outcomes

Participants will be able to:

- Deploy an AI chatbot in a **sample LMS environment**
- Understand how chatbots **interact with learners and provide support**
- Evaluate **accuracy, usability, and coverage of AI responses**
- Recognize the **role of staff in monitoring and updating chatbot functionality**

## 5. Tips for Effective Facilitation

- Use a **sandbox LMS** to allow experimentation without affecting real student data
- Start with a **limited set of FAQs** to ensure clarity and control
- Encourage participants to **test different query types** to observe chatbot behavior
- Highlight **ethical considerations** such as privacy, data security, and transparency

## 6. Reflection Questions

- How effectively does the chatbot **answer queries and support students**?
- Which types of questions or issues require **human follow-up**?
- How can staff ensure the chatbot **remains accurate, updated, and ethical**?
- What steps can be taken to **scale chatbot deployment across real LMS courses**?

## 7. Key Takeaways

1. AI chatbots can enhance **student engagement, accessibility, and timely support** in LMS platforms.
  2. Non-teaching staff are crucial for **deployment, monitoring, and maintenance**.
  3. Human oversight ensures **accuracy, ethical use, and escalation for complex queries**.
  4. Hands-on deployment experience prepares staff to **support faculty and students in AI-enhanced learning environments**.
- 
- Analyze real or mock student feedback using AI (e.g., MonkeyLearn)

## Materials Required

- Sample student feedback dataset (real anonymized or mock data)
- AI text analysis tool (e.g., MonkeyLearn, Lexalytics, or institutional analytics platform)
- Computers with internet access
- Spreadsheet or dashboard to record and visualize insights

## 3. Activity Overview

### Step 1: Prepare Feedback Data

- Collect or generate **sample feedback** from students on courses, assignments, or services.
- Ensure feedback is **anonymized and structured** for analysis.

### Step 2: Upload Feedback to AI Tool

- Log in to the AI tool and **import the feedback dataset**.
- Select appropriate **analysis model** (e.g., sentiment analysis, topic categorization, keyword extraction).

### Step 3: Run AI Analysis

- Activate the AI to process the feedback.
- Observe how it **categorizes feedback by sentiment (positive, neutral, negative)** or **themes/topics**.

### Step 4: Review and Interpret Results

- Examine AI-generated **visualizations, word clouds, or summary reports**.
- Identify **key insights**, recurring concerns, and areas for improvement.
- Discuss **limitations** of AI interpretation and areas requiring human review.

## Step 5: Discuss Actionable Strategies

- Translate insights into **practical recommendations** for faculty or administrative action.
- Highlight strategies for **continuous feedback monitoring** and improvement.

## 4. Learning Outcomes

Participants will be able to:

- Use AI tools to **analyze qualitative feedback efficiently**
- Identify **patterns, sentiment, and key themes** in student responses
- Interpret AI-generated insights for **academic or administrative decision-making**
- Recognize the **role of staff in ensuring ethical and accurate use of AI feedback analysis**

## 5. Tips for Effective Facilitation

- Start with a **small dataset** for demonstration and discussion
- Compare AI results with **manual review** to highlight accuracy and limitations
- Encourage participants to **experiment with different analysis models**
- Emphasize **privacy, anonymization, and ethical use of student data**

## 6. Reflection Questions

- How reliable are AI insights compared to **manual analysis** of feedback?
- What types of feedback require **human interpretation or follow-up**?
- How can staff support faculty in **using AI insights to improve teaching and student experience**?
- What ethical considerations must be addressed when analyzing student feedback with AI?

## 7. Key Takeaways

1. AI tools like MonkeyLearn **accelerate feedback analysis and reveal actionable patterns**.
2. Non-teaching staff play a critical role in **data preparation, interpretation, and reporting**.
3. Human oversight ensures **accuracy, context, and ethical use** of feedback insights.
4. Regular feedback analysis supports **continuous improvement in teaching, learning, and academic services**.

## Case Studies:

- AI tutors in nursing education (virtual simulations)

## Background

Nursing education increasingly integrates **virtual simulations** and **AI-powered tutoring systems** to enhance student learning. These tools allow learners to **practice clinical decision-making, patient care, and procedural skills** in a safe, controlled environment.

AI tutors leverage **adaptive learning, real-time feedback, and scenario-based simulations** to personalize learning experiences and improve competency outcomes.

## 2. Objectives of the Case Study

- Examine how AI tutors are **implemented in nursing programs**.
- Highlight **learning outcomes, efficiency, and engagement** improvements.
- Identify **operational and ethical considerations** for staff support.
- Provide insights for **non-teaching academic staff** on facilitating AI-enabled learning.

## 3. Implementation Example

**Institution:** Virtual Nursing Academy (hypothetical or anonymized real-world example)

**AI Tool Used:** SimTutor AI (adaptive nursing simulation platform)

**Target Audience:** Undergraduate nursing students (Year 2-4)

### Learning Modules:

- Patient assessment and vital signs interpretation
- Medication administration and dosage calculations
- Emergency response scenarios (e.g., cardiac arrest, respiratory distress)
- Communication and patient interaction skills

### Mode of Delivery:

- Cloud-based virtual simulations accessible on laptops/tablets
- AI tutor provides **step-by-step guidance, real-time hints, and corrective feedback**
- Scenario difficulty adjusts based on **student performance and progress**

## 4. Outcomes and Benefits

Area	Observed Impact
<b>Student Competency</b>	Improved clinical decision-making and procedural accuracy
<b>Engagement &amp; Confidence</b>	Increased participation in simulations and higher confidence in clinical skills
<b>Efficiency</b>	Faculty workload reduced as AI provides guidance, freeing time for targeted

Area	Observed Impact
<b>Personalization</b>	mentoring
	Adaptive learning paths address individual student strengths and weaknesses
<b>Assessment</b>	Real-time performance analytics assist in <b>grading and progress tracking</b>

## 5. Challenges and Considerations

Challenge	Solution / Mitigation
Technical issues (hardware/software)	Provide robust IT support and troubleshooting protocols
Over-reliance on AI	Integrate AI with hands-on clinical practice to maintain human skill application
Data privacy	Ensure compliance with institutional and legal standards for student data
Ethical concerns	Monitor AI-generated scenarios for <b>bias and realistic patient representation</b>
Faculty training	Conduct workshops for staff on <b>AI tutoring tools and monitoring dashboards</b>

## 6. Role of Non-Teaching Academic Staff

- Manage **technical setup and maintenance** of AI simulations
- Monitor **student access, progress dashboards, and system logs**
- Support faculty in **analyzing AI-generated performance data**
- Ensure **ethical use, privacy compliance, and accessibility**
- Coordinate **training sessions and user guides** for both faculty and students

## 7. Key Takeaways

1. AI tutors in nursing education **enhance clinical skills, decision-making, and personalized learning.**
2. Non-teaching staff are essential for **technical support, monitoring, and ensuring ethical deployment.**
3. Integration of AI with traditional clinical training **balances efficiency with hands-on competency development.**
4. Data-driven insights from AI simulations enable **targeted faculty intervention and continuous improvement.**

- Chatbot for answering FAQs in an MBA course

### Implementation Example

**Institution:** Business School Online Learning (hypothetical)

**Chatbot Tool Used:** DialogBot AI integrated with the LMS (e.g., Canvas or Moodle)

**Target Audience:** MBA students (full-time and part-time)

**Scope of FAQs:**

- Course schedules, assignment deadlines, and exam formats
- Resource links for case studies, readings, and lecture materials
- Guidance on project submissions, grading rubrics, and peer evaluations
- Administrative queries (enrollment, attendance policies, and certificates)

### Mode of Delivery:

- Embedded chatbot in LMS dashboard and mobile app
- Available **24/7** to respond to student queries
- Uses **predefined answers** for common questions and **AI-generated suggestions** for new queries

## 4. Outcomes and Benefits

Area	Observed Impact
<b>Response Time</b>	Students received immediate answers, improving satisfaction and engagement
<b>Faculty Workload</b>	Reduced repetitive queries, allowing faculty to focus on teaching and mentoring
<b>Student Autonomy</b>	Students could quickly find information without waiting for email responses
<b>Data Insights</b>	Query logs provided insights into common issues, informing course improvements
<b>Consistency</b>	Ensured standardized, accurate responses to all students

## 5. Challenges and Considerations

Challenge	Solution / Mitigation
Outdated or incorrect answers	Regularly review and update chatbot knowledge base
Complex or ambiguous queries	Route complex questions to faculty or support staff
Technical glitches	Provide IT support and monitor uptime/performance

Challenge	Solution / Mitigation
Privacy concerns	Ensure student queries are anonymized and comply with institutional policies
Engagement monitoring	Analyze chatbot usage and follow up on unresolved questions

## 6. Role of Non-Teaching Academic Staff

- **Set up and maintain** the chatbot in the LMS or mobile platform
- **Update and manage the FAQ knowledge base** for accuracy and relevance
- **Monitor chatbot interactions and escalation logs** for quality control
- **Provide training to faculty and students** on chatbot use
- **Support data analysis of chatbot usage** to identify gaps or improvements

## 7. Key Takeaways

1. AI chatbots enhance **student support, engagement, and efficiency** in MBA programs.
2. Non-teaching staff are crucial for **deployment, maintenance, monitoring, and content updates**.
3. Human oversight ensures **accuracy, ethical use, and escalation of complex queries**.
4. Continuous monitoring and updates allow chatbots to **adapt to evolving student needs** and improve learning experience.

## Scenario-Based Discussions:

- “Should bots give students grades?”

## Introduction

AI grading tools and automated bots are increasingly used in education to **assess student performance quickly and consistently**. However, relying solely on bots for grading raises questions about **accuracy, fairness, transparency, and ethical responsibility**.

Non-teaching academic staff can help faculty and students **navigate these challenges, ensuring AI grading is used responsibly**.

## 2. Learning Objectives

Participants will be able to:

- Understand **AI grading capabilities and limitations**

- Identify potential **ethical, accuracy, and fairness issues**
- Explore strategies for **human oversight and validation**
- Support faculty and students in **responsible AI grading implementation**

### 3. Scenario Example

**Scenario:**

An instructor decides to use an AI bot to grade a final essay for a large class. The bot provides instant scores and feedback, but some students feel their essays were **misinterpreted or unfairly scored**.

**Questions for Reflection:**

- Should the AI grade be considered **final**, or should there be a human review?
- How can staff ensure that **grading is fair and transparent**?
- What steps should be taken to **address student complaints or concerns**?

### 4. Group Activity

**Step 1: Divide into Small Groups**

- Groups of 3–5 participants
- Each group receives a **mock grading scenario** (e.g., essays, short answers, multiple-choice)

**Step 2: Analyze AI-Generated Grades**

- Compare AI-assigned scores with **sample human-assigned grades**
- Identify **discrepancies, potential biases, or unfair scoring**

**Step 3: Discuss Human Oversight**

- Decide when **human intervention is necessary**
- Develop **policies or strategies** to validate AI grading
- Consider **student communication protocols** for contested grades

**Step 4: Share Insights**

- Each group presents their **findings, recommendations, and mitigation strategies**
- Discuss **common concerns and best practices** for AI grading in academic settings

### 5. Key Concepts to Highlight

Concept	Explanation
<b>AI Grading Accuracy</b>	AI can quickly grade objective questions but may misinterpret subjective answers

Concept	Explanation
<b>Fairness and Bias</b>	AI may unintentionally favor certain writing styles or content patterns
<b>Human Oversight</b>	Faculty review is critical to ensure fairness and validity
<b>Transparency</b>	Students should understand how AI grades are calculated and evaluated
<b>Ethical Responsibility</b>	AI grading must respect student rights, privacy, and academic integrity

## 6. Reflection Questions

- What are the **risks and benefits** of using bots for grading?
- How can staff ensure **AI grades are accurate and fair**?
- Should students have the **right to contest AI-assigned grades**, and how?
- What policies should be in place to **balance efficiency with academic integrity**?

## 7. Key Takeaways

1. AI grading tools offer **speed and efficiency**, particularly for large classes or standardized assessments.
2. Human oversight is **essential for subjective assessments and quality assurance**.
3. Staff play a vital role in **monitoring AI outputs, addressing discrepancies, and ensuring fairness**.
4. Policies and transparent communication help **maintain trust and academic integrity** when AI is involved in grading.

- “What’s the teacher’s role in AI-supported classrooms?”

### Introduction

AI technologies are increasingly integrated into classrooms to **assist with personalized learning, grading, and feedback**. While AI can support instruction, the **teacher’s role remains central** in guiding, mentoring, and maintaining human oversight.

Non-teaching academic staff support the classroom by **helping manage AI tools, monitoring outputs, and ensuring ethical use**.

## 2. Learning Objectives

Participants will be able to:

- Understand the evolving **roles of teachers in AI-enhanced classrooms**
- Identify **tasks AI can support** versus tasks requiring human expertise

- Recognize the importance of **teacher oversight, mentorship, and ethical guidance**
- Support faculty and students in **effective AI integration**

### 3. Scenario Example

**Scenario:**

A high school uses an AI tutor to provide individualized exercises and instant feedback. The AI recommends additional resources based on student performance.

**Questions for Reflection:**

- What tasks can AI handle independently, and which tasks require **teacher involvement?**
- How should teachers **interpret AI recommendations** and adjust instruction accordingly?
- How can staff support teachers in **monitoring AI outputs and ensuring fairness?**

### 4. Group Activity

**Step 1: Divide into Small Groups**

- Groups of 3–5 participants
- Each group receives a **classroom scenario** with AI integration (e.g., AI-assisted grading, adaptive learning tools, virtual tutoring)

**Step 2: Identify Teacher Responsibilities**

- List tasks that **AI can automate** (e.g., grading multiple-choice questions, suggesting exercises)
- List tasks that **require teacher judgment** (e.g., mentorship, addressing student questions, ethical decision-making)

**Step 3: Discuss Staff Support Roles**

- Determine how **non-teaching staff can assist** teachers (technical setup, data monitoring, reporting, troubleshooting)
- Highlight opportunities for **collaboration between staff and faculty**

**Step 4: Present Group Insights**

- Share conclusions on **teacher-AI collaboration**, critical human oversight areas, and staff support strategies

### 5. Key Concepts to Highlight

Concept	Explanation
<b>Human-AI Collaboration</b>	AI assists with repetitive or data-driven tasks, teachers provide

Concept	Explanation
mentorship and ethical guidance	
<b>Instructional Oversight</b>	Teachers interpret AI outputs and ensure appropriate learning pathways
<b>Personalized Learning Support</b>	Teachers use AI insights to tailor lessons and interventions
<b>Ethical Responsibility</b>	Teachers ensure AI use aligns with fairness, inclusivity, and privacy standards
<b>Staff Support Role</b>	Staff manage AI tools, monitor outputs, and provide technical and administrative support

## 6. Reflection Questions

- Which classroom tasks should **always remain teacher-led** despite AI assistance?
- How can teachers **effectively leverage AI** without diminishing human interaction?
- How can staff **facilitate AI adoption** while ensuring teachers retain control and oversight?
- What **policies or training** can help define clear teacher roles in AI-supported classrooms?

## 7. Key Takeaways

1. AI is a **supportive tool**, not a replacement for teachers.
2. Teachers are critical for **mentorship, ethical oversight, and instructional decision-making**.
3. Non-teaching staff help ensure **smooth AI integration, accurate monitoring, and ethical compliance**.
4. Successful AI-supported classrooms require **collaboration between teachers, students, and staff**.

# Module 4 AI for Content Creation & Lecture Enhancement

**Hands-On Activities:**

- Generate a lecture outline using ChatGPT or Notion AI

#### Materials Required

- Computer or tablet with internet access
  - AI platform (ChatGPT, Notion AI, or equivalent)
  - Sample lecture topic provided by instructor (e.g., "Introduction to Machine Learning")
  - Note-taking tool or spreadsheet for recording outputs
- 

### 3. Activity Overview

#### Step 1: Define Lecture Topic

- Choose a **topic for the lecture**, e.g., "AI in Healthcare" or "Marketing Analytics."
- Specify **target audience and duration** (e.g., undergraduate students, 60 minutes).

#### Step 2: Input Instructions into AI

- Open the AI tool and input a **prompt** such as:  
*"Generate a detailed lecture outline for a 60-minute undergraduate lecture on [topic], including introduction, main points, examples, and summary."*

#### Step 3: Generate and Review Outline

- AI produces a structured outline with **sections, subtopics, and suggested examples**.
- Review the output for **accuracy, relevance, and completeness**.

#### Step 4: Customize and Refine

- Modify or expand AI-generated content based on **faculty preferences or course objectives**.
- Add **examples, case studies, or discussion points** to tailor the lecture.

#### Step 5: Discuss Staff Support

- Highlight how non-teaching staff can **assist faculty**:
  - o Setting up AI tools
  - o Providing tutorials or troubleshooting
  - o Collecting feedback on AI-generated content

### 4. Learning Outcomes

Participants will be able to:

- Use AI tools to **generate structured lecture outlines quickly**
- Evaluate AI-generated content for **accuracy, relevance, and pedagogical alignment**
- Assist faculty in **customizing and refining AI outputs**
- Recognize the **support role of non-teaching staff in AI-enhanced teaching workflows**

## 5. Tips for Effective Facilitation

- Start with a **simple topic** to demonstrate the process
- Compare AI-generated outline with a **manual outline** to highlight strengths and limitations
- Encourage participants to **experiment with different prompts** to see varied outputs
- Emphasize the importance of **review and human oversight**

## 6. Reflection Questions

- How accurate and relevant is the AI-generated lecture outline?
- Which elements require **human refinement or contextualization**?
- How can staff **support faculty in using AI efficiently and ethically**?
- What are the **advantages and limitations** of relying on AI for lecture preparation?

## 7. Key Takeaways

1. AI tools can **save time and enhance creativity** in lecture preparation.
2. Human review is essential to ensure **accuracy, relevance, and alignment with learning objectives**.
3. Non-teaching staff play a key role in **supporting faculty with setup, training, and troubleshooting**.
4. Hands-on use builds confidence in **integrating AI into academic workflows**.

Create a visual concept map or video using AI tools (e.g., Synthesia, Pictory)

### Materials Required

- Computer or tablet with internet access
- AI visualization tools (e.g., Pictory, Synthesia, MindMeister, Canva AI)
- Sample topic or concept provided by instructor (e.g., "Supply Chain Management Basics")
- Script or key points for video (if creating a video)
- Note-taking tool or workspace to record outputs

## 3. Activity Overview

### Step 1: Define the Topic

- Choose a **concept or topic** for visualization, e.g., "Marketing Funnel Stages" or "Photosynthesis Process."
- Decide on the format: **concept map or short video**.

## Step 2: Input Instructions into AI Tool

- For a **visual concept map**, enter topic and key subtopics into AI mapping tool.
- For a **video**, provide AI tool with:
  - o Script or bullet points
  - o Visual style preferences (animations, images, characters)
  - o Voiceover or narration options

## Step 3: Generate Content

- AI creates a **concept map** with nodes, connections, and labels OR a **video** with visual and audio elements.
- Review output for **accuracy, clarity, and relevance**.

## Step 4: Customize and Refine

- Add or adjust **nodes, images, or animations** to better fit learning objectives.
- Modify **text, narration, or visuals** to enhance clarity and engagement.

## Step 5: Discuss Staff Support Roles

- Non-teaching staff can:
  - o Assist with **AI tool setup and technical troubleshooting**
  - o Help **faculty refine AI outputs** for clarity and accessibility
  - o Ensure content is **aligned with curriculum and learning goals**

## 4. Learning Outcomes

Participants will be able to:

- Use AI tools to **generate concept maps or videos** for teaching purposes
- Evaluate outputs for **accuracy, visual clarity, and pedagogical alignment**
- Support faculty in **customizing AI-generated content**
- Recognize the **support role of non-teaching staff** in AI-enhanced content creation

## 5. Tips for Effective Facilitation

- Start with a **simple topic** to demonstrate AI visualization capabilities
- Compare AI-generated content with **manual creation** to highlight efficiency
- Encourage participants to **experiment with different styles, visuals, or narration options**
- Emphasize the importance of **review, accuracy, and accessibility**

## 6. Reflection Questions

- How accurate and clear is the AI-generated concept map or video?

- Which elements need **human refinement or contextualization**?
- How can staff **support faculty in using AI tools efficiently and ethically**?
- What are the **advantages and potential limitations** of AI-generated visual learning resources?

## 7. Key Takeaways

1. AI tools like Synthesia and Pictory **enhance creativity, engagement, and efficiency** in content creation.
  2. Human oversight is essential for **accuracy, clarity, and alignment with learning goals**.
  3. Non-teaching staff play a critical role in **technical support, refinement, and ethical monitoring**.
  4. Hands-on practice with AI visualization tools prepares staff to **support faculty and students in innovative learning methods**.
- Use an AI tool to rewrite a paragraph for different reading levels

### . Materials Required

- Computer or tablet with internet access
- AI text tool (e.g., ChatGPT, QuillBot, or other rewriting tools)
- Sample paragraph (from lecture notes, articles, or assignments)
- Worksheet or document to record outputs for comparison

## 3. Activity Overview

### Step 1: Choose a Paragraph

- Select a **sample paragraph** with moderate complexity (academic text or course material).

### Step 2: Input Paragraph into AI

- Use the AI tool and provide instructions such as:  
*“Rewrite this paragraph for a 10th-grade reading level.”*  
*“Rewrite this paragraph for a beginner-level audience.”*  
*“Rewrite this paragraph for an advanced or professional audience.”*

### Step 3: Generate and Review Outputs

- AI produces **rewritten versions** tailored to specified reading levels.
- Compare outputs for **clarity, vocabulary, sentence structure, and meaning retention**.

### Step 4: Customize and Refine

- Adjust the AI-generated text as needed to **ensure accuracy and context relevance**.

- Discuss **appropriate vocabulary, sentence length, and readability** for different learner groups.

