Teaching and Learning Seminar Series

Active Learning Strategies – summary of the seminar

Overview

This document synthesizes the core principles and strategies for active learning, outlined in a Teaching and Learning seminar presented by Simon Cleary, Academic Director at Euro University of Bahrain. The central argument is that traditional, passive learning methods like lectures are ineffective for genuine information assimilation. They foster inattention, create a false sense of knowledge, and fail to confront student misconceptions.

The proposed solution is a pedagogical shift toward active learning, which inverts the traditional educational model. This approach moves the simple transfer of information outside the classroom, dedicating in-class time to the more cognitively demanding task of assimilating that information. Key strategies include creating "information gaps" to stimulate curiosity, requiring students to vocalize their understanding, and utilizing collaborative activities.

Furthermore, the Teaching and Learning Centre seminar contextualized active learning within the modern challenge of AI tools like ChatGPT. It argues that while concerns about AI focus on academic output (e.g., written work), the more profound issue is the impact on input—a student's capacity for deep reading and assimilation. Active learning directly addresses this by prioritizing skills that AI cannot replicate, such as questioning source material and internalizing concepts in one's own words.

The Case Against Passive Learning

The seminar critically examined the efficacy of traditional lectures, framing them as a method of passive information reception that does not guarantee learning. The core problem is the distinction between the act of teaching and the outcome of learning

Deficiencies of the Lecture Model

The presentation identifies three fundamental flaws in how students experience lectures:

1. **Lack of Attention:** Students do not maintain the utmost attention required for information absorption.
2. **Illusion of Knowledge:** The format allows students to believe they understand the material without ever testing that understanding.
3. **Unchallenged Misconceptions:** Students are not confronted with their own incorrect assumptions or flawed interpretations.

The Traditional Educational Structure

The conventional approach to education is presented as a two-step process that places the most difficult cognitive task on the student in an unsupported environment:

- **Step 1: Transfer of Information (In Class):** The instructor delivers content via lecture.
- **Step 2: Assimilation of Information (Out of Class):** The student is expected to process, understand, and apply the information independently.

This model is critiqued for its inefficient use of instructor expertise and classroom time, dedicating the shared learning space to the simplest task (information transfer) and leaving the complex one (assimilation) for solo work.

The Principles and Practice of Active Learning

Active learning is positioned as a necessary paradigm shift that redefines the roles of the instructor and the student, as well as the purpose of classroom time. It emphasizes engagement, vocalization, and a constant state of activity.

The Flipped Model: A New Structure for Learning

The presentation advocates for inverting the traditional educational structure, a model where active participation is necessary. This revised two-step process is designed to maximize the value of in-person instruction:

- **Step 1: Transfer of Information (Out of Class):** Students engage with foundational material (e.g., readings, videos) before the class session.
- **Step 2: Assimilation of Information (In Class):** Classroom time is dedicated to activities, discussion, problem-solving, and collaborative work, guided by the instructor.

Core Strategies for Implementation

To foster an active learning environment, the seminar outlined several key pedagogical techniques:

- **Engage and Create an Information Gap:** The instructor's role is to make students aware of their own knowledge base, including:
  - What they know.
  - What they know they do not know.
  - What they do not know they do not know.
- **Promote Vocalization:** Students must be prompted to articulate their understanding, particularly in English, to solidify their learning and allow for formative assessment.
- **Check for Understanding:** Instead of simply providing definitions, instructors should use activities to check what students have understood.
- **Utilize Collaborative Structures:** Activities are frequently designed for pairs or small groups to encourage peer learning and discussion.
- **Maintain Constant Activity:** Learning is positioned as a continuous process, with active tasks required **before, during, and after** every formal session.

Active Learning in the Age of AI

The seminar directly addresses the challenges posed by generative AI tools like ChatGPT, arguing that an active learning framework is the most effective response.

Shifting Focus from Output to Input

The common fear surrounding AI in education is its potential to compromise academic *output* (ie. students using it to generate written work). The presentation reframes this concern, suggesting the more critical issue is the impact on academic *input*:

- A student's capacity to read critically.
- A student's ability to assimilate and use information effectively.

Two Modes of Reading

A crucial distinction is made between two different types of information engagement, which highlights the limitations of AI and the importance of higher-order thinking:

Reading Type	Description	Relation to AI
Transactional Reading	Reading for the simple transfer of information.	This is a task that AI (e.g., ChatGPT) can perform effectively.
Assimilative Reading	Reading to question terms, challenge ideas, and "own the meaning in their own words."	This is a complex human skill that active learning aims to develop.

By focusing on assimilative learning, educators can cultivate skills that are resistant to automation and are fundamental to true intellectual development.

Seminar Objectives

The presentation was designed to achieve several learning outcomes for its audience and was structured around a series of guiding questions to provoke thought and model the active learning process itself.

Learning Outcomes

- Consider the importance of active learning.
- Practice active learning within a case study example.
- Consider ways to engage students in activities through scaffolding.
- Discuss assumptions regarding ChatGPT in undermining reading.
- Be aware of a range of active learning strategies.