#### Step 5: Discuss Staff Support Roles

- Non-teaching staff can:
  - o Assist faculty in **adapting materials for diverse student groups**
  - o Monitor **AI outputs for accuracy and educational appropriateness**
  - o Ensure content is **inclusive, accessible, and aligned with curriculum goals**

#### 4. Learning Outcomes

Participants will be able to:

- Use AI tools to **adapt written content for multiple reading levels**
- Evaluate AI outputs for **clarity, readability, and accuracy**
- Assist faculty in **customizing materials for diverse student audiences**
- Recognize the **role of non-teaching staff in content accessibility and quality assurance**

#### 5. Tips for Effective Facilitation

- Start with a **moderately complex paragraph** to demonstrate differentiation clearly
- Compare AI outputs to **human-written adaptations** to highlight efficiency and limitations
- Encourage participants to **experiment with multiple reading levels**
- Emphasize **human review** for meaning retention and educational appropriateness

#### 6. Reflection Questions

- How well does AI adapt content for **different reading levels**?
- Which parts require **human adjustment** to maintain accuracy and context?
- How can staff support **faculty in producing accessible content** for diverse learners?
- What are the **benefits and limitations** of AI-assisted rewriting in education?

#### 7. Key Takeaways

1. AI tools can **quickly adjust content** to suit different learner abilities.
2. Human oversight ensures **accuracy, context, and appropriateness**.

3. Non-teaching staff play a key role in **supporting faculty and students** in creating accessible learning materials.
4. Hands-on practice enhances staff ability to **leverage AI tools for inclusive education**.

#### **Case Studies:**

- Text-to-video tools used in psychology lectures

#### **Background**

Psychology courses often involve **complex theories, case studies, and abstract concepts** that can be challenging for students to visualize. Text-to-video AI tools transform written content into **engaging, visual, and narrated videos**, making lectures more accessible and interactive.

Non-teaching academic staff play a vital role in **supporting faculty with AI tool deployment, content management, and student engagement monitoring**.

#### **2. Objectives of the Case Study**

- Examine how text-to-video tools enhance **psychology lectures and student comprehension**
- Highlight **efficiency, engagement, and accessibility** benefits for faculty and students
- Identify the role of **non-teaching staff in deployment, support, and oversight**
- Explore **best practices, challenges, and ethical considerations**

#### **3. Implementation Example**

**Institution:** University Psychology Department (hypothetical or anonymized real example)

**AI Tool Used:** Pictory AI or Synthesia

**Target Audience:** Undergraduate psychology students

#### **Content:**

- Theories of behavior and cognition
- Case studies in abnormal psychology
- Experiments in social psychology (e.g., Milgram experiment)

#### **Mode of Delivery:**

- Faculty provide lecture notes, scripts, or key points
- AI tool generates **animated videos with voiceover narration, illustrations, and text highlights**
- Videos uploaded to **LMS or shared via class portal** for asynchronous learning

#### 4. Outcomes and Benefits

Area	Observed Impact
<b>Student Engagement</b>	Increased attention and interest in abstract concepts
<b>Comprehension</b>	Improved understanding of complex psychological theories and experiments
<b>Efficiency</b>	Reduced lecture preparation time for faculty while producing high-quality visuals
<b>Accessibility</b>	Students can review videos at their own pace, enhancing inclusive learning
<b>Interactive Learning</b>	Videos support flipped classroom models and discussion-based activities

#### 5. Challenges and Considerations

Challenge	Solution / Mitigation
Script quality	Faculty provide clear, structured scripts for accurate video generation
Technical issues	Non-teaching staff assist with AI tool setup, troubleshooting, and uploads
Misinterpretation of content	Human review of AI-generated video to ensure <b>accuracy and context</b>
Accessibility concerns	Add captions, transcripts, and adjustable playback options
Ethical concerns	Ensure content respects <b>privacy and intellectual property rights</b>

#### 6. Role of Non-Teaching Academic Staff

- Assist with **AI tool setup and account management**
- Support faculty in **preparing scripts and inputs for text-to-video conversion**
- Monitor **video uploads and accessibility features** in LMS
- Provide **technical guidance and troubleshooting**
- Ensure **ethical use, copyright compliance, and student data protection**

#### 7. Key Takeaways

1. Text-to-video AI tools enhance **student engagement, comprehension, and accessibility** in psychology lectures.
2. Non-teaching staff are crucial for **technical support, content management, and quality assurance**.
3. Human oversight ensures **accuracy, ethical compliance, and alignment with learning objectives**.
4. Hands-on adoption of AI videos enables faculty to **focus on higher-order teaching activities** while students benefit from **interactive, visual learning experiences**.

- Accessibility compliance using AI auto-captioning in law courses

#### Implementation Example

**Institution:** Law School Digital Learning (hypothetical example)

**AI Tool Used:** Otter.ai, Microsoft Stream, or Zoom auto-captioning

**Target Audience:** Law students, including students with hearing impairments

**Content:**

- Recorded lectures on contract law, constitutional law, and case studies
- Guest lectures and panel discussions
- Supplementary video content (e.g., courtroom simulations)

#### Mode of Delivery:

- AI tool transcribes live lectures or pre-recorded videos
- Captions displayed **synchronously during playback** or as downloadable transcripts
- Staff ensure captions are **accurate, properly formatted, and synchronized**

### 4. Outcomes and Benefits

Area	Observed Impact
<b>Accessibility</b>	Students with hearing impairments can access lecture content fully
<b>Comprehension</b>	Captions aid all students in understanding legal terminology and complex cases
<b>Engagement</b>	Increased participation and confidence in following lectures
<b>Efficiency</b>	Reduced manual transcription workload for faculty
<b>Compliance</b>	Meets institutional and legal accessibility requirements

### 5. Challenges and Considerations

Challenge	Solution / Mitigation
Misinterpretation of legal terms	Staff review and correct captions for technical accuracy
Synchronization issues	Test tools before lectures and adjust timestamps as needed
Technical difficulties	Staff provide <b>training and troubleshooting support</b> for faculty
Privacy concerns	Ensure AI transcription <b>respects student and guest speaker privacy</b>
Accessibility compliance	Regularly audit captions for <b>accuracy, readability, and compliance standards</b>

## 6. Role of Non-Teaching Academic Staff

- Assist with **AI tool selection, setup, and integration** into LMS or lecture platforms
- Monitor **caption accuracy and legal terminology correctness**
- Provide **faculty training and user guides** on auto-captioning tools
- Ensure **data privacy, accessibility standards, and regulatory compliance**
- Collect feedback from students to **improve captioning quality and usability**

## 7. Key Takeaways

1. AI auto-captioning significantly enhances **accessibility, comprehension, and inclusivity** in law courses.
2. Non-teaching staff are essential for **technical support, quality assurance, and accessibility compliance**.
3. Human oversight ensures **accuracy of legal terminology, timing, and clarity** of captions.
4. Hands-on adoption of AI captioning tools empowers institutions to **meet accessibility standards while improving student engagement**.

I can also create a **workflow diagram** showing **lecture recording → AI captioning**

- AI-enhanced visual materials for biology labs

### Implementation Example

**Institution:** University Biology Department (hypothetical example)

**AI Tools Used:** DALL-E, BioRender AI, or other visualization/animation platforms

**Target Audience:** Undergraduate biology students

#### Content:

- Cellular processes (e.g., mitosis, meiosis, cellular respiration)
- Anatomy and physiology diagrams
- Ecosystem and environmental biology simulations
- Lab experiment visualizations (e.g., chemical reactions, dissection guides)

#### Mode of Delivery:

- AI-generated visuals integrated into **lab manuals, presentations, and LMS resources**
- 3D models or animations used in **pre-lab preparation and post-lab analysis**
- Staff ensure visuals are **accurate, labeled correctly, and aligned with curriculum objectives**

#### 4. Outcomes and Benefits

Area	Observed Impact
<b>Student Engagement</b>	Increased attention and curiosity through interactive visuals
<b>Comprehension</b>	Improved understanding of complex biological structures and processes
<b>Efficiency</b>	Faculty save time in preparing high-quality diagrams and animations
<b>Accessibility</b>	Visual materials support diverse learning styles and remote learners
<b>Interactive Learning</b>	Supports flipped labs and blended learning models

#### 5. Challenges and Considerations

Challenge	Solution / Mitigation
Accuracy of AI visuals	Staff review AI outputs and verify alignment with textbook content
Technical setup	Provide <b>guidance and troubleshooting</b> for faculty using AI tools
Intellectual property	Ensure AI-generated visuals comply with <b>copyright and licensing rules</b>
Accessibility	Include <b>alt text, captions, and annotations</b> for visually impaired students
Integration	Ensure seamless inclusion in LMS and lab manuals

#### 6. Role of Non-Teaching Academic Staff

- Assist in **AI tool setup and access management**
- Review and validate **AI-generated visuals for accuracy and clarity**
- Prepare **LMS or lab manuals with integrated AI materials**
- Provide **faculty training and user support** for AI visualization tools
- Ensure **compliance with copyright, accessibility, and ethical standards**

#### 7. Key Takeaways

1. AI-enhanced visuals improve **student comprehension, engagement, and accessibility** in biology labs.
2. Non-teaching staff are essential for **technical support, quality assurance, and content deployment**.
3. Human oversight ensures **accuracy, ethical use, and alignment with learning objectives**.
4. AI visuals complement hands-on lab work, supporting **interactive and blended learning approaches**.

#### Scenario-Based Discussions:

- “Can AI make your teaching more inclusive?”

## Introduction

AI offers tools to **adapt teaching for diverse learning needs**, including varying reading levels, language proficiencies, disabilities, and learning styles. Inclusive teaching ensures **all students have equitable access to learning materials and opportunities**.

Non-teaching academic staff support faculty by **facilitating AI adoption, monitoring outputs, and ensuring ethical and accessible implementation**.

## 2. Learning Objectives

Participants will be able to:

- Understand how AI tools can **enhance inclusivity in teaching**
- Identify **practical applications** of AI for different student needs
- Recognize **limitations, ethical considerations, and potential biases**
- Explore the **role of staff in supporting inclusive AI-driven teaching**

## 3. Scenario Example

### Scenario:

A professor is teaching a literature course with students from diverse backgrounds: ESL learners, students with dyslexia, and students with visual impairments. AI tools are available to:

- Simplify or rephrase text for different reading levels
- Provide text-to-speech and speech-to-text support
- Generate captions for video content
- Recommend alternative learning activities

### Discussion Questions:

- How can AI support each student’s specific needs?
- Are there risks of AI reinforcing biases or excluding certain students?
- What role do staff play in **monitoring, validating, and customizing AI outputs**?

## 4. Group Activity

### Step 1: Divide into Small Groups

- Groups of 3–5 participants
- Each group receives a **mock classroom profile** with diverse student needs

## Step 2: Identify AI Solutions

- List AI tools or features that could address **specific learning barriers**
- Examples: auto-captioning, reading level adjustment, translation, accessibility-friendly visuals

## Step 3: Discuss Limitations

- Identify where AI might **fail to support inclusivity**
- Discuss scenarios where **human intervention is necessary**

## Step 4: Present Group Findings

- Share strategies for **integrating AI tools into inclusive teaching practices**
- Highlight the **staff roles** in supporting faculty and students

## 5. Key Concepts to Highlight

Concept	Explanation
<b>Accessibility</b>	Making learning materials usable for students with disabilities
<b>Differentiation</b>	AI adapts content to different reading levels, languages, or learning styles
<b>Bias Awareness</b>	AI can unintentionally favor certain groups; human oversight is critical
<b>Human Oversight</b>	Staff and faculty ensure AI supports inclusivity without unintended harm
<b>Ethical Use</b>	Inclusive teaching with AI respects privacy, fairness, and accessibility standards

## 6. Reflection Questions

- Which aspects of teaching **can AI make more inclusive?**
- Where might AI **fall short or create new barriers?**
- How can staff support faculty in **validating and customizing AI tools?**
- What **policies or training** are needed for effective, inclusive AI adoption?

## 7. Key Takeaways

1. AI can enhance inclusivity by **adapting materials, supporting accessibility, and personalizing learning.**
2. Human oversight ensures **fairness, accuracy, and ethical use.**
3. Non-teaching staff are essential for **technical support, monitoring AI outputs, and guiding faculty.**
4. Inclusive AI-driven teaching requires **collaboration between staff, faculty, and students.**

- “Should AI be credited in teaching materials?”

## Introduction

With AI tools increasingly generating lecture content, visuals, videos, and assessments, questions arise about **academic attribution and transparency**. Crediting AI in teaching materials involves considering **intellectual property, ethical responsibility, and institutional policies**.

Non-teaching academic staff can help faculty **navigate attribution, maintain compliance, and manage documentation**.

## 2. Learning Objectives

Participants will be able to:

- Understand **ethical and legal considerations** of AI-generated teaching content
- Discuss whether AI should be **credited alongside human authors**
- Identify staff roles in **supporting faculty with attribution and compliance**
- Explore best practices for **transparency and integrity in teaching materials**

## 3. Scenario Example

### Scenario:

A faculty member uses ChatGPT to generate lecture slides on “Global Marketing Strategies.” They also use DALL·E to create illustrative images. When uploading materials to the LMS, students ask whether the AI contributed content and if it should be **acknowledged in citations or credits**.

### Discussion Questions:

- Should AI tools be credited as contributors in teaching materials? Why or why not?
- How can staff ensure **faculty comply with copyright, institutional, and ethical guidelines**?
- What is the **impact of AI attribution on academic integrity and transparency**?

## 4. Group Activity

### Step 1: Divide into Small Groups

- Groups of 3–5 participants
- Each group receives a **mock teaching material scenario** involving AI-generated slides, videos, or assessments

## Step 2: Identify Attribution Approaches

- Discuss possible ways to credit AI:
  - o Mention AI in **footnotes or slide references**
  - o Include a **disclaimer about AI assistance**
  - o Follow **institutional or copyright guidelines**

## Step 3: Evaluate Implications

- Consider **student perception, academic integrity, and legal requirements**
- Discuss staff roles in **ensuring compliance, reviewing AI use, and advising faculty**

## Step 4: Share Group Findings

- Present conclusions on **how AI crediting should be handled** in teaching materials
- Highlight best practices for **transparency and ethical use**

## 5. Key Concepts to Highlight

Concept	Explanation
<b>AI Contribution</b>	AI may generate text, visuals, or structure but cannot hold intellectual property
<b>Transparency</b>	Disclosing AI use maintains trust and academic integrity
<b>Ethical Responsibility</b>	Faculty are responsible for accuracy, fairness, and appropriate use of AI
<b>Staff Support Role</b>	Assist in <b>reviewing AI use, documenting contributions, and ensuring policy compliance</b>
<b>Legal &amp; Copyright Considerations</b>	AI outputs may be subject to licensing, copyright, or institutional rules

## 6. Reflection Questions

- Should AI-generated content be **acknowledged in the same way as human contributors?**
- How can staff support faculty in **ethical and transparent AI use?**
- What policies should institutions develop regarding **AI attribution in teaching materials?**
- How does **crediting AI affect student perception of learning materials?**

## 7. Key Takeaways

1. Crediting AI promotes **transparency and ethical use** but requires clear institutional guidance.
2. Faculty remain **responsible for content accuracy and intellectual integrity**.

3. Non-teaching staff play a key role in **monitoring AI use, advising on attribution, and ensuring compliance.**
4. Establishing best practices ensures AI use in teaching **enhances learning without compromising academic standards.**

#### **Topics Covered:**

- AI-generated content for lectures

#### **Introduction**

AI-generated content is transforming the way lectures are prepared and delivered. Tools like ChatGPT, Notion AI, and other content-generation platforms can produce **lecture scripts, slide outlines, examples, case studies, and even multimedia content.**

Non-teaching academic staff play an essential role in **supporting faculty with these tools, ensuring accuracy, managing outputs, and maintaining ethical and institutional standards.**

#### **2. What is AI-Generated Lecture Content?**

- **Definition:** Lecture content created or enhanced using AI algorithms that generate text, visuals, or multimedia based on user prompts.
- **Examples:**
  - Summarized lecture notes for specific topics
  - Structured lecture slides or outlines
  - Illustrative examples or analogies
  - Visualizations, concept maps, and diagrams
  - Short explainer videos or animations

#### **3. Benefits of AI-Generated Lecture Content**

<b>Benefit</b>	<b>Explanation</b>
<b>Efficiency</b>	Reduces faculty preparation time by automating content generation
<b>Consistency</b>	Maintains uniform quality and style across lectures
<b>Personalization</b>	Tailors content to student learning levels or course objectives

Benefit	Explanation
Creativity	Suggests examples, analogies, or visuals that enhance comprehension
Accessibility	Supports multiple formats (text, audio, visuals) to accommodate diverse learners

#### 4. Limitations and Considerations

Limitation	Mitigation
Accuracy	Staff and faculty must <b>review content for correctness and relevance</b>
Contextual appropriateness	Ensure examples and cases <b>fit the course and local context</b>
Bias	Check AI outputs for <b>cultural or content bias</b>
Overreliance	Faculty should use AI as a <b>support tool, not a replacement for expertise</b>
Intellectual property	Ensure AI outputs comply with <b>copyright and licensing rules</b>

#### 5. Role of Non-Teaching Academic Staff

- **Tool Support:** Assist faculty in accessing and using AI platforms effectively
- **Content Management:** Organize, format, and upload AI-generated materials to LMS or lecture repositories
- **Quality Assurance:** Review outputs for **accuracy, clarity, and relevance**
- **Training & Guidance:** Provide briefings or tutorials for faculty on AI use
- **Ethics & Compliance:** Ensure adherence to **institutional policies, copyright laws, and ethical standards**

#### 6. Best Practices

1. Always **review and refine AI-generated content** before presenting it to students.
2. Use AI to **enhance, not replace**, faculty knowledge and expertise.
3. Combine AI-generated materials with **interactive and personalized teaching strategies**.
4. Maintain **documentation and version control** of AI outputs for transparency.
5. Encourage faculty and staff to **experiment and provide feedback** for continuous improvement.

#### 7. Key Takeaways

- AI can **streamline lecture preparation**, enhance creativity, and support inclusive learning.
- Human oversight is crucial to ensure **accuracy, context, and ethical use**.
- Non-teaching staff are pivotal in **technical support, quality control, and compliance monitoring**.

- Strategic use of AI-generated content can **improve teaching efficiency and student engagement** without compromising academic integrity.
- Translation and accessibility tools

## Introduction

Modern AI-powered translation and accessibility tools enable institutions to **deliver educational content to diverse and inclusive student populations**. These tools support **multilingual students, learners with disabilities, and those with varying levels of digital literacy**, ensuring equitable access to learning.

Non-teaching academic staff play a vital role in **facilitating the use of these tools, monitoring quality, and ensuring compliance with accessibility standards**.

## 2. What Are Translation and Accessibility Tools?

- **Translation Tools:** AI-based platforms (e.g., DeepL, Google Translate, Microsoft Translator) that convert text, audio, or video content into **different languages**.
- **Accessibility Tools:** AI or software solutions that improve **content access for students with disabilities**, including:
  - o Text-to-speech (TTS) and speech-to-text (STT) tools
  - o Auto-captioning for video lectures
  - o Screen readers and alternative text for images
  - o Content simplification and readability enhancement

## 3. Benefits

	<b>Benefit</b>	<b>Explanation</b>
<b>Inclusivity</b>	Students with disabilities or different language backgrounds can access course materials effectively	
<b>Efficiency</b>	Quick translation and accessibility adaptation of lecture content	
<b>Engagement</b>	Improves comprehension and participation for all learners	
<b>Compliance</b>	Supports institutional adherence to accessibility standards (e.g., WCAG, ADA)	
<b>Flexibility</b>	Students can access content <b>anytime, anywhere</b> , in formats they can understand	

## 4. Limitations and Considerations

<b>Limitation</b>	<b>Mitigation</b>
Accuracy of translation	Staff and faculty should <b>review translations</b> , especially for technical or legal

<b>Limitation</b>	<b>Mitigation</b>
	terms
Misinterpretation	Ensure <b>contextual correctness</b> and cultural appropriateness
Technology reliance	Provide <b>training and support</b> to faculty and students
Accessibility gaps	Combine AI tools with <b>human oversight</b> to meet all accessibility needs
Privacy and data security	Ensure tools <b>comply with institutional data policies</b>

## 5. Role of Non-Teaching Academic Staff

- **Implementation:** Assist in setting up translation and accessibility tools across platforms
- **Quality Assurance:** Review translated materials, captions, and TTS outputs for accuracy
- **Technical Support:** Help faculty and students **navigate AI tools effectively**
- **Policy Compliance:** Ensure outputs meet **accessibility regulations and ethical standards**
- **Training:** Conduct workshops or tutorials on **using these tools effectively**

## 6. Best Practices

1. Always **review AI translations and accessibility outputs** for accuracy and context.
2. Provide **alternative formats** (audio, visual, text) to ensure full accessibility.
3. Encourage **faculty to integrate accessible materials into lectures proactively**.
4. Document workflows for **translation and accessibility processes** to maintain quality.
5. Collect **student feedback** to continuously improve accessibility and usability.

## 7. Key Takeaways

- AI translation and accessibility tools **enhance learning for diverse student populations**.
- Human oversight ensures **accuracy, relevance, and ethical use**.
- Non-teaching staff are critical in **implementation, support, and monitoring**.
- Strategic use of these tools fosters **inclusive, accessible, and compliant learning environments**.
- AI for multimedia and engagement

## Introduction

AI tools are increasingly used to create **multimedia content that enhances student engagement**. From interactive videos and animations to AI-generated quizzes and visualizations, these tools help **transform traditional lectures into immersive learning experiences**.

Non-teaching academic staff play an important role in **supporting faculty with AI tool adoption, managing outputs, and ensuring accessibility and compliance**.

## 2. What is AI for Multimedia and Engagement?

- **Definition:** AI-powered tools that generate or enhance **visual, audio, and interactive content** to make learning more engaging and effective.
- **Examples:**
  - AI-generated videos and animations (Synthesia, Pictory)
  - Interactive quizzes and simulations (Quizizz AI, Kahoot AI features)
  - Visualizations of complex concepts (BioRender AI, Tableau AI)
  - Gamified learning activities or adaptive learning modules

## 3. Benefits

Benefit	Explanation
<b>Enhanced Engagement</b>	Interactive visuals, videos, and simulations capture student attention
<b>Improved Comprehension</b>	Complex concepts are easier to understand with multimedia support
<b>Time Efficiency</b>	AI automates multimedia creation, reducing faculty prep time
<b>Personalization</b>	Adaptive content can adjust to individual learning levels and preferences
<b>Accessibility</b>	Multimedia can be paired with captions, audio, and alternative text for inclusive learning

## 4. Limitations and Considerations

Limitation	Mitigation
Accuracy of content	Staff and faculty review outputs for correctness
Overreliance	Use AI as a <b>supplement</b> , not a replacement for teaching expertise
Technical challenges	Provide <b>training and support</b> for AI tools
Accessibility gaps	Ensure videos have captions, images have alt-text, and simulations are usable by all students
Copyright and IP	Verify AI-generated media complies with <b>intellectual property rules</b>

## 5. Role of Non-Teaching Academic Staff

- **Tool Setup:** Help faculty access and configure AI multimedia tools
- **Content Management:** Organize AI-generated media for LMS, slides, or classroom use
- **Quality Assurance:** Review multimedia outputs for **accuracy, clarity, and accessibility**
- **Technical Support:** Assist faculty with **troubleshooting, updates, and integration**
- **Ethics & Compliance:** Ensure **copyright, privacy, and accessibility standards** are maintained

## 6. Best Practices

1. Use AI multimedia tools to **enhance learning, not replace teacher input.**
2. Always **review and validate AI outputs** for accuracy and clarity.
3. Integrate multimedia with **interactive learning activities** for engagement.
4. Ensure content is **accessible to all students** through captions, transcripts, and descriptive visuals.
5. Provide **training and guidelines** for faculty on AI multimedia tools.

## 7. Key Takeaways

- AI-powered multimedia transforms lectures into **interactive and engaging learning experiences.**
  - Human oversight ensures **accuracy, accessibility, and ethical use.**
  - Non-teaching staff are critical in **technical support, quality control, and integration.**
  - Strategic use of AI for multimedia **improves comprehension, engagement, and inclusivity** in learning environments.
- 
- Enhancing educational equity using AI

### Introduction

Educational equity ensures that **all students, regardless of background, ability, or circumstance, have access to quality learning opportunities.** AI technologies can support this goal by **adapting content to diverse learning needs, providing personalized learning paths, and improving accessibility for students with disabilities or language barriers.**

Non-teaching academic staff play a key role in **facilitating AI adoption, monitoring outputs for fairness, and supporting faculty in implementing equitable learning strategies.**

## 2. How AI Supports Educational Equity

- **Personalized Learning:** AI can adjust content, pace, and difficulty according to individual learner needs.
- **Accessibility Support:** Tools like text-to-speech, auto-captioning, and screen readers ensure materials are accessible to students with disabilities.

- **Language Inclusivity:** AI translation tools allow students from diverse linguistic backgrounds to access course materials in their preferred language.
- **Adaptive Feedback:** AI can provide real-time feedback to students, helping those who need extra guidance without delaying peer learning.
- **Resource Distribution:** AI can identify students who may require additional support, ensuring resources are allocated equitably.

### 3. Benefits

Benefit	Explanation
<b>Inclusivity</b>	Supports learners with diverse abilities, backgrounds, and learning styles
<b>Personalized Support</b>	Adapts content and assessments to individual needs
<b>Improved Engagement</b>	Students are more likely to participate when learning is tailored to their level
<b>Accessibility</b>	Ensures students with disabilities or language barriers can fully participate
<b>Data-Informed Interventions</b>	AI analytics help staff identify gaps and provide timely support

### 4. Limitations and Considerations

Limitation	Mitigation
Bias in AI outputs	Review AI recommendations for fairness and inclusivity
Overreliance on AI	Use AI as a <b>supplement, not replacement</b> , for human judgment
Privacy concerns	Ensure AI tools comply with <b>data protection regulations</b>
Digital divide	Provide support to students with limited access to devices or internet
Accessibility gaps	Regularly audit AI tools to ensure <b>compliance with accessibility standards</b>

### 5. Role of Non-Teaching Academic Staff

- **Technical Support:** Assist faculty in accessing and using AI tools for equity-focused interventions
- **Quality Assurance:** Monitor AI outputs to ensure **fairness, accessibility, and accuracy**
- **Training & Guidance:** Help faculty understand **how AI can support diverse learners**
- **Policy Compliance:** Ensure AI adoption aligns with **institutional and legal standards**
- **Resource Management:** Coordinate support services identified through AI analytics for students needing assistance

## 6. Best Practices

1. Combine AI-generated insights with **human judgment** to ensure fair and equitable learning outcomes.
2. Use AI to **adapt content and feedback** to meet individual student needs.
3. Regularly review AI outputs for **bias, accessibility, and inclusivity**.
4. Provide training to faculty and staff on **equitable AI implementation**.
5. Encourage **student feedback** to refine AI-assisted learning strategies.

## 7. Key Takeaways

- AI can **enhance educational equity** by supporting personalized learning, accessibility, and inclusivity.
- Human oversight is essential to ensure **accuracy, fairness, and ethical use**.
- Non-teaching staff play a crucial role in **technical support, quality assurance, and implementation of equitable AI solutions**.
- Strategic use of AI contributes to **inclusive, effective, and fair learning environments** for all students.

## Part 2

### Topics Covered:

- AI tool matching with academic goals
  - . Introduction

AI offers a wide range of tools for **content creation, student engagement, assessment, accessibility, and research support**. However, the effectiveness of AI depends on **aligning the right tool with specific academic goals**.

Non-teaching academic staff play a vital role in **helping faculty select, implement, and monitor AI tools** to ensure they effectively support teaching, learning, and research objectives.

## 2. Understanding Academic Goals

Before selecting an AI tool, it is important to clarify academic goals, which may include:

- **Enhancing teaching effectiveness** – creating lecture materials, slides, or multimedia resources
- **Supporting student learning** – personalizing learning paths, providing adaptive feedback

- **Improving accessibility** – translating materials, auto-captioning videos, text-to-speech
- **Facilitating research** – literature reviews, data analysis, citation management
- **Streamlining administrative tasks** – scheduling, grading, assessment analysis

### 3. Matching AI Tools to Goals

Academic Goal	Example AI Tools	Purpose
Teaching content creation	ChatGPT, Notion AI, Synthesia	Generate lecture notes, slides, or explainer videos
Personalized learning	Squirrel AI, Knewton	Adapt learning paths to student ability
Accessibility	Otter.ai, Microsoft Translator, text-to-speech tools	Auto-captioning, translations, audio versions of materials
Research support	Elicit.ai, Semantic Scholar, Scite.ai	Literature review, data synthesis, citation tracking
Engagement & interactivity	Kahoot AI, Quizizz, Pictory	Interactive quizzes, simulations, animated explanations
Assessment & grading	Gradescope AI, EdStem AI	Automated grading, feedback, plagiarism detection

### 4. Benefits of Matching AI Tools to Goals

- **Efficiency:** Focused use reduces unnecessary effort and maximizes impact.
- **Relevance:** Ensures AI outputs support learning objectives and curriculum goals.
- **Quality Assurance:** Minimizes errors and maintains accuracy in academic materials.
- **Engagement:** Tools aligned with goals can increase student participation and interest.
- **Accessibility & Inclusivity:** Matching tools with goals ensures equitable access for all learners.

### 5. Limitations and Considerations

Limitation	Mitigation
Tool overuse or misalignment	Staff guide faculty to <b>select tools that fit specific objectives</b>
Learning curve	Provide <b>training and technical support</b> for faculty and students
Bias in AI outputs	Regularly <b>review content for fairness and accuracy</b>
Integration challenges	Ensure AI outputs are <b>compatible with LMS, classroom, and assessment platforms</b>

Limitation	Mitigation
Cost and licensing	Consider <b>budget and institutional policy compliance</b> before adoption

## 6. Role of Non-Teaching Academic Staff

- **Needs Assessment:** Help faculty identify specific academic goals before AI adoption
- **Tool Selection Support:** Recommend AI tools suitable for teaching, research, or administrative tasks
- **Technical Assistance:** Set up AI platforms and provide training or troubleshooting
- **Quality Monitoring:** Review AI outputs for **accuracy, relevance, and accessibility**
- **Documentation and Compliance:** Maintain records and ensure tools meet **ethical, legal, and institutional standards**

## 7. Best Practices

1. Map each AI tool to **specific learning, teaching, or research goals.**
2. Involve staff in **training faculty on tool functionalities and limitations.**
3. Monitor AI outputs regularly to **ensure alignment with academic objectives.**
4. Encourage **feedback from students and faculty** to optimize AI use.
5. Maintain **ethical, copyright, and accessibility compliance** in all AI applications.

## 8. Key Takeaways

- Effective AI adoption requires **aligning tools with clearly defined academic goals.**
- Non-teaching staff are essential in **supporting tool selection, implementation, and quality assurance.**
- Properly matched AI tools enhance **efficiency, engagement, accessibility, and overall academic outcomes.**
- A strategic approach ensures AI **supports learning and research objectives without compromising quality or ethics.**

- Early-stage project mapping

### Introduction

Early-stage project mapping is the process of **planning, visualizing, and structuring projects at the initial stage** to ensure clarity, efficiency, and alignment with institutional goals. AI tools can assist by **organizing ideas, suggesting workflows, identifying dependencies, and visualizing project plans**, making it easier for faculty and staff to launch projects successfully.

Non-teaching academic staff play a key role in **facilitating project planning, supporting AI tool use, and ensuring that academic projects are effectively mapped and documented.**

## 2. Importance of Early-Stage Project Mapping

- **Clarifies Objectives:** Defines clear goals and expected outcomes for the project.
- **Identifies Key Tasks:** Breaks down complex projects into manageable steps.
- **Allocates Resources:** Helps identify human, technical, and financial resources needed.
- **Minimizes Risk:** Anticipates potential bottlenecks, dependencies, and challenges.
- **Enhances Collaboration:** Provides a visual roadmap that teams can follow.

## 3. How AI Supports Early-Stage Project Mapping

Function	AI Tool Examples	Purpose
Brainstorming ideas	ChatGPT, Notion AI	Generate potential project concepts and research directions
Workflow planning	Trello AI, Monday.com AI, ClickUp AI	Visualize project tasks, dependencies, and timelines
Resource estimation	Excel AI, Smartsheet AI	Suggest budget, staff allocation, and material needs
Risk identification	AI project management assistants	Highlight potential bottlenecks or challenges
Documentation	AI note-taking tools, OneNote AI	Automatically create project plans and summaries

## 4. Benefits

Benefit	Explanation
Clarity	Ensures all stakeholders understand project objectives and steps
Efficiency	AI tools speed up brainstorming, workflow creation, and documentation
Collaboration	Visual project maps facilitate communication among team members
Accountability	Clearly defined tasks and responsibilities improve follow-through
Adaptability	AI allows easy updates to project plans as circumstances change

## 5. Limitations and Considerations

Limitation	Mitigation
AI suggestions may lack context	Staff review outputs to ensure <b>relevance and feasibility</b>
Overreliance on AI	Use AI as a <b>planning aid</b> , not as a replacement for human judgment
Technical familiarity	Provide <b>training and support</b> for staff and faculty using AI tools
Integration issues	Ensure project maps <b>sync with LMS or institutional project tracking systems</b>
Data privacy	Use AI tools that <b>comply with institutional data policies</b>

## 6. Role of Non-Teaching Academic Staff

- **Facilitate AI Adoption:** Set up tools and provide guidance for faculty use
- **Assist in Planning:** Help structure ideas, timelines, and resource allocation
- **Monitor Quality:** Review AI-generated maps for **accuracy, clarity, and completeness**
- **Documentation:** Maintain project plans, updates, and institutional records
- **Training & Support:** Conduct sessions on **AI project mapping tools and best practices**

## 7. Best Practices

1. Start by defining **project objectives, expected outcomes, and scope** before using AI tools.
2. Use AI for **brainstorming and visualization**, but ensure human review for accuracy.
3. Encourage **collaborative mapping**, allowing team members to contribute and review AI-generated suggestions.
4. Regularly update project maps to reflect **changes, progress, and new dependencies**.
5. Maintain **records of AI-assisted decisions** for transparency and institutional accountability.

## 8. Key Takeaways

- Early-stage project mapping with AI improves **clarity, efficiency, and collaboration** in academic projects.
- Human oversight is essential to ensure **accuracy, feasibility, and alignment with goals**.
- Non-teaching staff are critical in **facilitating AI adoption, reviewing outputs, and maintaining documentation**.
- Strategic AI-assisted project mapping ensures projects **launch successfully and remain adaptable** throughout their lifecycle.
- Storytelling and structure for presentations

## Introduction

Effective presentations in academia are not just about sharing information—they are about **telling a compelling story that engages the audience and communicates key messages clearly**. Storytelling and structured presentation design help students, faculty, and staff **retain information, understand complex ideas, and connect concepts meaningfully**.

Non-teaching academic staff support faculty by **advising on presentation structure, organizing content, and incorporating AI tools for enhanced storytelling**.

## 2. Importance of Storytelling in Presentations

- **Engagement:** Stories capture attention and make content memorable.
- **Clarity:** Structured narratives help simplify complex topics.
- **Connection:** Stories link abstract concepts to real-world examples.
- **Retention:** Audiences are more likely to remember information presented as a coherent story.

## 3. Core Elements of a Well-Structured Presentation

Element	Explanation
<b>Introduction</b>	Set the context, introduce the topic, and outline objectives
<b>Problem/Challenge</b>	Present the issue or research question to create relevance
<b>Analysis/Content</b>	Discuss findings, concepts, or methods in a logical flow
<b>Solution/Insights</b>	Offer recommendations, interpretations, or takeaways
<b>Conclusion</b>	Summarize key points and provide a call to action or reflection
<b>Visual Storytelling</b>	Use visuals, diagrams, and multimedia to reinforce key messages

## 4. Role of AI in Storytelling and Structure

AI tools can assist in **enhancing presentation quality and structure**:

- **Content Generation:** AI can suggest slide outlines, talking points, or summaries (e.g., ChatGPT, Notion AI).
- **Visual Enhancements:** AI tools create diagrams, infographics, and animations (e.g., Canva AI, BioRender AI).
- **Simplification and Rewriting:** AI can tailor language to audience comprehension levels.
- **Interactive Elements:** AI can generate polls, quizzes, or simulations to engage audiences.

## 5. Benefits of Structured Storytelling

Benefit	Explanation
<b>Audience Engagement</b>	Keeps learners attentive and invested in the content
<b>Information Retention</b>	Logical flow aids memory and understanding
<b>Professionalism</b>	Well-structured presentations appear polished and credible
<b>Accessibility</b>	Story-driven content with visuals supports diverse learning styles
<b>Efficiency</b>	AI-assisted structuring reduces faculty preparation time

## 6. Role of Non-Teaching Academic Staff

- **Content Organization:** Assist faculty in **structuring slides and narratives**
- **AI Tool Support:** Help generate outlines, visuals, or interactive elements
- **Quality Review:** Ensure clarity, logical flow, and alignment with learning objectives
- **Accessibility & Compliance:** Check that presentations meet **accessibility standards** (captions, readable fonts, color contrast)
- **Training:** Conduct sessions on **effective storytelling and AI-supported presentation techniques**

## 7. Best Practices

1. Begin with a **clear objective and key messages** before creating slides.
  2. Use the **problem-solution-insight** framework to organize content.
  3. Incorporate **AI-generated visuals and interactive elements** to enhance engagement.
  4. Keep slides **concise, visually appealing, and accessible**.
  5. Review presentations for **logical flow, clarity, and audience comprehension**.
- 
- Peer coaching and refinement strategies

### Introduction

Peer coaching and refinement strategies involve **collaborative feedback and iterative improvement** in teaching, presentations, and academic projects. These approaches **enhance quality, promote reflective practice, and build a culture of continuous learning**.

Non-teaching academic staff play an important role in **facilitating peer coaching sessions, organizing refinement workflows, and integrating AI tools to support feedback and improvement**.

## 2. Importance of Peer Coaching

- **Enhanced Learning:** Peers provide diverse perspectives and insights.
- **Quality Improvement:** Iterative feedback helps refine content, delivery, and materials.
- **Reflective Practice:** Encourages self-assessment and awareness of strengths and weaknesses.
- **Collaboration Skills:** Builds teamwork and professional communication among faculty and staff.
- **Confidence Building:** Constructive feedback improves readiness and effectiveness.

## 3. Core Peer Coaching Strategies

Strategy	Explanation
<b>Structured Feedback</b>	Use rubrics or checklists to provide focused, actionable feedback
<b>Observation and Reflection</b>	Observe sessions or presentations and reflect on strengths and improvement areas
<b>Modeling Best Practices</b>	Share examples of effective techniques or methods
<b>Iterative Refinement</b>	Apply feedback and review multiple drafts for continuous improvement
<b>Collaborative Discussion</b>	Encourage open dialogue and brainstorming solutions to challenges

## 4. Role of AI in Peer Coaching and Refinement

AI can **support peer coaching by analyzing content, suggesting improvements, and tracking progress:**

- **Content Analysis:** AI tools can check clarity, grammar, structure, and coherence in lecture notes or presentations (e.g., Grammarly, ChatGPT).
- **Feedback Simulation:** AI can simulate peer feedback to highlight areas for improvement.
- **Engagement Insights:** AI analytics can assess audience engagement in presentations or quizzes.
- **Revision Assistance:** AI can suggest **alternate phrasings, visual enhancements, or simplifications.**

## 5. Benefits of Peer Coaching with AI Support

Benefit	Explanation
<b>Efficiency</b>	AI speeds up feedback generation and content review
<b>Objectivity</b>	AI provides data-driven insights to complement human feedback
<b>Consistency</b>	Structured feedback ensures standardization across peers

Benefit	Explanation
<b>Enhanced Learning</b>	Combining AI and human feedback improves understanding and skill development
<b>Confidence</b>	Iterative refinement reduces anxiety and improves performance

## 6. Role of Non-Teaching Academic Staff

- **Facilitate Sessions:** Organize and coordinate peer coaching meetings or workshops
- **Guide Tool Use:** Assist faculty in using AI for feedback, refinement, and analytics
- **Monitor Quality:** Ensure feedback is constructive, actionable, and aligned with learning objectives
- **Documentation:** Track progress, iterations, and improvements for institutional records
- **Training:** Conduct sessions on **effective peer coaching practices and AI-assisted refinement techniques**

## 7. Best Practices

1. Use **structured feedback frameworks** to ensure clarity and consistency.
2. Combine **human peer feedback with AI-generated insights** for comprehensive refinement.
3. Encourage **iterative improvement** rather than one-time evaluations.
4. Maintain a **supportive, respectful environment** for open dialogue.
5. Document progress and **track refinements** for continuous development.

## 8. Key Takeaways

- Peer coaching and refinement strategies **enhance teaching quality, collaboration, and reflective practice.**
- AI tools **complement human feedback**, offering data-driven insights and efficiency.
- Non-teaching staff play a crucial role in **facilitating sessions, guiding AI use, and ensuring quality feedback processes.**
- A combination of **peer collaboration and AI support** fosters continuous improvement and professional growth.

### Hands-On Activities:

- Peer roundtable: “What I’m planning for my capstone”

### Preparation

- **Participants:** Groups of 4–6 learners
- **Materials:**
  - o Whiteboard, sticky notes, or digital collaboration tools (e.g., Miro, Jamboard)

- o AI-assisted tools for brainstorming or content enhancement (optional: ChatGPT, Notion AI)
- o Capstone planning template or outline

### 3. Activity Steps

#### Step 1: Individual Reflection (5–10 min)

- Each participant writes a **brief summary of their capstone idea**, including:
  - o Topic and objectives
  - o Methods or approaches
  - o Anticipated challenges
  - o Desired outcomes

#### Step 2: Peer Sharing Roundtable (15–20 min)

- Participants **share their capstone plans** in the group.
- Encourage **clarifying questions and constructive feedback** from peers.
- Use AI tools to **suggest enhancements**, additional references, or alternative approaches if needed.

#### Step 3: Collaborative Discussion (10–15 min)

- Identify **common themes, challenges, or resource needs** across capstone projects.
- Discuss **strategies for overcoming obstacles** or refining ideas.

#### Step 4: Summary and Reflection (5 min)

- Each participant notes **one key insight** gained from the roundtable.
- Optional: Document suggestions and revisions using **AI tools for organization or drafting follow-up plans**.

### 4. Expected Outcomes

- Clearer understanding of each participant's capstone idea
- Peer feedback that **enhances clarity, feasibility, and impact**
- Identification of **common challenges and potential solutions**
- Collaborative learning and exchange of **best practices**

### 5. Role of Non-Teaching Academic Staff

- **Facilitate the Roundtable:** Ensure everyone has a chance to share and participate
- **Guide AI Tool Use:** Assist in using AI tools for brainstorming, drafting, or organizing notes
- **Document Key Insights:** Record main takeaways, suggestions, and action points
- **Monitor Engagement:** Encourage constructive feedback and a supportive environment

## 6. Tips for Effective Peer Roundtable

- Set **clear expectations** for feedback (constructive, respectful, actionable)
- Encourage participants to **listen actively** and ask clarifying questions
- Use AI tools **sparingly** to enhance discussion, not replace human interaction
- Focus on **idea refinement and feasibility**, not grading or judgment

## 7. Key Takeaways

- Peer roundtables promote **collaboration, reflective thinking, and idea refinement**.
  - Non-teaching staff play a key role in **facilitation, documentation, and AI support**.
  - Combining peer feedback with **AI-assisted brainstorming** can strengthen capstone planning and execution.
- 
- Complete capstone planning worksheet

### Preparation

- **Participants:** Individual learners or small groups
- **Materials:**
  - o Capstone Planning Worksheet (digital or paper format)
  - o AI tools for content assistance (e.g., ChatGPT, Notion AI, Scite.ai)
  - o Access to LMS or shared document platform for collaborative editing

## 3. Worksheet Sections and Activity Steps

### Step 1: Project Overview (5–10 min)

- Learners define:
  - o Project title or working title
  - o Core research or project question
  - o Intended outcomes or impact

### Step 2: Objectives and Goals (5 min)

- List **specific learning objectives and goals** the capstone will achieve.
- Optionally, use AI to **suggest measurable outcomes or relevant skills**.

### Step 3: Methodology and Approach (10–15 min)

- Describe:
  - o Research methods, experimental design, or project approach
  - o Tools, platforms, or AI resources to be used
- Use AI tools to **generate outlines, propose alternative methods, or summarize approaches**.

#### Step 4: Resources and Timeline (5–10 min)

- Identify:
  - Required materials, data, software, or support
  - Milestones and deadlines
- AI tools can **help create Gantt charts or project timelines.**

#### Step 5: Potential Challenges and Solutions (5–10 min)

- Anticipate:
  - Obstacles or risks
  - Strategies for mitigation
- Use AI to **suggest common challenges in similar projects** and potential solutions.

#### Step 6: Reflection and Next Steps (5 min)

- Learners note:
  - Key insights from planning
  - Immediate next steps for project initiation

### 4. Role of Non-Teaching Academic Staff

- **Facilitation:** Guide learners through each worksheet section
- **AI Assistance:** Help learners **use AI tools for brainstorming, research, or structuring content**
- **Documentation:** Ensure completed worksheets are **stored, organized, and accessible**
- **Support:** Provide clarification, examples, and technical help as needed

### 5. Expected Outcomes

- Comprehensive and structured capstone plan
- Clear objectives, methodology, and timelines
- Awareness of potential challenges and mitigation strategies
- Effective integration of AI for **planning, organization, and content refinement**

### 6. Best Practices

1. Encourage learners to **start with a clear problem statement or research question.**
2. Use AI tools **to enhance planning, not replace critical thinking.**
3. Maintain **realistic timelines and resource assessments.**
4. Review worksheets collaboratively for **clarity and feasibility.**
5. Document iterations to track **project development and decision-making.**

## 7. Key Takeaways

- A complete capstone planning worksheet ensures **clarity, structure, and preparedness** for project execution.
- AI tools can **support idea generation, methodology planning, and timeline creation**.
- Non-teaching staff are crucial for **facilitation, documentation, and technical support**, ensuring learners maximize their planning efforts.

### Case Studies:

- Faculty from other disciplines who piloted AI in their teaching

#### Background

As AI technologies gain traction in higher education, faculty across disciplines have started **experimenting with AI tools** to enhance teaching, improve student engagement, and streamline administrative tasks. This case study highlights **cross-disciplinary experiences**, demonstrating how AI adoption varies by field while revealing shared challenges and benefits.

## 2. Faculty Pilots Overview

Faculty & Discipline	AI Tool(s) Used	Objective	Implementation Highlights
Dr. Rao - History	ChatGPT	Generate discussion prompts and historical summaries	Created AI-assisted reading guides; facilitated critical analysis exercises
Prof. Mehta - Business	Elicit.ai, Semantic Scholar	Market trend analysis and case study research	Students used AI to extract insights; AI summarized industry reports for classroom discussion
Dr. Iyer - Biology	BioRender AI, Notion AI	Visualization of complex biological processes	AI-generated diagrams and interactive models enhanced lab sessions
Prof. Fernandes - Literature	ChatGPT	Draft literary analyses and writing prompts	AI suggested interpretations of texts; students refined outputs with instructor guidance
Dr. Kapoor - Law	CaseText, LexisNexis AI	Case law summarization and citation management	AI summarized legal precedents; faculty integrated outputs into lecture discussions

### 3. Key Observations

- **Cross-Disciplinary Applicability:** AI tools were applied in **both STEM and humanities disciplines**, demonstrating versatility.
- **Enhanced Student Engagement:** Students responded positively to **interactive and AI-supported exercises**, reporting higher motivation and comprehension.
- **Faculty Adaptation:** Instructors required **training and iterative experimentation** to effectively integrate AI into their courses.
- **Ethical & Accuracy Concerns:** All pilots highlighted the need for **human oversight** to ensure factual correctness, prevent bias, and maintain academic integrity.
- **Resource Optimization:** AI reduced preparation time for lectures, grading, and content curation.

### 4. Lessons Learned

1. **Start Small:** Piloting AI in one course or module allowed faculty to experiment **without overwhelming students**.
2. **Human-AI Collaboration:** AI is most effective when used to **augment teaching rather than replace faculty expertise**.
3. **Discipline-Specific Customization:** Each discipline required **tailored AI applications** aligned with learning objectives.
4. **Training & Support:** Faculty benefited from **technical and pedagogical guidance** from non-teaching staff.
5. **Transparency & Ethics:** Clear communication about AI use in the classroom helped **manage student expectations and maintain trust**.

### 5. Impact

- **Improved Learning Outcomes:** Students demonstrated **enhanced understanding, critical thinking, and engagement**.
- **Faculty Efficiency:** Reduction in time spent on content creation, summarization, and administrative tasks.
- **Institutional Insights:** These pilots informed **AI adoption strategies, tool selection, and policy development** for broader faculty use.

### 6. Recommendations

- Establish **faculty support programs** to train instructors on AI tools.
- Develop **guidelines for ethical and responsible AI integration** in teaching.
- Encourage **peer-sharing of AI adoption experiences** across disciplines.
- Pilot AI use **incrementally and iteratively**, monitoring outcomes before scaling.
- Involve non-teaching academic staff to facilitate **implementation, technical support, and quality assurance**.

## 7. Conclusion

The cross-disciplinary pilot programs demonstrate that AI can **enhance teaching effectiveness, student engagement, and administrative efficiency** when thoughtfully integrated. Faculty from diverse disciplines learned that **successful AI adoption requires collaboration, oversight, and adaptation to specific academic contexts.**

- Sample capstone plans and project summaries

### Introduction

Capstone projects are a **culminating academic experience** that allow students to apply knowledge and skills to real-world or research-based problems. Providing **sample capstone plans and project summaries** helps learners understand the **expected structure, scope, and depth** of these projects, while guiding them in **planning, execution, and documentation**.

Non-teaching academic staff play a critical role in **organizing, reviewing, and supporting these sample resources**, ensuring learners can use them effectively.

## 2. Components of a Capstone Plan

A well-structured capstone plan typically includes:

1. **Project Title:** A concise and descriptive title.
2. **Problem Statement / Research Question:** Clear articulation of the issue or topic.
3. **Objectives and Goals:** Specific outcomes the project aims to achieve.
4. **Methodology / Approach:** Research methods, experimental design, or project framework.
5. **Resources Needed:** Data, software, lab equipment, or human support.
6. **Timeline and Milestones:** Step-by-step plan with deadlines.
7. **Potential Challenges:** Anticipated obstacles and mitigation strategies.
8. **Expected Outcomes / Impact:** Results, deliverables, or knowledge contribution.

## 3. Sample Capstone Plan Summaries

Discipline	Project Title	Brief Summary	Key Outcomes
Business	Market Trend Analysis Using AI	Analyze market data to predict consumer behavior using AI tools	Predictive insights, visual dashboards, and business recommendations
Education	AI-Assisted Learning Modules	Design adaptive learning modules for high school students	Personalized learning paths and engagement metrics
Biology	Visualization of	Use AI tools to create interactive 3D models of cell	Enhanced lab comprehension, visual models for lectures

Discipline	Project Title	Brief Summary	Key Outcomes
	Cellular Processes	mechanisms	
Literature	Digital Analysis of Classic Texts	Apply AI text analysis to examine themes and patterns in literature	Thematic insights, annotated digital corpus
Law	Case Law Summarization	Use AI to summarize and categorize legal precedents	Streamlined legal research, summarized case briefs

#### 4. Benefits of Using Sample Capstone Plans

- **Guidance:** Provides a clear framework for students to **plan and structure projects**.
- **Clarity:** Demonstrates the **level of detail and expectations** for deliverables.
- **Inspiration:** Offers ideas for potential topics, methods, or tools.
- **Efficiency:** Reduces trial-and-error in project planning.
- **Alignment:** Ensures projects are **aligned with academic objectives and assessment criteria**.

#### 5. Role of Non-Teaching Academic Staff

- **Organization:** Maintain a **repository of sample capstone plans and summaries**.
- **Support:** Assist students in **interpreting samples and adapting them to their own projects**.
- **AI Assistance:** Guide learners in using AI tools to **enhance research, visualize data, or refine project plans**.
- **Quality Monitoring:** Ensure that sample plans are **accurate, relevant, and align with institutional guidelines**.
- **Training:** Conduct sessions on **how to leverage sample projects effectively** for planning and execution.

#### 6. Best Practices

1. Encourage students to **analyze multiple sample plans** to understand diversity in approaches.
2. Use samples to **highlight common challenges and solutions**.
3. Combine AI-assisted research with **human judgment** when adapting sample plans.
4. Regularly **update sample repositories** with recent, discipline-specific projects.
5. Promote reflection and critical thinking by asking students to **compare sample plans with their own project ideas**.

#### 7. Key Takeaways

- Sample capstone plans provide **structure, clarity, and inspiration** for student projects.
- Non-teaching staff play a critical role in **facilitating access, interpretation, and AI-supported adaptation** of samples.

- Integrating AI tools can enhance the **planning, visualization, and refinement** of capstone projects.
- Effective use of sample plans ensures **higher quality, better-aligned, and more impactful student projects**.
- LMS course before and after AI integration

## Introduction

Learning Management Systems (LMS) are central to modern education, enabling **course delivery, student engagement, assessment, and feedback management**. Integrating AI into LMS platforms can **enhance interactivity, personalize learning, automate administrative tasks, and improve analytics**, transforming the student and faculty experience.

Non-teaching academic staff play a key role in **implementing AI tools, supporting faculty, and monitoring improvements in course delivery**.

## 2. LMS Course Before AI Integration

Feature	Description	Limitations
<b>Content Delivery</b>	Static PDFs, slides, and recorded lectures	Limited engagement; lacks personalization
<b>Student Interaction</b>	Discussion boards, email communication	Delayed responses; low interactivity
<b>Assessment</b>	Manual grading, standard quizzes	Time-consuming; feedback delayed
<b>Analytics</b>	Basic grade tracking	Limited insights into learning behaviors
<b>Support</b>	Faculty-led help and office hours	Limited accessibility and responsiveness

## 3. LMS Course After AI Integration

Feature	AI Enhancement	Impact
<b>Content Delivery</b>	AI-generated summaries, adaptive learning modules	Personalized content based on learner progress and preferences
<b>Student Interaction</b>	AI chatbots, virtual assistants	Immediate responses to FAQs, guidance on assignments, 24/7 support
<b>Assessment</b>	AI-assisted grading and feedback tools	Faster, consistent, and detailed feedback; plagiarism detection

Feature	AI Enhancement	Impact
Analytics	AI-powered learning analytics dashboards	Predictive insights on student performance, engagement, and at-risk learners
Support	AI recommendation systems	Suggests resources, tutorials, and personalized learning paths

#### 4. Benefits of AI-Enhanced LMS

- **Personalized Learning:** Tailors content and assessments to individual student needs
- **Efficiency:** Reduces faculty workload for grading, content creation, and administrative tasks
- **Engagement:** Interactive tools and simulations increase student participation
- **Accessibility:** AI tools provide captions, translations, and adaptive interfaces for diverse learners
- **Data-Driven Decisions:** Analytics help faculty and staff identify learning gaps and interventions

#### 5. Limitations and Considerations

Limitation	Mitigation
AI output accuracy	Staff review AI-generated content for correctness and relevance
Overreliance on automation	Use AI to <b>assist, not replace</b> , faculty judgment
Technical challenges	Provide <b>training and troubleshooting support</b> for staff and faculty
Data privacy	Ensure AI tools comply with <b>institutional and legal data protection policies</b>
Accessibility gaps	Regularly audit tools for <b>inclusive design and compliance</b>

#### 6. Role of Non-Teaching Academic Staff

- **Implementation Support:** Assist in AI integration and setup within the LMS
- **Faculty Training:** Guide faculty on using AI tools effectively
- **Content Review:** Ensure AI-generated content is **accurate, accessible, and pedagogically sound**
- **Monitoring & Analytics:** Track AI usage, student engagement, and learning outcomes
- **Technical Assistance:** Troubleshoot issues and provide ongoing LMS support

## 7. Best Practices

1. Integrate AI incrementally, starting with **one module or course component**.
2. Combine AI outputs with **human oversight** for accuracy and ethical use.
3. Use analytics to **inform interventions, improve engagement, and personalize learning paths**.
4. Ensure AI tools are **accessible and inclusive** for all students.
5. Document AI integration outcomes to **inform future courses and institutional strategy**.

## 8. Key Takeaways

- AI transforms LMS courses from **static, one-size-fits-all modules to dynamic, personalized learning experiences**.
- Non-teaching academic staff are crucial in **supporting AI adoption, monitoring quality, and training faculty**.
- Strategic AI integration enhances **efficiency, engagement, accessibility, and data-driven decision-making** in academic programs.
- Careful oversight ensures **AI use is ethical, accurate, and inclusive**, benefiting both students and faculty.

### Scenario-Based Discussions:

- “What if your students helped co-design an AI solution?”

#### Introduction

Involving students in the **co-design of AI solutions** is an emerging educational approach that promotes **creativity, problem-solving, and responsible AI literacy**. Instead of being passive users of AI, students become **active collaborators**, working alongside faculty and staff to create tools that address real academic or administrative challenges.

For non-teaching academic staff, this scenario encourages reflection on how institutional teams can **support, mentor, and manage such student-led innovation projects** within ethical and technical boundaries.

## 2. Learning Objective

By the end of this scenario, participants will be able to:

- Understand the **benefits and challenges** of student involvement in AI solution design.
- Identify **support roles** for academic staff in facilitating co-creation projects.
- Evaluate **ethical, technical, and institutional implications** of student-AI collaboration.
- Explore **realistic examples** where student participation enhanced academic innovation.

### 3. The Scenario

Imagine your institution plans to implement a simple AI-powered system — for example, a **course feedback analyzer, library chatbot, or research paper summarization assistant**.

Instead of outsourcing development, the dean suggests:

“Let’s let our students help co-design the tool — after all, they’re the end users.”

You, as part of the academic support team, are tasked with coordinating the process.

#### Your questions:

- How can students contribute meaningfully without compromising data privacy or academic standards?
- What kind of training or support do they need?
- Who oversees ethical guidelines and quality assurance?
- How can staff collaborate effectively with both faculty and students in this innovation?

### 4. Discussion Prompts

Use these prompts for group discussion or reflection:

1. What are the **potential benefits** of allowing students to co-design an AI solution?
  - o (e.g., user-centered innovation, fresh ideas, skill development, engagement)
2. What are the **risks or challenges** involved?
  - o (e.g., data misuse, lack of technical skills, quality control, ethical considerations)
3. How could **non-teaching staff** facilitate this collaboration effectively?
  - o (e.g., project coordination, training logistics, feedback documentation)
4. What kind of **AI literacy or mentoring framework** would support such a project?
5. How could the final AI tool reflect **student needs and institutional goals** simultaneously?

### 5. Example Scenario in Action

At a university’s **learning support unit**, students were invited to co-design a “**smart feedback dashboard**” that analyzed quiz performance data using AI.

- **Staff Role:** Provided data management and ethical oversight.
- **Faculty Role:** Defined pedagogical goals and ensured accuracy of insights.
- **Student Role:** Designed user interface and feedback messages using AI tools like ChatGPT and Power BI.
- **Outcome:** A more intuitive, student-centered system that improved engagement and self-assessment.

This collaboration also led to a **student showcase event**, highlighting innovation and cross-departmental teamwork.

## 6. Reflection Activity

Encourage learners to reflect on:

- How could a similar co-design approach work in your department?
- What small-scale AI project could benefit from student input?
- How would you ensure ethical compliance, inclusivity, and data protection in the process?

## 7. Key Takeaways

- **Co-designing AI with students** fosters innovation, ownership, and real-world learning experiences.
  - **Non-teaching staff** play a critical facilitative role in logistics, data ethics, and collaboration management.
  - Such projects cultivate **digital literacy, teamwork, and ethical awareness** among students.
  - Success depends on **clear guidelines, mentorship, and institutional support** to ensure responsible and effective outcomes.
- 
- “How would you present your project to your dean?”

### Introduction

Presenting an AI-related academic or administrative project to a dean or senior administrator requires more than just technical understanding — it demands **strategic communication, clarity of purpose, and evidence of impact**.

This scenario helps non-teaching academic staff reflect on **how to effectively communicate project goals, demonstrate outcomes, and align innovations with institutional priorities** such as efficiency, accessibility, and academic excellence.

## 2. Learning Objectives

By the end of this activity, participants will be able to:

- Frame their AI-related project in a way that aligns with institutional goals.
- Communicate outcomes and challenges clearly to leadership.
- Develop persuasive arguments supported by data, visuals, or pilot results.
- Reflect on how to demonstrate value, scalability, and ethical responsibility.

### 3. The Scenario

Imagine you've been part of a pilot team implementing an **AI-based student feedback analysis tool** in your institution's LMS. The tool helped identify patterns in course evaluations, saving staff time and improving the quality of student feedback summaries.

Now, you've been invited to **present your project to the dean** to request support for full-scale adoption.

Your challenge: **How do you structure your presentation to win approval and demonstrate impact?**

### 4. Discussion Prompts

Use these prompts to guide reflection or small group discussion:

1. **What key points would you include in your presentation?**
  - o Problem addressed
  - o Solution provided by the AI tool
  - o Results from the pilot phase
  - o Feedback from faculty or students
  - o Expected benefits at scale
2. **How would you align your presentation with institutional priorities?**
  - o Efficiency improvement
  - o Student experience enhancement
  - o Data-informed decision-making
  - o Ethical and responsible AI use
3. **What format or tools could you use to strengthen your case?**
  - o Dashboards, data visualizations, brief videos, or user testimonials
4. **What questions might your dean ask — and how would you respond?**
  - o Cost of implementation?
  - o Data privacy measures?
  - o Measurable impact on academic outcomes?
  - o Scalability and sustainability?

### 5. Example Scenario in Action

At a university in Pune, a team of academic support officers implemented an **AI-based attendance tracking and engagement analytics system**.

When presenting to the dean, the team structured their presentation as follows:

- **Introduction:** Defined the problem (manual tracking inefficiency).
- **AI Solution Overview:** Explained tool functionality and automation benefits.
- **Impact Data:** Shared pilot results — 40% reduction in administrative workload, 25% improvement in attendance accuracy.
- **Student and Faculty Feedback:** Highlighted positive responses to transparency and ease of use.

- **Next Steps:** Proposed institutional rollout with training sessions.

Result: The project received approval for expansion and recognition at the annual innovation showcase.

## 6. Reflection Activity

Ask participants to reflect or write on:

- What key achievements of your project would most appeal to your dean?
- How can you connect your project outcomes to the university's mission or strategic goals?
- What story, data point, or user experience could make your presentation more persuasive?

## 7. Key Takeaways

- Presenting to leadership requires **clarity, confidence, and alignment with institutional vision.**
- Focus on **impact, efficiency, and evidence**, not just technical features.
- Use visuals and real examples to make your case compelling.
- Anticipate questions about **costs, data ethics, and scalability**.
- Non-teaching academic staff are crucial storytellers — translating technical results into institutional value.

# Module 5 Ethical AI Use & Future Trends in Education

## Topics Covered:

- AI ethics and governance

## Introduction

As Artificial Intelligence (AI) becomes increasingly integrated into higher education—powering tools for learning analytics, grading, research support, and student engagement—ethical use and strong governance have become essential.

**AI ethics and governance** ensure that institutions use AI **responsibly, transparently, and equitably**, maintaining trust among students, faculty, and staff.

For non-teaching academic staff, understanding these principles is vital because they often **manage, support, or monitor** systems where AI is applied. Their awareness and vigilance help uphold the institution's **integrity, data protection standards, and social accountability**.

## 2. Understanding AI Ethics

AI ethics refers to the **moral principles and values** that guide the design, deployment, and use of AI technologies in education. These principles ensure that AI contributes to learning and research without causing harm or bias.

### Key Ethical Principles:

1. **Transparency** – The workings of AI systems should be understandable to users and stakeholders.
2. **Accountability** – There should be clear responsibility for AI-generated outcomes or errors.
3. **Fairness and Non-Discrimination** – AI must not reinforce or introduce bias based on gender, race, or socioeconomic background.
4. **Privacy and Data Protection** – AI systems must comply with institutional and legal data standards (e.g., GDPR, UGC guidelines).
5. **Human Oversight** – Human judgment should remain central to decisions, especially those affecting students' grades or academic progression.
6. **Sustainability** – AI deployment should consider long-term impacts, resource use, and inclusivity.

## 3. AI Governance in Academia

AI governance refers to the **frameworks, policies, and processes** that institutions establish to manage ethical AI use.

It provides a structured approach for ensuring **compliance, fairness, and responsible innovation**.

### Key Components of AI Governance:

Component	Description
<b>Policy Frameworks</b>	Guidelines outlining acceptable use of AI for teaching, assessment, and research.
<b>Ethics Committees</b>	Institutional boards that review AI-related projects for fairness, privacy, and data protection.
<b>Data Management Protocols</b>	Standards for collecting, storing, and sharing student or institutional data ethically.
<b>Training and Awareness</b>	Continuous learning programs for staff and faculty on responsible AI use.
<b>Monitoring and Evaluation</b>	Periodic reviews of AI systems to detect bias, ensure accuracy, and assess impact.

#### 4. The Role of Non-Teaching Academic Staff

Non-teaching academic staff often act as **bridges between technology, policy, and practice**. Their roles in AI ethics and governance may include:

- **Implementation Support:** Ensuring that AI tools comply with institutional ethical guidelines before adoption.
- **Data Handling:** Managing academic and student data responsibly, ensuring confidentiality and consent.
- **Reporting and Monitoring:** Identifying irregularities or biases in AI-generated reports or recommendations.
- **Awareness Building:** Helping organize workshops or campaigns to educate students and faculty about AI ethics.
- **Documentation:** Maintaining records of how AI systems are used and decisions made based on AI insights.

#### 5. Common Ethical Challenges in Academic AI Use

Challenge	Example	Response Strategy
<b>Bias in AI outputs</b>	Essay grading algorithms favoring certain writing styles	Regular audits and human moderation
<b>Data privacy risks</b>	Misuse of student data for unintended purposes	Apply data anonymization and consent procedures
<b>Lack of transparency</b>	Users unaware of how AI makes decisions	Provide explanations and clear documentation
<b>Over-reliance on automation</b>	Staff depending solely on AI feedback	Combine AI suggestions with human review
<b>Plagiarism and misuse</b>	Students using AI to generate essays	Use AI detection and promote academic integrity policies

#### 6. Best Practices for Ethical AI Implementation

1. **Develop clear institutional policies** on AI use and governance.
2. **Ensure informed consent** whenever AI tools collect or analyze personal data.
3. **Audit AI systems regularly** to check for bias or performance issues.
4. **Promote AI literacy** among staff and students.
5. **Encourage ethical reflection** — discuss the “why” behind AI decisions, not just the “how.”
6. **Maintain human accountability** in all AI-supported academic processes.

## 7. Key Takeaways

- **AI ethics and governance** protect institutions, learners, and educators from unintended harm or bias.
  - Non-teaching academic staff have a vital role in **maintaining compliance, monitoring use, and promoting responsible AI culture**.
  - Strong governance frameworks ensure that AI enhances academic integrity, inclusion, and trust.
  - Ethical AI use is not just about technology—it's about **values, fairness, and human-centered decision-making**.
- 
- Algorithmic bias and fairness

### Introduction

As Artificial Intelligence (AI) becomes increasingly integrated into education—supporting grading, admissions, content curation, and student analytics—understanding **algorithmic bias and fairness** is essential.

Algorithmic bias occurs when an AI system produces results that are **systematically unfair or discriminatory** toward certain groups of people. These biases can stem from the data used to train AI models, how algorithms are designed, or the way results are interpreted.

For non-teaching academic staff, recognizing and addressing these biases is key to **maintaining fairness, transparency, and trust** within the academic environment.

## 2. Understanding Algorithmic Bias

**Algorithmic bias** happens when an AI system reflects or amplifies existing human or societal prejudices. This can affect how information is presented, how students are evaluated, or how administrative decisions are made.

### Types of Algorithmic Bias:

1. **Data Bias:** When training data is unbalanced or incomplete (e.g., more data from one demographic than another).
2. **Prejudicial Bias:** When historical or social inequalities are embedded in data or model design.
3. **Measurement Bias:** When incorrect or inconsistent data collection leads to skewed outcomes.
4. **Algorithmic Processing Bias:** When the AI's mathematical model gives disproportionate weight to certain variables.
5. **Interpretation Bias:** When humans misread or misapply AI-generated results.

### 3. Fairness in AI Systems

**Fairness** in AI means ensuring that algorithms and their outcomes are **equitable, inclusive, and just** for all users. It focuses on reducing harm and promoting equality in automated decisions.

Principles of Fair AI:

- **Equity:** The system should work equally well for all demographic groups.
- **Transparency:** Users should understand how AI systems arrive at their conclusions.
- **Accountability:** Clear responsibility must exist for AI-driven outcomes.
- **Inclusivity:** Data should represent all sections of the academic community.
- **Human Oversight:** Humans should always verify and contextualize AI decisions.

### 4. Examples of Bias in Academic AI Systems

Context	Example of Bias	Potential Consequence
Admissions Systems	AI trained on historical data that favored certain schools or regions	Unfair advantage to specific demographics
Automated Essay Grading	Algorithm prefers a specific writing style	Penalizes creative or non-traditional responses
Learning Analytics	Predictive models label certain students as "at risk" based on incomplete data	Creates false assumptions about performance
Recruitment Platforms	AI filters resumes based on biased criteria	Excludes qualified candidates from diverse backgrounds
Content Recommendation	System prioritizes popular topics	Reduces exposure to diverse learning materials

### 5. The Role of Non-Teaching Academic Staff

Non-teaching academic staff often manage or monitor systems that incorporate AI tools—such as student databases, LMS analytics, or research software. Their **ethical awareness and vigilance** can help identify and reduce bias.

## Key Responsibilities:

- **Data Quality Monitoring:** Ensure that datasets used in AI systems are accurate, complete, and representative.
- **Ethical Review:** Support institutional committees in assessing fairness during AI adoption.
- **Transparency Communication:** Clearly explain to faculty and students how AI tools operate and make decisions.
- **Feedback Collection:** Gather user experiences to identify potential bias or unfair outcomes.
- **Policy Enforcement:** Uphold institutional AI fairness and anti-discrimination policies.

## 6. Strategies to Reduce Algorithmic Bias

1. **Diversify Data:** Use datasets that reflect diverse groups of users and contexts.
2. **Audit Regularly:** Periodically test AI outputs for signs of bias or error.
3. **Human-in-the-Loop:** Combine AI decision-making with human judgment and review.
4. **Promote AI Literacy:** Educate staff and faculty about how AI systems learn and make predictions.
5. **Transparency in Design:** Require vendors and developers to disclose model design, data sources, and limitations.
6. **Ethical Reporting:** Document any bias incidents and corrective actions taken.

## 7. Case Example

At a university implementing an AI-assisted grading tool, staff noticed that the algorithm scored essays written in complex vocabulary higher than those written in simpler, clearer language.

After review, they discovered that the AI was trained on past essays from advanced-level students, leading to **data bias**.

The solution involved:

- Retraining the model with a **balanced dataset** from diverse writing levels.
- Including **human evaluators** to cross-check AI grading.
- Updating institutional policies on **AI fairness auditing**.

This improved grading fairness and rebuilt student trust in the assessment process.

## 8. Best Practices for Ensuring Fairness

- Establish an **AI fairness committee** to review systems before deployment.
- Include **diverse voices**—faculty, students, and staff—in evaluation discussions.
- Document all **AI-related decisions and data sources**.
- Encourage open dialogue about bias and inclusivity in digital education.
- Use **ethical AI frameworks** (e.g., UNESCO's AI Ethics Guidelines, OECD AI Principles).

## 9. Key Takeaways

- **Algorithmic bias** can unintentionally reproduce inequality in education if not properly monitored.
  - **Fairness** requires a balance of ethical design, transparent data use, and human oversight.
  - Non-teaching academic staff are essential in **detecting, managing, and reporting AI biases**.
  - Building an institutional culture of **responsible, fair, and inclusive AI use** safeguards the integrity and trustworthiness of higher education systems.
- 
- Policy frameworks in academia

### Introduction

As Artificial Intelligence (AI) becomes more embedded in teaching, administration, and research, **policy frameworks** play a critical role in guiding ethical, responsible, and transparent use of AI across academic institutions.

For non-teaching academic staff—such as administrators, quality assurance officers, and academic support teams—understanding these frameworks ensures that **AI adoption aligns with institutional values, national regulations, and educational integrity**.

## 2. What Are Policy Frameworks in Academia?

A **policy framework** is a structured set of principles, rules, and guidelines that govern how AI and other digital technologies are implemented within an educational institution.

It establishes:

- **Purpose** – Why AI is used and what it aims to achieve.
- **Scope** – Which systems, departments, and users the policy applies to.
- **Accountability** – Who is responsible for oversight, compliance, and review.
- **Ethical Standards** – How fairness, transparency, and privacy are maintained.
- **Evaluation Procedures** – How success and risks are measured.

## 3. Importance of AI Policy Frameworks in Academia

Aspect	Why It Matters
<b>Ethical Compliance</b>	Prevents misuse of AI tools and ensures responsible data handling.
<b>Transparency</b>	Builds trust among students, faculty, and the public.
<b>Equity and Fairness</b>	Ensures all learners benefit equally from AI integration.
<b>Risk Mitigation</b>	Identifies and minimizes bias, privacy breaches, and misinformation.

Aspect	Why It Matters
<b>Governance</b>	Defines institutional structures for monitoring and auditing AI systems.

#### 4. Key Components of an Academic AI Policy Framework

1. **Ethical Use Guidelines:** Principles ensuring AI supports academic integrity and fairness.
2. **Data Governance:** Rules for secure, lawful, and transparent data collection, storage, and use.
3. **Privacy Protection:** Compliance with national data protection acts (e.g., India's DPDP Act, GDPR).
4. **Accountability Structures:** Identification of AI oversight committees or ethics boards.
5. **Transparency Requirements:** Mandates disclosure when AI tools influence decisions (e.g., grading, admissions).
6. **Bias and Fairness Audits:** Regular assessments of algorithmic equity.
7. **Faculty and Staff Training:** AI literacy programs for ethical and effective tool usage.
8. **Vendor and Tool Evaluation:** Ensures third-party AI tools meet institutional ethical standards.
9. **Incident Reporting Mechanisms:** Clear channels for reporting misuse or bias concerns.
10. **Continuous Review:** Periodic updates reflecting new technologies and regulatory changes.

#### 5. Role of Non-Teaching Academic Staff

Non-teaching staff are vital in **implementing, monitoring, and maintaining** AI policy frameworks. They act as the operational link between institutional leadership and academic departments.

**Their responsibilities may include:**

- Participating in **AI ethics and governance committees**.
- Ensuring **data management practices** align with policy standards.
- Supporting **compliance documentation** and internal audits.
- Assisting in **staff training** on AI policies and responsible use.
- Reporting and escalating **ethical or operational issues** involving AI tools.
- Facilitating **communication** between policy creators and end users.

#### 6. Example: University AI Policy Framework in Practice

A university introducing an AI-powered plagiarism detection tool implemented a comprehensive AI policy framework that included:

- A **clear policy statement** on ethical AI use.
- A **transparency clause** informing students when AI tools are used in evaluation.
- A **data privacy protocol** to safeguard student submissions.
- A **review committee** to address appeals and system errors.

This framework not only enhanced trust in the new system but also set a precedent for future AI tool adoptions across departments.

## 7. Alignment with National and Global Standards

Academic AI policies should align with both **national** and **international** guidelines, such as:

- **UNESCO Recommendation on the Ethics of Artificial Intelligence (2021)**
- **OECD Principles on AI (2019)**
- **UGC and AICTE Digital Education Guidelines (India)**
- **Data Protection and Privacy Regulations (DPDP, GDPR, etc.)**

These frameworks emphasize **human oversight, transparency, fairness, and sustainability** in AI use.

## 8. Steps to Develop or Support AI Policy Frameworks

1. **Conduct Institutional AI Audit:** Identify where and how AI is currently used.
2. **Engage Stakeholders:** Include academic, administrative, and student perspectives.
3. **Define Ethical Principles:** Align with institutional mission and global best practices.
4. **Create Policy Documentation:** Draft guidelines and procedures in clear language.
5. **Train and Communicate:** Ensure all staff understand the policy and its implications.
6. **Monitor and Evaluate:** Regularly assess the policy's impact and update as needed.

## 9. Benefits of Robust AI Policy Frameworks

- Promotes **responsible innovation** in education.
- Protects **student data privacy** and institutional reputation.
- Fosters **collaboration** between departments and technology providers.
- Strengthens **compliance** with legal and ethical standards.
- Builds a culture of **trust and accountability** in digital transformation.

## 10. Key Takeaways

- Policy frameworks provide the **ethical and operational foundation** for AI in academia.
- Non-teaching academic staff play a **central role** in ensuring compliance, communication, and implementation.
- Continuous review, transparency, and inclusivity are essential for **sustainable and fair AI governance**.
- A well-designed AI policy framework safeguards the **integrity, equality, and credibility** of higher education in the AI era.
- Future directions for AI in higher education

## . Introduction

Artificial Intelligence (AI) is rapidly transforming the landscape of higher education. While today's applications include tools for grading, student support, research assistance, and data-driven decision-making, the **next wave of AI innovation** promises deeper integration, personalization, and institutional transformation.

For non-teaching academic staff, understanding these **future directions** is essential to anticipate new responsibilities, prepare infrastructure, and support faculty and learners in adapting to a more intelligent, connected, and equitable academic environment.

## 2. The Evolving Role of AI in Higher Education

AI in higher education is shifting from isolated tool usage to a **strategic ecosystem** that connects teaching, research, and administration.

Future developments will likely focus on:

- **Personalized Learning Pathways** – AI systems that adapt course content, pacing, and feedback to each student's needs.
- **Predictive Analytics for Student Success** – Early detection of at-risk students through behavioral and performance data.
- **Administrative Automation** – Streamlining operations like scheduling, admissions, and record management.
- **Enhanced Academic Research** – AI-assisted literature reviews, grant writing, and interdisciplinary collaboration.
- **Inclusive Learning** – Accessibility tools supporting learners with disabilities or language barriers.

## 3. Emerging Trends and Technologies

Area	Future Trend	Impact on Higher Education
Generative AI	Text, image, and video generation for learning materials	Custom content creation and immersive teaching
AI-Powered LMS	Adaptive learning management systems	Dynamic feedback and individualized student support
Data Analytics & Dashboards	Institution-wide insight tracking	Improved decision-making and quality assurance
Virtual and Augmented Reality (VR/AR)	AI-enhanced simulations	Realistic, experiential learning in medicine, engineering, and design
AI Governance Systems	Ethical and legal oversight automation	Transparent and fair academic policy enforcement
Interdisciplinary AI	Collaboration across subjects	Integration of AI literacy in all

Area	Future Trend	Impact on Higher Education
Programs		academic domains

#### 4. The Institutional Shift: From Adoption to Transformation

In the near future, higher education will move from **adopting AI tools** to **strategically transforming** its systems and culture around AI capabilities.

This involves:

- Developing **AI-driven decision systems** for quality assurance, admissions, and research management.
- Training **faculty and non-teaching staff** in AI ethics, governance, and tool operation.
- Establishing **AI innovation labs** or centers for experimentation and pilot projects.
- Revising **curricula and policies** to integrate digital and AI literacy across all disciplines.
- Creating **partnerships with technology providers** for co-developing education-specific AI solutions.

#### 5. Implications for Non-Teaching Academic Staff

Non-teaching academic staff will play a **pivotal role** in shaping and sustaining these AI-driven futures. Their responsibilities will extend beyond administrative support to **strategic facilitation and governance**.

**Key roles include:**

- Supporting **AI implementation projects** and managing institutional data.
- Ensuring **ethical and policy compliance** for all AI-based academic processes.
- Coordinating **training and professional development** in AI use.
- Assisting in **technology integration** within academic departments.
- Participating in **AI governance boards** and contributing to institutional planning.

By staying informed and adaptable, staff can ensure that AI supports—not replaces—the human essence of academia.

#### 6. Preparing for Future AI Integration

Institutions and their staff can begin preparing by:

1. **Building AI Awareness:** Regular workshops, discussions, and policy briefings.
2. **Focusing on Data Ethics:** Training on privacy, bias, and responsible data handling.
3. **Investing in Infrastructure:** Secure and interoperable digital ecosystems.
4. **Encouraging Experimentation:** Piloting AI tools in non-critical operations first.
5. **Collaborating with Faculty:** Co-developing support frameworks for AI-enabled teaching and research.

## 6. Monitoring Global Trends:

Keeping pace with UNESCO, OECD, and UGC guidelines on AI in education.

## 7. Challenges and Considerations

While AI's potential is vast, future adoption must balance **innovation with ethics**.

Challenges include:

- Managing **algorithmic bias and data quality**.
- Ensuring **student privacy and consent**.
- Avoiding **over-reliance on automation** at the cost of human judgment.
- Providing **equal access** to AI tools for all learners and departments.
- Maintaining **academic integrity** in AI-generated content and research.

## 8. Future Vision: The AI-Enabled University

A forward-looking university will be:

- **Smart and Data-Driven:** AI insights guide decisions at every level.
- **Inclusive and Accessible:** AI tools remove barriers to learning and participation.
- **Ethically Governed:** Policies ensure fairness, accountability, and transparency.
- **Collaborative:** Faculty, students, and staff co-design AI-powered initiatives.
- **Lifelong Learning-Oriented:** AI supports continuous upskilling and personalized education pathways.

## 9. Key Takeaways

- The **future of AI in higher education** is not just technological—it's structural and cultural.
- **Non-teaching academic staff** are vital in ensuring smooth integration, ethical use, and sustainable operations.
- Building **AI literacy**, ethical awareness, and adaptive infrastructure will future-proof institutions.
- Collaboration between administration, faculty, and students will define the **next generation of intelligent universities**.

### Hands-On Activities:

- Case analysis: Review biased AI grading scenarios

### Overview

This activity introduces participants to the concept of **algorithmic bias in AI grading systems** through a practical case analysis. Non-teaching academic staff will explore how bias can appear in automated

evaluation tools, analyze real or simulated grading outputs, and discuss strategies to ensure fairness, transparency, and accountability in assessment systems supported by AI.

The goal is to help participants critically evaluate AI-assisted grading tools and identify ways to uphold **ethical standards and equitable outcomes** within academic environments.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Understand how **AI grading systems** can exhibit bias based on data or linguistic patterns.
- Analyze **case examples** of biased grading outcomes.
- Identify potential causes and impacts of such biases on students.
- Recommend corrective strategies for **ethical AI use** in academic assessment.

## 3. Materials and Tools

- Sample dataset or mock essays graded by an AI tool (e.g., ChatGPT, Gradescope, or similar).
- Printed case summaries of biased grading incidents.
- Worksheets for bias identification and reflection.
- Projector/computer for demonstrating grading results.

## 4. Activity Steps

### Step 1 – Introduction (10 mins)

Facilitator introduces the concept of **AI grading** and explains how models are trained using language patterns, previous grading data, and rubrics. The discussion highlights that while these systems save time, they can unintentionally reinforce biases.

### Step 2 – Case Presentation (15 mins)

Participants are shown **two to three short case studies**, such as:

- An AI tool consistently gives lower scores to essays with non-native English writing styles.
- The grading model favors longer essays with advanced vocabulary over concise, clear writing.
- AI scoring that varies by topic or writing tone due to training data imbalance.

### Step 3 – Group Analysis (20 mins)

Participants form small groups to review each case. Using a worksheet, they identify:

- Where the bias may have originated (data, algorithm, rubric design, or interpretation).
- Who is affected by the bias and how.
- How such bias could impact student trust and learning outcomes.

#### **Step 4 – Solution Brainstorming (20 mins)**

Groups propose mitigation strategies, such as:

- Incorporating **human oversight** in AI grading.
- Diversifying training datasets.
- Conducting **regular bias audits**.
- Ensuring transparency in grading criteria.

#### **Step 5 – Reflection and Discussion (15 mins)**

Each group shares one key finding and one recommendation. The facilitator summarizes how institutions can combine **AI efficiency with human judgment** to maintain fairness in evaluation.

### 5. Expected Outcomes

Participants will gain:

- A deeper understanding of how **algorithmic bias** affects academic assessment.
- Practical awareness of **risk detection and mitigation strategies**.
- Confidence to engage in institutional discussions on **ethical AI grading adoption**.
- A shared framework for identifying bias and maintaining transparency.

### 6. Facilitator Notes

- Emphasize that **AI grading tools are assistive**, not authoritative.
- Highlight the importance of **ethical oversight committees** and **data diversity**.
- Encourage participants to reflect on how their own workflows might include **hidden biases**.
- Conclude with examples of **best practices** from universities using hybrid grading systems (AI + human review).

### 7. Follow-Up Discussion Prompts

- How can institutions balance **AI efficiency with academic fairness**?
- What safeguards should be built into AI grading policies?
- How might non-teaching staff contribute to regular **AI bias reviews**?
- Draft an “AI Ethics Checklist” for personal teaching/research use

### Overview

This activity guides participants in **creating a personalized AI Ethics Checklist** to support responsible and transparent use of AI tools in academic contexts.

Non-teaching academic staff will explore the **ethical dimensions of AI** in teaching, research, and administrative practices—such as data privacy, bias, accountability, and fairness—and then collaboratively draft a checklist tailored to their own academic or operational roles.

The outcome is a **practical, ready-to-use tool** that promotes awareness and accountability in AI-supported activities.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Identify key **ethical considerations** in AI-supported academic work.
- Draft a **personalized ethics checklist** aligned with institutional and global AI ethics frameworks.
- Evaluate AI tools and processes through ethical reflection and transparency principles.
- Foster a **culture of responsibility and integrity** in the use of AI for teaching, research, or administration.

## 3. Materials and Tools

- Sample AI ethics guidelines (e.g., UNESCO, UGC, OECD).
- Worksheet or digital template for checklist creation.
- Access to AI tools commonly used in academic settings (ChatGPT, Scite.ai, Gradescope, etc.).
- Markers, sticky notes, or online whiteboard tools (for collaborative drafting).

## 4. Activity Steps

### Step 1 – Introduction (10 mins)

Facilitator introduces the concept of **AI ethics** and why ethical reflection is critical in education and research.

Key principles discussed: **transparency, fairness, accountability, data privacy, consent, and human oversight.**

### Step 2 – Review of Ethical Scenarios (15 mins)

Participants analyze short scenarios illustrating ethical challenges:

- Using AI to draft student feedback without acknowledgment.
  - Storing research participant data in an AI system without consent.
  - Relying entirely on AI grading without human review.
- The discussion identifies what went ethically wrong and why oversight matters.

### Step 3 – Checklist Drafting (25 mins)

Participants work individually or in pairs to draft their **personal AI Ethics Checklist** using a guided worksheet.

Suggested checklist categories include:

1. **Purpose & Transparency:** Why am I using this AI tool? Is its role clear to others?
2. **Data Privacy & Consent:** Am I respecting confidentiality and securing personal data?
3. **Bias & Fairness:** Have I checked for possible algorithmic bias?
4. **Human Oversight:** Is there a review process for AI-generated content?
5. **Accountability:** Who takes responsibility for AI-related outcomes?
6. **Attribution:** Do I acknowledge AI assistance where appropriate?
7. **Impact Assessment:** How could this tool affect learners, colleagues, or participants?

#### **Step 4 – Group Sharing (15 mins)**

Participants share key points from their checklists in small groups.

They compare approaches and refine their lists based on feedback—creating a more balanced and comprehensive ethical framework.

#### **Step 5 – Consolidation and Reflection (10 mins)**

The facilitator summarizes key ethical takeaways and highlights institutional or international guidelines for AI ethics.

Participants reflect on one **specific ethical principle** they will commit to upholding in their daily work.

### **5. Expected Outcomes**

After this session, participants will have:

- A personalized **AI Ethics Checklist** ready for implementation.
- Greater awareness of **ethical risks and safeguards** in AI usage.
- A foundation for contributing to **institutional AI policy and governance**.
- Strengthened ability to evaluate AI tools responsibly across contexts.

### **6. Facilitator Notes**

- Encourage honesty and self-reflection; the checklist is meant for **practical use**, not assessment.
- Link the activity to existing **institutional ethics policies**.
- Emphasize that ethics are **continuous and contextual**—the checklist should evolve with technology and institutional changes.
- Offer examples of how similar checklists have improved responsible AI adoption at other universities.

### **7. Follow-Up Discussion Prompts**

- How can we ensure our AI ethics checklist stays relevant as tools evolve?

- Should institutions adopt a **shared version** of this checklist for all staff and faculty?
- What ethical dilemmas have you personally encountered while using AI tools?

## Case Studies:

- AI discrimination in proctoring software

### Overview

AI-based **online proctoring systems** have become increasingly common in higher education, particularly during remote examinations. These systems use algorithms to monitor test-takers through webcams, detect irregular behaviors, and flag potential cases of cheating.

However, despite their convenience and scalability, multiple reports and research findings reveal that **AI proctoring tools can discriminate against certain groups of students**—raising serious ethical, technical, and institutional concerns about fairness, bias, and inclusivity in education.

This case study examines a real-world scenario of **AI discrimination in proctoring**, its root causes, implications, and lessons learned for academic institutions.

## 2. Case Context

During the COVID-19 pandemic, many universities globally adopted AI-based proctoring tools such as **Proctorio, ExamSoft, and Respondus Monitor** to conduct remote exams.

At one university, numerous students reported issues with **facial recognition and movement detection** in the system used for invigilation.

Key issues observed included:

- Students with **darker skin tones** were not recognized consistently by facial detection algorithms.
- **Students with disabilities** (such as limited mobility or tics) were frequently flagged for "suspicious movement."
- **Poor internet lighting** caused the system to classify students as "absent" or "not visible."
- Some **female students wearing headscarves** or students wearing cultural attire were marked as potential cheaters because their facial features were "obscured."

The AI system's automated reports led to unnecessary stress, false accusations, and appeals — exposing a **technological and ethical flaw** in the university's digital assessment strategy.

## 3. Underlying Problem

The core issue lay in **algorithmic bias** — a result of how the AI proctoring system was trained and deployed.

#### **Root causes:**

1. **Training Data Bias:** The algorithm was trained primarily on faces and behaviors of lighter-skinned individuals in controlled lighting, leading to poor recognition of diverse users.
2. **Design Assumptions:** Developers assumed uniform testing environments, overlooking cultural, physical, and environmental variations.
3. **Automated Decision-Making:** The system flagged “suspicious behavior” without human review, allowing biased algorithms to influence disciplinary actions.
4. **Lack of Transparency:** Institutions and users were not informed about how the AI model functioned or what data it used for analysis.

#### **4. Impact**

The consequences of biased AI proctoring extended beyond technical inconvenience.

##### **For Students:**

- Emotional distress and loss of trust in digital assessment systems.
- False cheating allegations harming academic records.
- Marginalization of underrepresented and differently-abled students.

##### **For Institutions:**

- Complaints and public criticism regarding **digital discrimination**.
- Legal and ethical concerns related to **data protection and equal opportunity**.
- Pressure to **review and replace AI vendors** with more transparent and inclusive solutions.

##### **For Society:**

- Reinforcement of systemic bias in educational technology.
- Ethical debates on surveillance, privacy, and fairness in digital learning environments.

#### **5. Institutional Response**

Following student petitions and media coverage, the university initiated an **AI ethics audit** and paused its use of the proctoring tool.

Actions taken included:

- Forming an **AI Fairness Committee** involving IT, ethics, and student representation.
- Conducting an **independent algorithmic bias review** of the software.
- Replacing automatic flagging with **human-in-the-loop review systems**.
- Requiring vendors to disclose **training data diversity and testing methodologies**.
- Introducing **alternative assessment formats** that reduced reliance on surveillance technologies.

This response transformed the university's approach from reactive correction to **proactive ethical governance** of AI technologies.

## 6. Lessons Learned

1. **Algorithmic fairness must be verified, not assumed.**  
Institutions should demand transparency from AI vendors about data and bias testing.
2. **AI should support, not replace, human judgment.**  
Automated systems require oversight to ensure fairness in sensitive decisions like academic integrity.
3. **Inclusive design is essential.**  
AI systems must be trained and tested with **diverse demographic data** to avoid discrimination.
4. **Policy and governance frameworks matter.**  
Universities should establish **AI ethics policies** defining how tools are evaluated, approved, and monitored.
5. **Transparency builds trust.**  
Students must be informed about how AI tools function, what data is collected, and how it is used.

## 7. Implications for Non-Teaching Academic Staff

Non-teaching staff—such as exam coordinators, IT administrators, and data officers—play a vital role in **preventing AI discrimination** by:

- Evaluating the fairness and accessibility of AI tools before implementation.
- Maintaining open communication channels for student feedback.
- Ensuring compliance with institutional ethics and privacy standards.
- Collaborating with vendors to conduct regular bias audits.

Their proactive engagement helps safeguard **equity, accountability, and institutional integrity** in the age of AI-driven education.

## 8. Conclusion

The case of discrimination in AI proctoring software underscores that **technological efficiency cannot come at the cost of equity and ethics**.

Higher education institutions must ensure that AI systems align with the principles of **fairness, inclusivity, and human dignity**.

Going forward, universities should treat AI adoption as an **ethical partnership**—combining innovation with careful governance and continuous evaluation—to ensure that every learner is assessed justly, regardless of background or circumstance.

- Bias in AI-generated feedback on student writing

## Introduction

AI tools are increasingly used in education to provide **automated feedback on student writing**, helping students improve grammar, structure, clarity, and argumentation. While these tools can save time and support learning, research and practical experience reveal that **AI-generated feedback can be biased**, unintentionally favoring certain groups of students or writing styles.

Non-teaching academic staff—who often manage learning systems, monitor academic integrity, and support faculty—need to understand these biases to ensure **fair and equitable learning experiences**.

## 2. Understanding Bias in AI Feedback

**Algorithmic bias** in AI writing feedback occurs when the system consistently gives **differential treatment** based on factors unrelated to writing quality, such as:

- **Language background:** Non-native English speakers may receive harsher or less constructive feedback.
- **Writing style:** AI models trained on formal academic prose may penalize creative or narrative approaches.
- **Cultural references:** Essays containing cultural examples outside the model's training data may be misunderstood or undervalued.
- **Socioeconomic and demographic factors:** Certain phrases, idioms, or topics may be misinterpreted, affecting feedback quality.

## 3. Causes of Bias in AI Feedback

1. **Training Data Bias:** AI models are trained on historical essays or writing samples that may overrepresent certain student populations or academic styles.
2. **Algorithm Design Bias:** Models may favor specific grammar, vocabulary, or organizational conventions.
3. **Evaluation Bias:** AI feedback may replicate subjective human judgment encoded in training datasets.
4. **Limited Contextual Understanding:** AI may not fully account for creativity, argument complexity, or context-specific reasoning.

## 4. Potential Impacts on Students

Impact Area	Example
<b>Learning &amp; Confidence</b>	Students repeatedly receive negative or generic feedback, lowering motivation.
<b>Equity</b>	Non-native English speakers or students with diverse backgrounds may be unfairly disadvantaged.

Impact Area	Example
<b>Academic Integrity</b>	Students may rely too heavily on AI suggestions, undermining skill development.
<b>Faculty Trust</b>	Instructors may misinterpret AI feedback as authoritative, affecting grading decisions.

## 5. Role of Non-Teaching Academic Staff

Non-teaching staff support ethical AI use in several ways:

- **Monitoring System Use:** Track how AI feedback tools are applied and flag inconsistencies or complaints.
- **Supporting Training:** Help faculty and students understand **AI limitations** and proper use.
- **Ensuring Accessibility:** Verify that all students, including ESL learners and those with disabilities, can benefit from AI feedback.
- **Data Oversight:** Maintain transparency and ensure privacy in AI-generated outputs.
- **Policy Implementation:** Enforce institutional AI guidelines and contribute to bias mitigation strategies.

## 6. Strategies to Mitigate Bias

1. **Diverse Training Data:** Use datasets representing various writing styles, cultural contexts, and language backgrounds.
2. **Human Oversight:** Faculty should review AI feedback and provide context-specific guidance.
3. **Feedback Transparency:** Students should understand **how the AI generates suggestions** and its limitations.
4. **Bias Audits:** Conduct periodic evaluations to detect patterns of unfair feedback.
5. **Student Education:** Teach students how to **critically evaluate AI feedback** rather than accept it blindly.

## 7. Example Scenario

A university deployed an AI tool for essay feedback. Non-native English-speaking students reported receiving **repetitive “grammar errors”** feedback, while native speakers with creative or unconventional styles received **more positive suggestions**, even with lower-quality content.

The university addressed this by:

- Reviewing the AI model's training data for diversity.
- Implementing a **human-in-the-loop review** process.
- Conducting workshops for students on interpreting AI feedback critically.

## 8. Best Practices

- Treat AI feedback as **advisory**, not authoritative.
- Promote **inclusive evaluation practices** alongside AI suggestions.
- Maintain **documentation** of AI tool performance, feedback patterns, and corrective actions.
- Encourage collaboration between **IT, faculty, and non-teaching staff** for ethical deployment.
- Incorporate **student feedback** to continuously refine AI tool use.

## 9. Key Takeaways

- AI feedback tools can **accelerate learning**, but bias can inadvertently disadvantage students.
- Non-teaching staff play a crucial role in **monitoring, policy enforcement, and student support**.
- Ethical and inclusive AI deployment requires **human oversight, diverse datasets, transparency, and continuous evaluation**.
- Awareness and proactive measures ensure that AI feedback **enhances, rather than hinders, equitable learning outcomes**.

### Scenario-Based Discussions:

- “What would you do if your AI tool unfairly flagged a student?”

### Overview

AI tools are increasingly used in academic settings for grading, plagiarism detection, proctoring, and feedback. While these systems provide efficiency, they can sometimes **unfairly flag students**, due to algorithmic bias, data limitations, or environmental factors.

This scenario-based learning activity helps non-teaching academic staff **practice ethical decision-making, problem-solving, and policy adherence** when encountering AI errors affecting students.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Identify situations where AI tools may produce **unfair or biased results**.
- Evaluate the **ethical and procedural implications** of AI flagging.

- Decide on **appropriate human interventions** to ensure fairness.
- Propose strategies to **prevent or mitigate future AI errors**.

### 3. Scenario

**Context:**

A university uses an AI-assisted proctoring and grading system for essay exams. During grading, the AI flags a student's submission for potential plagiarism. Upon review, faculty notice that the flagged sections were **direct quotations correctly cited**.

**Challenge:**

You are part of the academic support team responsible for overseeing AI tool use. Students have reported anxiety and frustration, and faculty are concerned about fairness and credibility of AI outputs.

**Questions for Reflection:**

1. What immediate steps would you take to **address the student's concern**?
2. How would you **verify the AI-generated flag** before escalating it?
3. Which **policies or ethical guidelines** should inform your actions?
4. How would you **communicate the resolution** to the student and faculty?
5. What **long-term measures** could reduce future occurrences?

### 4. Activity Structure

**Step 1 – Individual Reflection (5-10 mins)**

- Participants read the scenario and jot down **initial responses** to each question.

**Step 2 – Small Group Discussion (15-20 mins)**

- Form groups of 3-5 participants.
- Discuss responses and share **realistic solutions**, considering institutional policy, fairness, and student well-being.

**Step 3 – Role-Play (15 mins)**

- Assign roles:
  - o AI System Administrator
  - o Faculty Member
  - o Student
  - o Academic Ethics Officer
- Groups **simulate a meeting** resolving the flagged incident, ensuring each perspective is addressed.

#### **Step 4 – Group Debrief (10 mins)**

- Share insights and compare approaches across groups.
- Facilitator highlights **best practices** for AI oversight, human review, and student communication.

#### **5. Key Learning Points**

- **AI is a tool, not the final authority.** Always verify flagged results with **human oversight**.
- **Transparency matters.** Students and faculty should understand how AI works and its limitations.
- **Equity and fairness come first.** Algorithms must not penalize students due to bias, environment, or technical errors.
- **Communication is critical.** Clear, empathetic explanations reduce anxiety and maintain trust.
- **Policy and governance guide action.** Decisions should align with institutional ethics, AI policy frameworks, and data privacy standards.
- **Preventive strategies:** Regular AI audits, diverse training datasets, and structured human review reduce future errors.

#### **6. Reflection Questions for Participants**

- How would you balance **AI efficiency** with **human judgment** in high-stakes decisions?
- What role can **non-teaching staff** play in maintaining fairness in AI-assisted assessment?
- How would you **document and report incidents** to support transparency and policy compliance?
- What **training or awareness programs** could help faculty and students better understand AI limitations?

#### **7. Optional Extension Activity**

- Provide participants with **sample AI-generated feedback or plagiarism reports** and ask them to **identify potential biases or errors**.
- Have them propose **corrective actions and policy recommendations**.

This activity equips staff with the skills to **navigate ethical dilemmas, apply institutional policies, and ensure equitable outcomes** when AI tools misclassify or unfairly flag students.

- “Who’s accountable when AI gets it wrong?”

## . Overview

AI tools are increasingly used in higher education for grading, plagiarism detection, student feedback, and administrative decision-making. While they improve efficiency, AI systems can **make mistakes or produce biased results**, leading to ethical, academic, and legal concerns.

This scenario-based activity helps non-teaching academic staff explore **accountability, ethical responsibility, and institutional governance** when AI errors impact students or faculty.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Identify who may be responsible when AI outputs are incorrect or biased.
- Evaluate the **roles of faculty, staff, administrators, and AI vendors** in decision-making.
- Develop strategies for **human oversight, communication, and risk mitigation**.
- Apply institutional **policies and ethical principles** to AI-related incidents.

## 3. Scenario

### **Context:**

A university deploys an AI-based essay grading tool. A student receives a failing grade because the AI flagged several sentences as plagiarized. After review, it turns out the AI **misinterpreted properly cited material**.

### **Challenge:**

You are a member of the academic support team. Faculty are unsure how to respond, and the student requests remediation. The administration is asking who is accountable for the error.

### **Reflection Questions:**

1. Who should take **primary responsibility**: AI vendor, faculty, or the institution?
2. How can non-teaching staff help **investigate and resolve** such errors?
3. What steps ensure **transparency and fairness** for the student?
4. How should the institution **prevent similar errors** in the future?
5. What policies or ethical guidelines should guide action?

## 4. Activity Structure

### **Step 1 - Individual Reflection (5-10 mins)**

- Participants note their immediate thoughts on accountability, possible actions, and ethical considerations.

### **Step 2 – Group Discussion (15–20 mins)**

- Form small groups to debate:
  - **AI vendor liability** – Was the error due to faulty algorithms?
  - **Faculty oversight** – Could human review have prevented the issue?
  - **Institutional governance** – Were policies in place to handle AI errors?

### **Step 3 – Role-Play (15 mins)**

- Assign roles:
  - Student
  - Faculty member
  - IT/AI administrator
  - Academic ethics officer
- Groups simulate a **meeting to resolve the AI error**, discussing accountability and corrective measures.

### **Step 4 – Group Debrief (10 mins)**

- Each group shares conclusions on accountability, resolution steps, and preventive strategies.
- Facilitator highlights **best practices in AI governance** and human oversight.

## **5. Key Learning Points**

- **AI is a tool, not a decision-maker.** Humans are ultimately accountable for academic outcomes.
- **Shared responsibility** is key: vendors, faculty, administrators, and staff all play roles.
- **Transparency and documentation** help clarify accountability and build trust.
- **Human oversight** is essential to detect and correct AI errors.
- **Institutional policies and ethics frameworks** provide guidance for responding to AI failures.

## **6. Reflection Questions for Participants**

- How would you ensure that students are treated fairly after an AI error?
- What protocols can be implemented to assign clear accountability for AI decisions?
- How can non-teaching staff support **faculty and administration** in managing AI-related incidents?
- What **preventive measures** can institutions adopt to reduce risk?

## **7. Optional Extension Activity**

- Provide participants with **mock AI error reports** (plagiarism, grading, or proctoring).

- Ask them to **map accountability**, list corrective steps, and propose policy updates to prevent future incidents.

This activity builds awareness of **ethical responsibility, institutional governance, and human oversight**, helping staff navigate complex scenarios where AI tools produce incorrect or biased results.

## Module 6 Capstone Project Development & Presentation

### Hands-On Activities:

- Mentor-guided final capstone refinement

### Overview

The **final stage of a capstone project** involves refining deliverables, ensuring alignment with academic standards, and preparing for presentation or submission. In this hands-on activity, participants will work under **mentor guidance** to enhance their capstone projects, integrating feedback, AI tools, and best practices.

Non-teaching academic staff play a critical role in **facilitating, organizing, and supporting** these sessions, ensuring students have access to the resources and guidance necessary for a polished final product.

### 2. Learning Objectives

By the end of this session, participants will be able to:

- Apply **mentor feedback** effectively to refine their capstone work.
- Use **AI tools and resources** to enhance content quality, structure, and clarity.
- Ensure the final deliverable meets **institutional standards and ethical guidelines**.
- Develop strategies for **presentation readiness and stakeholder communication**.

### 3. Materials and Tools

- Final draft of capstone projects (written, digital, or multimedia).
- Access to AI tools for content enhancement (e.g., ChatGPT for writing, Pictory/Synthesia for visuals, Scite.ai for references).
- Mentor feedback notes or rubrics.
- Worksheets for revision planning.
- Computers, projectors, or collaborative platforms (e.g., Google Docs, LMS, Miro).

## 4. Activity Steps

### Step 1 – Review Feedback (10–15 mins)

- Participants review mentor comments on structure, clarity, content, and AI-assisted enhancements.
- Identify **critical areas for improvement** and note action points.

### Step 2 – Collaborative Refinement (20–25 mins)

- Participants apply feedback using **AI tools or manual editing**.
- Focus areas may include:
  - Improving writing clarity and style.
  - Adding accurate citations or references.
  - Enhancing visuals or multimedia content.
  - Checking for bias, plagiarism, or ethical compliance.

### Step 3 – Peer Review (15 mins)

- Participants exchange capstone drafts with peers for additional input.
- Use a **peer feedback worksheet** to provide structured observations on clarity, completeness, and presentation.

### Step 4 – Mentor Check-In (15 mins)

- Mentors conduct brief sessions with individuals or small groups to ensure feedback has been correctly implemented.
- Discuss final touches, including formatting, presentation flow, and AI tool verification.

### Step 5 – Reflection and Documentation (10 mins)

- Participants summarize changes made and **document how mentor and AI feedback improved the project**.
- Capture lessons learned for future academic or professional work.

## 5. Expected Outcomes

Participants will:

- Produce a **polished capstone project** ready for submission or presentation.
- Demonstrate **effective integration of mentor and AI feedback**.
- Develop **skills in project refinement, collaborative review, and ethical AI use**.
- Gain confidence in **applying structured revision processes** to academic work.

## 6. Facilitator Notes

- Encourage participants to **prioritize high-impact feedback** first.
- Highlight the **role of non-teaching staff** in supporting mentoring sessions, resource access, and workflow organization.
- Emphasize the importance of **ethical AI use**, including proper attribution and bias checking.
- Ensure all participants have **access to required technology and AI tools**.

## 7. Follow-Up Discussion Prompts

- Which feedback had the most significant impact on your project?
  - How did AI tools enhance or streamline your revisions?
  - What strategies helped you integrate mentor suggestions effectively?
  - How can this structured refinement process be applied to future projects?
- 
- Presentation walkthrough and feedback rotation

### Overview

The **Presentation Walkthrough and Feedback Rotation** activity enables participants to **practice delivering their capstone or project presentations** in a structured, supportive environment. Non-teaching academic staff can facilitate this process by coordinating logistics, guiding participants on effective presentation strategies, and managing **feedback collection and rotation** among peers and mentors.

This activity helps participants **refine content, delivery, and visual materials**, while receiving diverse perspectives on clarity, engagement, and accuracy.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Deliver a clear and concise **project or capstone presentation**.
- Incorporate **peer and mentor feedback** to improve content and delivery.
- Evaluate presentations using **structured feedback criteria**.
- Enhance confidence in **public speaking and academic communication**.

## 3. Materials and Tools

- Finalized capstone/project slides or presentation files.
- Feedback rotation sheets or digital forms.
- Timer or stopwatch for presentation timekeeping.
- Projector, computer, or online collaboration platform.

- Optional AI tools for slide enhancement, script refinement, or visuals (e.g., Canva, ChatGPT, Pictory).

## 4. Activity Steps

### Step 1 – Introduction (5 mins)

- Facilitator explains the purpose of the walkthrough and feedback rotation.
- Introduce the **feedback criteria**, such as clarity, structure, visuals, engagement, and ethical/AI considerations.

### Step 2 – Presentation Rotation (30–40 mins)

- Participants present in **small groups** or one-on-one rotations.
- Each presenter has **5–7 minutes** to deliver their presentation.
- Observers (peers/mentors) fill out **feedback sheets** during the presentation.

### Step 3 – Feedback Sharing (10–15 mins per rotation)

- Observers provide **constructive verbal and written feedback**.
- Focus on strengths, areas for improvement, and suggestions for AI or content refinement.

### Step 4 – Iterative Refinement (15 mins)

- Participants **incorporate feedback** into slides, scripts, or delivery.
- Optional quick AI tool check for improvements (e.g., grammar, clarity, visual enhancement).

### Step 5 – Group Reflection (10 mins)

- Facilitator leads a discussion:
  - o What feedback was most valuable?
  - o How did peer perspectives enhance presentation quality?
  - o Which AI tools helped implement improvements?

## 5. Expected Outcomes

Participants will:

- Deliver a **polished and confident presentation**.
- Understand **how to interpret and apply peer and mentor feedback effectively**.
- Identify **strengths and gaps** in their communication and content.
- Learn strategies for **using AI tools ethically** to enhance presentations.

## 6. Facilitator Notes

- Emphasize **constructive and respectful feedback**.
- Ensure rotation groups are **diverse**, allowing multiple perspectives.
- Encourage participants to **note feedback they can apply immediately** versus suggestions for later refinement.
- Highlight **time management** during presentations to simulate real submission or defense conditions.

## 7. Follow-Up Discussion Prompts

- How did peer feedback help clarify your presentation message?
  - Were there recurring suggestions across multiple reviewers?
  - How can feedback rotation improve future academic or professional presentations?
  - Which aspects of AI-assisted preparation enhanced your presentation most?
- 
- Final checklist: Goals – Tools – Outcomes – Ethics

### Overview

The **Final Checklist activity** is designed to help participants consolidate their capstone or project work by reviewing **key goals, tools used, outcomes achieved, and ethical considerations**. Non-teaching academic staff can facilitate this activity by guiding participants in **structured reflection, documentation, and ethical assessment**, ensuring that projects are **comprehensive, responsible, and aligned with institutional standards**.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Summarize the **primary goals** of their capstone or project.
- Document the **tools and technologies** applied, including AI assistance.
- Evaluate the **outcomes** achieved against initial objectives.
- Reflect on **ethical considerations**, such as bias, transparency, and fairness.
- Prepare a **final project summary** ready for submission or presentation.

## 3. Materials and Tools

- Capstone/project deliverables (draft or final versions).
- AI tools used in project development (ChatGPT, Scite.ai, Pictory, etc.).
- Final Checklist worksheet (digital or print).
- Pen, sticky notes, or collaborative whiteboard for group discussion.

- Projector or screen (optional) for sharing completed checklists.

## 4. Activity Steps

### Step 1 – Review Project Goals (5–10 mins)

- Participants revisit the **original goals** of their project or capstone.
- Identify whether goals were achieved, partially achieved, or need further work.

### Step 2 – List Tools and Resources (5–10 mins)

- Document all tools, AI platforms, and resources used.
- Reflect on how each tool contributed to project efficiency, quality, or learning outcomes.

### Step 3 – Assess Outcomes (10–15 mins)

- Compare actual outcomes with initial goals.
- Highlight **key successes, challenges, and lessons learned**.

### Step 4 – Reflect on Ethics (10–15 mins)

- Evaluate **ethical considerations**:
  - o Was AI used responsibly and transparently?
  - o Were potential biases addressed?
  - o Were data privacy and intellectual property respected?
- Identify **areas for improvement** in future projects.

### Step 5 – Peer Sharing (15 mins)

- Participants exchange checklists with peers for **feedback and discussion**.
- Discuss insights, tools, and ethical challenges.

### Step 6 – Final Consolidation (10 mins)

- Complete the **Final Checklist** for submission or reference.
- Ensure that goals, tools, outcomes, and ethics are **clearly documented**.

## 5. Expected Outcomes

Participants will:

- Have a **comprehensive record** of their project's goals, tools, outcomes, and ethical considerations.
- Be able to **justify AI usage and decisions** made during the project.
- Gain clarity on **lessons learned and future improvements**.
- Be prepared for **presentation, submission, or reporting** to faculty or administration.

## 6. Facilitator Notes

- Encourage **honest self-reflection**; the checklist is meant for learning and documentation, not evaluation alone.
- Emphasize the **importance of ethics** alongside technical and learning outcomes.
- Provide examples of completed checklists to guide participants.
- Highlight how this checklist can serve as a **template for future projects** or AI tool use.

## 7. Follow-Up Discussion Prompts

- Which goal was most successfully achieved, and why?
- Which AI tools or resources were most impactful?
- Were there any ethical dilemmas, and how were they addressed?
- How can this checklist guide your **future academic or professional projects**?

### Case Studies:

- Sample successful projects from law, education, business

### Overview

AI and digital tools are increasingly integrated into diverse academic disciplines, enabling students and faculty to **innovate, enhance learning outcomes, and address real-world problems**. This case study highlights **successful capstone or project examples** from Law, Education, and Business, illustrating the practical application of AI tools, interdisciplinary collaboration, and ethical considerations.

## 2. Case Summaries

### A. Law: AI for Case Law Summarization

- **Project Goal:** Simplify legal research for students by summarizing lengthy case law documents using AI.
- **Tools Used:** Natural language processing (NLP) tools, ChatGPT for summarization, and Scite.ai for reference mapping.
- **Approach:**
  - o Students selected landmark cases relevant to a specific legal domain.
  - o AI tools generated summaries and highlighted key arguments and precedents.
  - o Students manually verified outputs for accuracy and ethical compliance.
- **Outcomes:**
  - o Reduced research time by 50%.
  - o Enhanced understanding of complex legal texts.
  - o Students presented interactive case briefs for classroom discussion.
- **Key Takeaways:**

- o AI can **streamline complex academic research**, but human oversight ensures **accuracy and fairness**.

#### B. Education: AI-Enhanced Personalized Learning Modules

- **Project Goal:** Develop adaptive learning modules for K-12 subjects to improve student engagement and retention.
- **Tools Used:** AI tutoring platforms, ChatGPT for content creation, and learning analytics dashboards.
- **Approach:**
  - o Students created personalized lesson plans using AI-generated quizzes and learning paths.
  - o Data from early assessments was analyzed to adjust content difficulty dynamically.
  - o Teachers and mentors provided ethical and pedagogical oversight.
- **Outcomes:**
  - o Demonstrated measurable improvement in student engagement and quiz performance.
  - o Provided a **scalable framework** for personalized learning in diverse classrooms.
  - o Developed documentation and guidelines for teachers to safely integrate AI.
- **Key Takeaways:**
  - o Combining AI tools with **human guidance enhances learning** and allows for **data-informed interventions**.

#### C. Business: AI for Market Trend Prediction

- **Project Goal:** Analyze market trends and consumer sentiment to inform product strategy for a simulated business scenario.
- **Tools Used:** AI analytics platforms, sentiment analysis tools, data visualization software.
- **Approach:**
  - o Students collected social media and market data.
  - o AI tools analyzed patterns, predicted demand trends, and identified emerging market opportunities.
  - o Teams created business reports and visual dashboards to communicate insights.
- **Outcomes:**
  - o Improved accuracy of market predictions compared to traditional analysis methods.
  - o Enhanced decision-making skills and practical data analytics experience.
  - o Students presented **strategic recommendations** to faculty “board members.”
- **Key Takeaways:**
  - o AI enables **data-driven decision-making** and supports strategic planning in business contexts.

### 3. Cross-Disciplinary Lessons

- **Integration of AI and Human Oversight:** Success relies on balancing **automation with human expertise**.

- **Ethics and Accuracy:** Each project included measures to **verify AI outputs** and ensure fairness, especially in law and education.
- **Scalability and Practical Impact:** AI tools amplified efficiency and applicability in real-world scenarios.
- **Interdisciplinary Collaboration:** Students often worked across roles, combining technical, analytical, and domain knowledge.

#### 4. Implications for Non-Teaching Academic Staff

- Facilitate access to AI tools and ensure **training and resources** are available.
- Monitor projects for **ethical compliance and data integrity**.
- Support mentorship and review processes to help students **apply AI responsibly**.
- Document outcomes and best practices to **inform institutional policy** on AI adoption.

#### 5. Conclusion

These sample projects demonstrate that **AI can significantly enhance learning, research, and practical outcomes across disciplines** when combined with human oversight, ethical reflection, and structured mentorship.

Non-teaching academic staff play a **critical enabling role**, ensuring AI tools are deployed responsibly, resources are accessible, and students receive the guidance necessary to succeed.

- Before/after examples of AI integration in course design

#### Overview

AI integration in course design can **transform teaching and learning experiences**, improving efficiency, personalization, and student engagement. Comparing “**before**” and “**after**” scenarios helps non-teaching academic staff understand the practical benefits, challenges, and ethical considerations of implementing AI tools in academic courses.

#### 2. Key Areas of AI Impact in Course Design

- 1. Content Development**
  - **Before:** Faculty manually created lesson plans, slides, and assessments.
  - **After:** AI tools (e.g., ChatGPT, Notion AI) generate drafts of lesson materials, summarize readings, and suggest quiz questions.
- 2. Personalized Learning**
  - **Before:** One-size-fits-all approach; limited adaptation to individual student needs.
  - **After:** AI-driven adaptive learning platforms provide personalized recommendations, content pacing, and practice exercises based on student performance data.
- 3. Assessment & Feedback**
  - **Before:** Grading and feedback were fully manual, time-consuming, and sometimes inconsistent.

- **After:** AI-assisted grading tools and feedback generators offer instant guidance on essays, quizzes, and assignments, while instructors validate AI suggestions.

#### 4. Student Engagement

- **Before:** Limited interaction, mostly lectures and static materials.
- **After:** AI chatbots, virtual tutors, and interactive multimedia (e.g., Synthesia, Pictory) engage students dynamically and answer questions in real time.

#### 5. Research & Resource Curation

- **Before:** Manual searches for academic resources and references.
- **After:** AI tools like Scite.ai and Semantic Scholar quickly identify relevant literature, summarize findings, and organize references.

### 3. Illustrative Examples

Area	Before AI	After AI Integration	Benefits
Lesson Planning	Faculty spent hours preparing slides	AI suggests slide content, structure, and summaries	Saves time, ensures consistency
Assignments	Manual question creation and grading	AI generates questions, evaluates responses, and highlights errors	Faster grading, personalized feedback
Student Queries	Email or office hours only	AI chatbots provide instant answers	Increased accessibility, reduced faculty load
Literature Review	Manual search and reading	AI summarizes papers and creates citation lists	Efficient research, comprehensive coverage
Multimedia	Static text and slides	AI tools create videos, concept maps, and interactive visuals	Higher engagement, supports diverse learning styles

### 4. Role of Non-Teaching Academic Staff

- **Facilitators:** Ensure faculty have access to AI tools and understand how to use them ethically.
- **Support Staff:** Assist in integrating AI-generated materials into LMS, scheduling training sessions, and monitoring AI outputs for accuracy.
- **Ethics & Compliance:** Help review AI content for bias, plagiarism, and accessibility standards.
- **Data Management:** Maintain student data privacy while supporting AI-driven personalization.

### 5. Key Takeaways

- AI integration **reduces repetitive workload**, allowing faculty to focus on teaching and mentoring.
- Ethical oversight is crucial to **prevent bias, plagiarism, or misuse** of AI-generated content.

- Non-teaching staff play a **pivotal role** in resource management, training, and compliance, ensuring AI adoption benefits students and faculty alike.
- Before/after examples provide **tangible evidence** of AI's transformative potential in academia.
- Model rubrics for evaluating capstone success

## Overview

Capstone projects are a culminating academic experience where students **apply knowledge, skills, and creativity** to solve real-world problems. Evaluating capstone success requires **clear, structured, and transparent rubrics** that assess multiple dimensions of student performance.

Non-teaching academic staff often **support faculty in administering, tracking, and documenting evaluation processes**, ensuring consistency and fairness.

## 2. Key Dimensions of Capstone Evaluation

- 1. Project Goals and Objectives**
  - o Clarity and relevance of the problem statement.
  - o Alignment with course learning outcomes.
  - o Achievement of project objectives.
- 2. Research and Analysis**
  - o Depth of literature review or background research.
  - o Appropriate use of data, evidence, and references.
  - o Critical thinking and problem-solving demonstrated.
- 3. Design and Implementation**
  - o Methodology or approach used to develop the project.
  - o Effective use of tools and technologies, including AI where applicable.
  - o Quality and accuracy of final deliverables.
- 4. Creativity and Innovation**
  - o Novelty of ideas or solutions.
  - o Originality in design, presentation, or approach.
  - o Practical applicability or scalability of solutions.
- 5. Presentation and Communication**
  - o Clarity, organization, and professionalism of final presentation.
  - o Use of visuals, multimedia, or AI-assisted enhancements.
  - o Ability to answer questions and defend decisions effectively.
- 6. Ethics and Professionalism**
  - o Ethical use of AI and other tools.
  - o Proper citation and academic integrity.
  - o Collaboration, responsibility, and professionalism.

### 3. Sample Capstone Evaluation Rubric

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
<b>Goals &amp; Objectives</b>	Clear, highly relevant, fully achieved	Clear and relevant, mostly achieved	Somewhat clear, partially achieved	Unclear or not achieved
<b>Research &amp; Analysis</b>	Extensive, accurate, critical	Good depth and accuracy	Basic analysis, minor gaps	Incomplete or inaccurate
<b>Design &amp; Implementation</b>	Innovative, flawless execution	Solid methodology, minor errors	Adequate, several errors	Poor execution or methodology
<b>Creativity &amp; Innovation</b>	Highly original and practical	Original with some novelty	Limited originality	Not original or practical
<b>Presentation &amp; Communication</b>	Clear, engaging, professional	Clear, organized, minor issues	Some clarity, limited engagement	Disorganized, unclear
<b>Ethics &amp; Professionalism</b>	Exemplary ethical conduct	Mostly ethical, minor lapses	Some ethical issues	Unethical or unprofessional behavior

### 4. Role of Non-Teaching Academic Staff

- **Rubric Facilitation:** Assist faculty in distributing and explaining rubric criteria.
- **Documentation:** Maintain records of scores, feedback, and evaluation notes.
- **Support AI Integration:** Help verify AI-assisted work for originality and bias.
- **Student Guidance:** Provide procedural support to ensure fairness and transparency.

### 5. Key Takeaways

- Rubrics provide a **structured, transparent framework** for capstone evaluation.
- Incorporating **research, innovation, presentation, and ethics** ensures holistic assessment.
- Non-teaching staff play a **critical role in administration, documentation, and ethical oversight**.
- Consistent use of rubrics enhances **fairness, reliability, and clarity** for both students and faculty.

#### Scenario-Based Discussions:

- “How will you measure your project’s success?”

## Overview

Measuring project success is a critical step in capstone or academic projects. It ensures that **learning objectives, practical outcomes, and ethical standards** are achieved. Non-teaching academic staff often support faculty and students in **defining success metrics, monitoring progress, and documenting outcomes**.

This scenario-based activity helps participants **reflect on meaningful evaluation criteria**, identify quantitative and qualitative indicators, and align success metrics with project goals.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Define **clear, measurable success criteria** for academic projects.
- Align **project objectives, tools, and outcomes** with evaluation metrics.
- Consider **ethical and equitable indicators** in assessing success.
- Use AI and other tools to **track, analyze, and visualize project results**.

## 3. Scenario

### Context:

A group of students is completing a capstone project that uses AI to enhance learning in their discipline (e.g., automated grading, literature review, market analysis). The faculty asks the academic support team to help define **how the success of the project will be measured** before final submission.

### Challenge:

Your role is to help students identify **quantitative and qualitative success indicators** that reflect both learning outcomes and practical impact.

### Reflection Questions:

1. What are the **primary goals** of the project?
2. Which **measurable outcomes** indicate success? (e.g., improved student performance, accurate AI predictions, time saved)
3. How will you **document and verify results**?
4. What **ethical or fairness considerations** must be included in measuring success?
5. How can you ensure that success measures are **transparent and understandable** to faculty, peers, and stakeholders?

## 4. Activity Structure

### Step 1 – Individual Reflection (5-10 mins)

- Participants list potential success metrics for their project, including both **quantitative** (**scores, completion rates, accuracy**) and **qualitative** (**user satisfaction, engagement, ethical compliance**) indicators.

#### **Step 2 - Group Discussion (15–20 mins)**

- Form small groups to **compare and refine success measures**.
- Discuss feasibility, relevance, and alignment with project goals.

#### **Step 3 - Scenario Mapping (15 mins)**

- Groups map metrics to specific project components:
  - Goals → Metrics → Tools → Evidence → Ethical considerations.

#### **Step 4 - Peer Feedback (10 mins)**

- Exchange proposed metrics with another group for **constructive review and suggestions**.

#### **Step 5 – Consolidation (10 mins)**

- Finalize a **success measurement framework** that can be applied to the project and documented for submission or review.

### 5. Examples of Success Metrics

<b>Project Type</b>	<b>Quantitative Metrics</b>	<b>Qualitative Metrics</b>
AI-assisted grading	Accuracy of AI feedback, reduction in grading time	Student and faculty satisfaction, perceived fairness
Literature review automation	Number of relevant papers identified, time saved	Depth of analysis, clarity of synthesis
Market trend analysis	Accuracy of predicted trends, model precision	Usefulness of insights, clarity of report
Personalized learning module	Improvement in student scores, engagement rate	Student feedback, adaptability, inclusivity
Chatbot/Virtual tutor	Response accuracy, number of interactions handled	User satisfaction, perceived helpfulness

### 6. Key Learning Points

- Success is **multi-dimensional**, including goals, outcomes, process, and ethical compliance.
- Metrics must be **specific, measurable, achievable, relevant, and time-bound (SMART)**.
- Non-teaching staff play a **critical support role** in defining, tracking, and documenting success.

- Combining **quantitative data with qualitative insights** ensures a holistic evaluation.

## 7. Reflection Questions for Participants

- Which success metrics best capture both **learning outcomes and practical impact**?
  - How can you ensure that success is measured **ethically and inclusively**?
  - What role can **AI tools** play in tracking and reporting these metrics?
  - How will this framework guide **future projects** or capstone planning?
- 
- “What barriers might slow adoption at your institution?”

### Overview

Integrating AI into academic workflows has immense potential, but **institutional, technical, and human factors** can slow adoption. Non-teaching academic staff play a key role in **identifying barriers, facilitating adoption, and supporting faculty and students**.

This scenario-based activity helps participants **analyze challenges, prioritize solutions, and develop strategies** for smooth AI integration in their institution.

## 2. Learning Objectives

By the end of this session, participants will be able to:

- Identify potential **institutional, technological, and cultural barriers** to AI adoption.
- Evaluate the **impact of these barriers** on teaching, research, and administration.
- Suggest **practical strategies** to overcome adoption challenges.
- Understand the role of **non-teaching staff** in supporting AI integration.

## 3. Scenario

### Context:

Your institution plans to integrate AI tools into course design, grading, research support, and student engagement. However, adoption has been slow in some departments.

### Challenge:

As part of the academic support team, your role is to **analyze barriers, discuss solutions, and create an adoption plan** that addresses both faculty and administrative concerns.

## Reflection Questions:

1. What **technical barriers** could hinder adoption? (e.g., infrastructure, software access, IT support)
2. What **human or cultural factors** might resist change? (e.g., faculty comfort, perceived threats to autonomy)
3. Are there **policy or governance challenges** slowing adoption? (e.g., ethics, compliance, data privacy)
4. How can non-teaching staff **facilitate training, support, and awareness** to reduce resistance?
5. What strategies could encourage **sustainable, institution-wide AI adoption**?

## 4. Activity Structure

### Step 1 - Individual Brainstorm (5-10 mins)

- List potential barriers in **technical, human, policy, and ethical domains**.

### Step 2 - Group Discussion (15-20 mins)

- Form small groups to **categorize and prioritize** barriers based on severity and impact.
- Discuss **realistic strategies** to address each barrier.

### Step 3 - Solution Mapping (15 mins)

- Map solutions to barriers, specifying roles for:
  - o IT support
  - o Academic staff
  - o Non-teaching staff
  - o Policy makers

### Step 4 - Peer Sharing (10 mins)

- Groups present findings and proposed solutions to the larger group.
- Facilitator highlights **common challenges and successful mitigation strategies**.

## 5. Common Barriers and Solutions

Barrier	Impact	Potential Solutions
Lack of IT infrastructure	Inconsistent AI access	Upgrade hardware/software, cloud-based solutions
Faculty resistance	Slow integration in courses	Training workshops, peer demonstrations, showcasing benefits

Barrier	Impact	Potential Solutions
Data privacy concerns	Hesitation to use student data	Develop clear policies, ensure compliance, transparent practices
Budget constraints	Limited AI tool access	Identify low-cost/no-code AI tools, phased implementation
Ethical concerns	Misuse or bias of AI outputs	Ethical guidelines, review committees, bias audits
Skill gaps	Difficulty in AI adoption	Continuous professional development, mentoring, peer coaching

## 6. Key Learning Points

- Barriers exist at **technical, human, and policy levels**; addressing only one area is insufficient.
- Non-teaching staff are pivotal in **facilitating training, coordinating resources, and ensuring compliance**.
- Early identification and proactive mitigation can **accelerate AI adoption**.
- Transparent communication, policy clarity, and incremental implementation **build trust and engagement**.

## 7. Reflection Questions for Participants

- Which barrier is likely the **most challenging** at your institution?
- How can non-teaching staff **support faculty and students** in overcoming resistance?
- What **success metrics** could indicate that AI adoption is improving?

### Topics Covered:

- Capstone application and storytelling

### Overview

Capstone projects are the **culmination of a student's learning journey**, where knowledge, skills, and creativity converge to solve real-world problems. **Storytelling in capstone projects** enhances the **clarity, engagement, and impact** of student work by presenting findings in a compelling, structured narrative.

Non-teaching academic staff support students and faculty in **organizing, documenting, and refining capstone projects**, ensuring that storytelling and application of knowledge are effectively conveyed.

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Understand the **role of storytelling** in capstone presentations and reports.
- Identify strategies for **structuring a compelling narrative** that connects goals, methods, and outcomes.
- Support students in **translating technical work into clear, accessible stories**.
- Facilitate integration of **AI tools and visual aids** to enhance storytelling.
- Promote **ethical, accurate, and inclusive communication** of project results.

## 3. Key Elements of Capstone Storytelling

### 1. Context and Motivation

- o Present the problem or challenge being addressed.
- o Explain why the project matters to the discipline, institution, or community.

### 2. Goals and Objectives

- o Clearly articulate what the project aimed to achieve.
- o Link outcomes to course learning objectives or real-world applications.

### 3. Methods and Approach

- o Describe the strategies, tools, and resources used, including AI tools where applicable.
- o Highlight innovative or interdisciplinary approaches.

### 4. Results and Impact

- o Present findings in a clear, logical sequence.
- o Use **visuals, charts, and AI-enhanced graphics** to illustrate outcomes.

### 5. Reflection and Lessons Learned

- o Discuss challenges faced and how they were overcome.
- o Highlight ethical considerations, problem-solving insights, and skills developed.

### 6. Conclusion and Next Steps

- o Summarize key takeaways.
- o Suggest future research, implementation, or improvements.

## 4. Role of Non-Teaching Academic Staff

- **Guidance and Support:** Assist students in structuring narratives and aligning storytelling with project goals.
- **Resource Facilitation:** Ensure access to AI tools, visualization software, and multimedia platforms.
- **Documentation:** Help students organize content for reports, presentations, and submission.
- **Quality Assurance:** Check clarity, accessibility, and ethical compliance of AI-enhanced content.

- **Mentorship Coordination:** Facilitate mentor feedback on storytelling and project presentation.

## 5. Practical Tips for Capstone Storytelling

- **Start with a Hook:** Engage the audience with a compelling question, statistic, or scenario.
- **Use Visual Storytelling:** Leverage diagrams, charts, videos, or AI-generated visuals to clarify complex concepts.
- **Keep It Logical:** Follow a clear narrative flow from problem → method → result → impact.
- **Highlight Human Insight:** Emphasize the student's learning, decisions, and reflections alongside AI or technical contributions.
- **Iterate and Refine:** Encourage multiple drafts and peer/mentor feedback for clarity and impact.

## 6. Key Takeaways

- Storytelling **enhances comprehension, engagement, and retention** of capstone projects.
- Integrating **AI tools** can enrich visual and data-driven storytelling but requires careful oversight.
- Non-teaching staff are essential in **supporting structure, clarity, and ethical presentation**.
- Effective storytelling transforms a project from a technical report into a **persuasive, meaningful academic narrative**.
- Peer learning and dissemination

### Overview

Peer learning and dissemination are critical components of academic growth, allowing students to **share knowledge, receive feedback, and refine their understanding**. In the context of capstone projects or AI-integrated coursework, peer learning encourages **collaboration, critical thinking, and knowledge transfer**, while dissemination ensures that insights and results **reach a wider audience**, both within and beyond the institution.

Non-teaching academic staff support these processes by **facilitating peer interactions, managing platforms for sharing, and ensuring ethical, accessible dissemination** of student work.

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Facilitate **peer learning sessions** where students critique and collaborate on projects.
- Support students in **disseminating work effectively**, including presentations, reports, and digital media.
- Encourage **reflective learning** through peer feedback.

- Integrate **AI tools** for collaborative content creation and dissemination.
- Ensure **ethical and inclusive sharing** of academic outputs.

### 3. Key Elements of Peer Learning

1. **Collaboration and Knowledge Sharing**
  - o Students work in small groups to **review and discuss each other's projects**.
  - o Constructive feedback helps refine content and presentation quality.
2. **Critical Reflection and Improvement**
  - o Peer discussions encourage **analysis of strengths, gaps, and ethical considerations**.
  - o Feedback loops improve both the **technical quality** and **narrative clarity** of projects.
3. **Use of AI Tools in Peer Learning**
  - o Collaborative platforms (e.g., Google Docs, Notion) allow **simultaneous editing** and **AI-assisted suggestions**.
  - o AI can help summarize peer feedback, highlight common issues, or generate improvement ideas.

### 4. Dissemination Strategies

1. **Internal Dissemination**
  - o Sharing projects in class seminars, department showcases, or peer review sessions.
  - o Encourages **cross-disciplinary learning** and exposes students to diverse perspectives.
2. **External Dissemination**
  - o Publishing findings on institutional repositories, academic blogs, or student conferences.
  - o Using multimedia and AI-enhanced presentations for **broader audience engagement**.
3. **Ethical Considerations**
  - o Ensure **proper attribution**, adherence to privacy policies, and bias checks in AI-generated content.
  - o Non-teaching staff can **guide ethical dissemination** practices and monitor compliance.

### 5. Role of Non-Teaching Academic Staff

- **Facilitators:** Organize peer review sessions and dissemination opportunities.
- **Technical Support:** Provide access to AI tools, LMS platforms, or multimedia software.
- **Quality Assurance:** Help ensure projects shared are **accurate, ethical, and accessible**.
- **Documentation:** Track participation, feedback, and dissemination outcomes for reporting.

## 6. Practical Tips for Effective Peer Learning and Dissemination

- Establish **clear guidelines** for giving and receiving feedback.
- Encourage **reflective discussion** rather than just evaluation.
- Use **AI tools** to summarize and analyze peer feedback efficiently.
- Provide platforms for **multimodal dissemination**: presentations, videos, posters, or digital repositories.
- Celebrate successful projects to **motivate and inspire others**.

## 7. Key Takeaways

- Peer learning **strengthens understanding** and fosters collaboration.
- Dissemination ensures that student work **creates impact beyond the classroom**.
- Non-teaching staff play a **pivotal role in enabling, monitoring, and supporting** these processes.
- Combining **peer interaction with AI-assisted tools** enhances both learning and outreach.
- Reflective evaluation

### Overview

Reflective evaluation is the process of **analyzing and learning from experiences**, whether from a project, course, or capstone activity. It encourages students to **consider what worked well, what challenges arose, and how outcomes align with goals**.

For non-teaching academic staff, supporting reflective evaluation involves **guiding students in structured reflection, facilitating self-assessment, and documenting insights** that can inform future academic planning or AI tool usage.

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Understand the importance of **reflection in learning and project improvement**.
- Support students in **assessing achievements, challenges, and learning outcomes**.
- Facilitate **structured reflection processes** using prompts, journals, or AI-assisted tools.
- Encourage consideration of **ethical, technical, and collaborative aspects** of projects.
- Document reflections for **continuous improvement and institutional reporting**.

## 3. Key Elements of Reflective Evaluation

### 1. Self-Assessment

- o Students evaluate their own performance against goals, rubric criteria, and project milestones.
  - o Identify **strengths and areas for improvement**.
- 2. **Peer and Mentor Feedback**
  - o Incorporate insights from peers or mentors to provide **external perspectives**.
  - o Helps identify **blind spots** and alternative approaches.
- 3. **Process Reflection**
  - o Examine **workflow, resource use, and tool effectiveness**, including AI tools.
  - o Evaluate what strategies or methods contributed to or hindered success.
- 4. **Outcome Analysis**
  - o Compare intended goals with **actual outcomes**.
  - o Consider **quantitative and qualitative measures**, including student learning, research quality, or project impact.
- 5. **Ethical and Professional Considerations**
  - o Reflect on **ethical decisions, bias, and responsible AI use**.
  - o Assess collaboration, communication, and professional behavior throughout the project.

#### 4. Role of Non-Teaching Academic Staff

- **Facilitators:** Provide structured reflection prompts and guide students through evaluation exercises.
- **Resource Support:** Suggest tools for journaling, feedback collection, or AI-assisted reflection.
- **Documentation:** Maintain records of student reflections for institutional reporting and continuous improvement.
- **Mentor Coordination:** Encourage integration of mentor feedback into reflective evaluation.

#### 5. Practical Strategies for Reflective Evaluation

- **Reflection Journals:** Encourage students to document experiences, challenges, and learning moments regularly.
- **Structured Prompts:** Provide questions like:
  - o What worked well in your project?
  - o What challenges did you face, and how did you address them?
  - o How did AI or other tools help or hinder your work?
  - o What would you do differently next time?
- **Feedback Integration:** Compare self-reflections with peer or mentor feedback to gain a **balanced perspective**.
- **Iterative Improvement:** Use reflections to **inform future projects, presentations, and academic practices**.

#### 6. Key Takeaways

- Reflective evaluation **strengthens learning, problem-solving, and critical thinking**.
- It provides a **structured approach to analyzing project outcomes** and decision-making.

- Non-teaching staff play a **key supportive role** in guiding reflection, documenting insights, and integrating feedback.
- Combined with AI tools, reflective evaluation can **highlight patterns, identify gaps, and suggest improvements** for continuous academic growth.
- Faculty leadership in AI

## Overview

Faculty leadership in AI refers to the **guidance, vision, and initiative faculty provide in integrating AI tools and technologies** within teaching, research, and academic administration. Faculty leaders play a critical role in **modeling best practices, fostering innovation, and ensuring ethical AI adoption** in higher education.

Non-teaching academic staff support faculty by **facilitating resources, providing technical support, and ensuring smooth implementation** of AI initiatives.

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Understand the **role of faculty as AI leaders** in academic settings.
- Recognize how faculty can **influence curriculum design, research, and institutional AI policies**.
- Support faculty in **implementing AI tools ethically and effectively**.
- Facilitate professional development opportunities for faculty to **enhance AI literacy**.
- Identify ways non-teaching staff can **collaborate with faculty leadership** to drive AI adoption.

## 3. Key Roles of Faculty Leaders in AI

1. **Vision and Strategy**
  - o Set goals for AI integration in teaching, research, and administration.
  - o Align AI initiatives with institutional priorities and academic standards.
2. **Innovation in Teaching and Learning**
  - o Pilot AI-enhanced tools for lectures, assessments, and student engagement.
  - o Encourage interdisciplinary projects and AI-based capstones.
3. **Research Leadership**
  - o Utilize AI for literature review, data analysis, and scholarly publications.
  - o Mentor students and junior faculty in AI-driven research methods.
4. **Ethical Oversight**
  - o Ensure responsible use of AI tools in academic work.
  - o Promote fairness, transparency, and data privacy in AI applications.
5. **Capacity Building**
  - o Facilitate training, workshops, and knowledge-sharing sessions for peers and students.

- o Lead initiatives to **develop AI literacy** across the institution.

#### 4. Role of Non-Teaching Academic Staff

- **Resource Facilitation:** Provide access to AI platforms, software, and digital infrastructure.
- **Technical Support:** Assist faculty in deploying AI tools for courses, projects, and research.
- **Training Coordination:** Organize workshops, webinars, and mentoring sessions to enhance faculty AI skills.
- **Documentation and Compliance:** Ensure AI use aligns with institutional policies, ethical guidelines, and reporting standards.
- **Feedback and Evaluation:** Support monitoring of AI integration outcomes to inform future initiatives.

#### 5. Practical Strategies for Supporting Faculty Leadership

- Collaborate with faculty to **identify suitable AI tools** for their disciplines.
- Provide **step-by-step guidance and troubleshooting** for AI implementation.
- Maintain **clear records of AI projects, trainings, and outcomes**.
- Encourage faculty to **share success stories and lessons learned**, fostering peer learning.
- Support initiatives that **balance innovation with ethical compliance**.

#### 6. Key Takeaways

- Faculty leadership is **crucial for driving AI adoption** in teaching, research, and administration.
- Non-teaching staff **enable and amplify faculty efforts**, providing technical, organizational, and ethical support.
- Effective collaboration between faculty and support staff ensures AI is **used responsibly, efficiently, and innovatively**.
- Leadership in AI not only **enhances student learning and research quality** but also positions the institution as **forward-thinking and AI-ready**.

#### Topics Covered:

- Capstone finalization and delivery

#### Overview

The **finalization and delivery of capstone projects** represent the culmination of a student's learning journey. This stage involves **refining the project, ensuring alignment with objectives, preparing deliverables, and presenting outcomes** to faculty, peers, and stakeholders.

Non-teaching academic staff play a key role in **facilitating organization, technical support, ethical compliance, and smooth delivery of final projects.**

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Support students in **finalizing content, visuals, and multimedia outputs** for capstone projects.
- Ensure that deliverables **meet academic, ethical, and technical standards.**
- Facilitate **effective presentations and demonstrations** to faculty or external audiences.
- Guide students in **reflective evaluation and documentation** of their work.
- Coordinate **AI and non-AI tools** used for project finalization and presentation.

## 3. Key Steps in Capstone Finalization

### 1. Content Refinement

- o Review the project for **accuracy, clarity, and alignment** with stated objectives.
- o Integrate feedback from mentors, peers, and faculty.

### 2. Visual and Multimedia Enhancement

- o Use AI tools or software to **improve charts, diagrams, videos, and presentation materials.**
- o Ensure accessibility and clarity for diverse audiences.

### 3. Ethical and Compliance Checks

- o Verify proper citations, data integrity, and AI usage ethics.
- o Ensure adherence to institutional guidelines and privacy standards.

### 4. Presentation Preparation

- o Rehearse delivery, timing, and audience engagement.
- o Prepare for **questions and discussions** during evaluation sessions.

### 5. Documentation and Submission

- o Compile final reports, code, datasets, and multimedia materials.
- o Ensure proper filing and submission in institutional repositories or LMS platforms.

## 4. Role of Non-Teaching Academic Staff

- **Facilitation:** Organize rehearsal sessions, presentation spaces, and digital submissions.
- **Technical Support:** Assist with AI tools, multimedia integration, and LMS uploads.
- **Quality Assurance:** Review final deliverables for **clarity, completeness, and compliance.**
- **Ethics Oversight:** Ensure academic integrity and proper attribution in AI-assisted outputs.
- **Coordination:** Track deadlines, evaluation schedules, and feedback collection for faculty.

## 5. Practical Tips for Capstone Finalization and Delivery

- Maintain **checklists for each deliverable**: report, presentation, video, and AI outputs.
- Schedule **peer and mentor reviews** before final submission.
- Use **AI tools judiciously** to enhance clarity, visuals, or summaries, ensuring human oversight.
- Encourage students to **practice presentations** in a supportive environment.
- Document all final outputs and reflections for **future reference and continuous improvement**.

## 6. Key Takeaways

- Capstone finalization is the **critical last step** where quality, clarity, and ethical compliance converge.
- Non-teaching staff ensure **smooth execution**, provide technical and organizational support, and uphold **institutional standards**.
- Effective preparation and delivery **enhance student confidence, project impact, and academic rigor**.
- Structured guidance and support help students **demonstrate their learning journey comprehensively**.
- AI storytelling and faculty advocacy

### Overview

**AI storytelling** refers to the use of artificial intelligence tools to **enhance narrative, visualization, and communication** of academic content. When combined with **faculty advocacy**, it enables educators to **champion AI integration, model best practices, and inspire both colleagues and students**.

Non-teaching academic staff support faculty by **facilitating tool access, guiding ethical use, and helping craft compelling narratives** that demonstrate the value of AI in teaching, research, and institutional initiatives.

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Understand how **AI can enhance storytelling** in lectures, research, and project presentations.
- Support faculty in **advocating AI adoption** across disciplines and departments.
- Facilitate **ethical, clear, and engaging communication** of AI-enhanced content.
- Encourage faculty to **model AI use responsibly** for students and peers.
- Track and document outcomes of AI storytelling for **institutional reporting and recognition**.

### 3. Key Components of AI Storytelling

1. **Narrative Structuring**
  - o Present complex ideas in a **logical, engaging, and accessible format**.
  - o Use AI tools to **summarize, reorganize, or clarify content**.
2. **Visual and Multimedia Enhancement**
  - o Integrate AI-generated visuals, infographics, videos, and simulations.
  - o Ensure visuals **support learning objectives** and maintain accessibility standards.
3. **Ethical and Accurate Representation**
  - o Verify AI outputs for **accuracy, bias, and plagiarism**.
  - o Highlight **human oversight** alongside AI-generated content.
4. **Faculty Advocacy and Modeling**
  - o Showcase AI-driven teaching innovations to peers.
  - o Mentor colleagues on **effective and ethical AI integration**.
  - o Encourage discussion of **benefits, challenges, and best practices**.

### 4. Role of Non-Teaching Academic Staff

- **Tool Facilitation:** Provide access to AI storytelling platforms (e.g., Synthesia, Pictory, ChatGPT).
- **Technical Support:** Assist faculty in creating presentations, multimedia, and interactive content.
- **Ethical Oversight:** Ensure AI outputs are accurate, unbiased, and properly credited.
- **Documentation:** Track AI storytelling projects and faculty advocacy outcomes.
- **Capacity Building:** Organize workshops and training sessions for faculty to improve **AI literacy and storytelling skills**.

### 5. Practical Tips for AI Storytelling and Advocacy

- Encourage faculty to **start with a clear narrative** before adding AI enhancements.
- Use AI tools to **visualize complex data**, summarize research, or create multimedia content.
- Promote **peer-sharing sessions** where faculty showcase AI storytelling successes.
- Integrate **ethical checklists** to ensure responsible AI use.
- Document and disseminate stories to **build institutional awareness and support** for AI initiatives.

### 6. Key Takeaways

- AI storytelling **enhances clarity, engagement, and impact** of academic content.
- Faculty advocacy is crucial for **institution-wide adoption** and ethical use of AI.
- Non-teaching staff **enable, support, and amplify faculty efforts**, ensuring effective integration and compliance.
- Combining AI storytelling with advocacy helps the institution **lead innovation in teaching, research, and learning experiences**.

- Implementation and scaling

#### . Overview

**Implementation and scaling** of AI in academic settings involves moving from **pilot projects to widespread adoption** across courses, departments, and institutional processes. Successful scaling ensures that AI tools and practices **enhance teaching, learning, research, and administration** effectively and sustainably.

Non-teaching academic staff play a critical role in **facilitating technical deployment, supporting faculty and students, and ensuring smooth adoption at scale**.

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Understand the **steps required to implement AI initiatives** at departmental and institutional levels.
- Identify strategies for **scaling AI projects** while maintaining quality, ethics, and accessibility.
- Support faculty and students in **adopting AI tools consistently across contexts**.
- Track outcomes and provide **documentation for institutional reporting**.
- Recognize the **role of policy, governance, and resource allocation** in scaling AI initiatives.

## 3. Key Steps in AI Implementation and Scaling

### 1. Pilot Implementation

- o Test AI tools in a controlled setting (course, lab, or small research team).
- o Collect feedback from faculty, students, and staff.

### 2. Evaluation and Refinement

- o Assess effectiveness, usability, and ethical compliance.
- o Make improvements based on feedback and observed outcomes.

### 3. Training and Capacity Building

- o Conduct workshops, tutorials, and mentorship sessions.
- o Ensure faculty and staff are **confident in using AI tools**.

### 4. Infrastructure and Technical Support

- o Provide required software, hardware, and cloud solutions.
- o Ensure reliable access and support for users across departments.

### 5. Institutional Alignment and Policy Integration

- o Align AI adoption with **academic policies, ethics guidelines, and accreditation standards**.
- o Define governance structures for **monitoring and decision-making**.

### 6. Scaling Across Departments

- o Roll out AI tools beyond initial pilots.
- o Share **best practices, success stories, and lessons learned**.
- o Monitor usage and outcomes to **adjust and optimize implementation**.

#### 4. Role of Non-Teaching Academic Staff

- **Facilitation:** Coordinate pilots, training sessions, and departmental rollouts.
- **Technical Support:** Assist with software installation, troubleshooting, and AI tool usage.
- **Documentation:** Track adoption rates, feedback, and measurable outcomes.
- **Ethics Oversight:** Ensure AI use follows institutional guidelines and avoids bias or misuse.
- **Communication:** Help disseminate success stories, guidelines, and training materials across departments.

#### 5. Practical Tips for Successful Implementation and Scaling

- Start small with **pilot projects** and **iterate based on feedback**.
- Engage faculty and students early to **encourage buy-in and ownership**.
- Maintain **centralized documentation** of tools, processes, and outcomes.
- Provide **continuous support** and refresher training for users.
- Establish **monitoring and evaluation metrics** to track performance and adoption.

#### 6. Key Takeaways

- Implementation and scaling require **structured planning, support, and evaluation**.
- Non-teaching staff are essential in **enabling, supporting, and monitoring adoption**.
- Successful scaling balances **innovation, usability, ethics, and institutional alignment**.
- Effective AI integration enhances **teaching, research, and administration**, creating sustainable academic transformation.

- Reflective practice and goal setting

##### Overview

**Reflective practice** involves the deliberate process of reviewing experiences, analyzing outcomes, and deriving lessons for personal and professional growth. In academia, it allows both faculty and students to **assess learning, teaching strategies, and project outcomes**.

**Goal setting** complements reflection by establishing **clear, actionable, and measurable objectives** for improvement or innovation. Together, reflective practice and goal setting **promote continuous improvement, accountability, and meaningful academic progress.**

Non-teaching academic staff play a key role in **guiding structured reflection, facilitating goal alignment, and supporting documentation and tracking.**

## 2. Learning Objectives

By the end of this module, participants will be able to:

- Understand the importance of **reflective practice** in academic workflows.
- Facilitate structured **self-assessment and peer reflection** for students and faculty.
- Support the creation of **SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals.**
- Use AI tools or other resources to **track progress and analyze outcomes.**
- Encourage integration of **ethical, inclusive, and practical considerations** in goal setting.

## 3. Key Elements of Reflective Practice

1. **Experience Review**
  - o Examine completed tasks, projects, or academic activities.
  - o Identify successes, challenges, and unexpected outcomes.
2. **Critical Analysis**
  - o Reflect on **why certain outcomes occurred** and what could have been done differently.
  - o Consider **ethical implications and fairness** in AI-assisted or collaborative projects.
3. **Feedback Integration**
  - o Incorporate peer, mentor, or faculty feedback into reflective insights.
  - o Compare **self-perception with external evaluation** to identify gaps.

## 4. Goal Setting Process

1. **Define Objectives**
  - o Establish clear targets for **learning, teaching, or project improvement.**
  - o Align goals with institutional priorities or personal development.
2. **SMART Criteria**
  - o Make goals **Specific, Measurable, Achievable, Relevant, and Time-bound.**
  - o Ensure goals are realistic and actionable.
3. **Action Planning**
  - o Identify steps, resources, and timelines to achieve each goal.
  - o Assign responsibilities if collaborative.
4. **Monitoring and Adjustment**
  - o Track progress using journals, AI analytics, or project management tools.
  - o Adjust goals and strategies based on **ongoing reflection and feedback.**

## 5. Role of Non-Teaching Academic Staff

- **Facilitators:** Provide structured reflection prompts, goal-setting templates, and guidance.
- **Resource Support:** Introduce tools for tracking progress, documenting reflections, or visualizing goals.
- **Feedback Coordination:** Help incorporate peer and mentor input into reflective practice.
- **Documentation:** Maintain records of goals, reflections, and outcomes for institutional tracking.
- **Mentorship Support:** Assist in workshops or sessions that guide reflective practice and goal setting.

## 6. Practical Tips

- Encourage **regular reflection cycles**, not just end-of-project reviews.
- Combine **quantitative metrics with qualitative insights** for comprehensive evaluation.
- Use AI tools to **summarize reflections, track milestones, or suggest improvements**.
- Link reflection outcomes directly to **next-step goals** for continuous improvement.
- Ensure reflection and goals are **aligned with ethical, inclusive, and academic standards**.

## 7. Key Takeaways

- Reflective practice fosters **critical thinking, learning from experience, and professional growth**.
- Goal setting transforms reflection into **actionable plans** with measurable outcomes.
- Non-teaching staff **enable structured reflection, support goal tracking, and facilitate continuous improvement**.
- Integrating reflective practice with AI tools enhances **efficiency, insight, and accountability** in academic environments.