

## ARTIFICIAL INTELLIGENCE IN EDUCATION

**Dr. P. Rajeswari<sup>1</sup> & Dr. S. Purushothaman<sup>2</sup>**

<sup>1</sup> Assistant Professor, Department of Computer Science, MRCAS, Madurai

<sup>2</sup> Professor, Mechanical Engineering, Adama Science and Technology, Adama, Ethiopia

DOI: <https://doi.org/10.34293/eduspectra.v5is1-may23.008>

### Abstract

Education is an act of imparting information to the human brain with necessary exposures to solved methods, for example, practical as a repetitive process. Each teacher at various levels of classteachingadopts different strategies to make the students learn the concepts and expect 100% results from their students. However, few students with dedicated efforts are not able to clear the examinations on time and many students don't find any interest in learning the concepts. The reason could be they are attracted by the lectures or studentshave no interest in the courses.

**Aim:** To make students show interest in learning the courses with little effort.

**Methodology:** To present the concepts in an easier way to the students and not make it a cumbersome topic. Include a video presentation for every subtopic with relevant attractive background music.

1. Use special and novel (artificial intelligence) techniques to bring the attention of the student's brains in the classroom lectures.
2. Teachers should adopt an easy way to make students remember the concepts.

**Results:** At least 95% of success in making the students learn the courses could be achieved

**Keywords:** Artificial Intelligence, Education, Learning Strategy

### Introduction

Contents of course developments for a topic involve continuous changes over some time. Especially whenever new technologies were introduced,the contents of the technology were introduced starting from the industrial technology itself. Then modifying to the needs of the student's curriculum at college levels. However, not curriculum changes are not required inpreschooling, primary schooling and higher-level schooling (beforeentering intoa college degree).

Teachers are human and they have natural intelligence. Despite that, teachers find it difficult to make students understand the concepts. This is because the evolution and learning process of students' brains are unique and are not alike with all student'sunderstanding processes. In such cases,



**Figure 1 Teaching and Learning Process**

Figure 1 presents a schematic diagram showing lecturing by the teacher and learning by students. Table 1 presents the percentage of students showing interest in learning a particular course.

<b>Table 1 Interest of Students in Learning a Course</b>
10% of students fully interested in the course
80% of students are interested in the course just to complete it
10% of students don't have any interest in the course

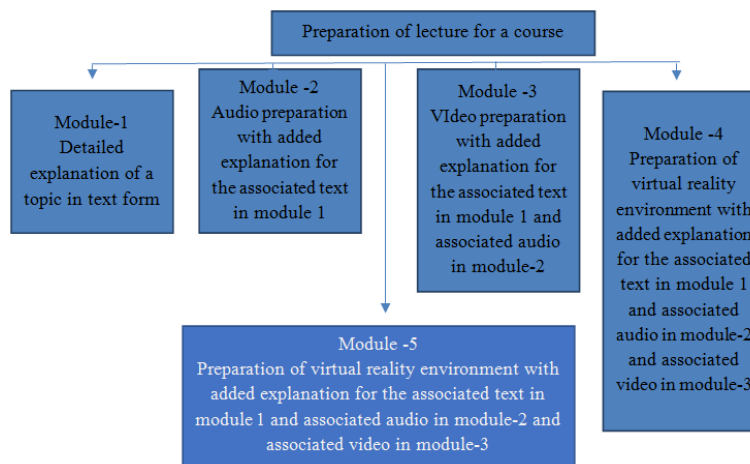
Section 2 presents a literature review and section 3 lists out the methodology to implement artificial intelligence into education. Section 4 gives how experimentation has to be carried out. Section 5 presents how results have to be understood. Section 6 gives the pros and cons of the new education system.

## Literature Review

Please refer to the new education policy of India[1] and the new education policy [2].

## Methodology

1. Preparation of the contents in detail.
2. Assumption should not be that students have prior knowledge of the course. Due to this important fundamental should not be skipped. Hence all the fundamentals required for the course should be detailed out as one unit in the content of the course.



**Figure 2 Preparation of Lecture**

3. Various methods can be used to create a presentable and acceptable lecture of a course by any category of student who undergoes the course. Figure 2 presents how to prepare a lecture for a course.
4. Introduce expert system concepts into the preparation of the course. This will clarify a lot of doubts of the students during the lecture. The person who is involved in preparing the lecture should have sufficient expertise and knowledge about the course.

## Experimentation

To understand the efficiency of the course preparation, a sample group of students have be taken into account. The sample should be group made into 3 groups as per Table 1. That is students should be picked up for the evaluation based on the previous examination results where very frequently 10% of students are fully interested in the course, 80% of students are interested in the course just to complete it, and the remaining 10% students don't have any interest in the course.

Each student should be given a prepared lecture with sufficient time to learn the course. Exams should be conducted on systematic methods. The results of the exams should be analyzed and tallied with the three categories of percentage of students. If there is less pass percentage then reasons should be identified, and the presentation of the lecture has to be modified. In this continuous process, a stage will reach where all students will be able to pass the examinations. This benefit will be reaped by the new batch of students.

Some of the questions are to be formed so that the difficulties in learning the course can be understood.

## Questions

1. How is the introduction to a topic? Which topic needs improvement?
2. How is the relevance of the picture for the topic? What modification has to be done?
3. Any duplication of information in a topic that leads to superfluosness or boredom? Which portion has to be edited?
4. How is the description of steps in solving a problem? Has any additional steps to be included? Or any step is irrelevant, so it has to be removed?
5. How is the voice in the audio? Is it pleasing or rough? Is any modification required?
6. Is the expert system method adopted in the lecture? If not what additional if and else information have to be included?
7. Is the title meaningfully included in the course? Or is it randomly included?
8. How about the examples cited and solved? are they properly included?
9. What do you think of the course? How do you think it is useful?
10. Do you feel any additional intelligence through the expert system has to be included? If so, how it can be done?

## Results

The results from the examination have tobe associated with the intelligence quotient of the students and linked with the material of the lecture preparation. The examination results of students from different institutions have to be compared for one course. The decisionhas to be taken on how best to additional inputs.

## Conclusion

**Cons:** In the name of improvement in education, digital teaching and evaluation have boomed a lot. Due to this one-to-one contact education method is lost.

**Pros:** Due to the present computer age, lots of new ideas and new concepts sprout and are getting implemented in modern education and the industry.

### References

1. Blikstein, P. (2021). Artificial Intelligence in Education: Current Progress and Future Directions. *Frontiers in Education*, 6, 659241. doi: 10.3389/feduc.2021.659241
2. D'Mello, S. K., Olney, A., Hays, P., & Williams, C. (2020). Artificial Intelligence in Education: A Critical Examination. *Educational Psychologist*, 55(4), 201-216. doi: 10.1080/00461520.2020.1838502
3. Ma, W., Adesope, O. O., Nesbit, J. C., & Liu, Q. (2021). Intelligent Tutoring Systems for STEM Learning: A Meta-analysis. *Review of Educational Research*, 91(4), 523-563. doi: 10.3102/0034654320963277
4. Xing, W., Gao, T., Huang, S., & Chen, L. (2020). Recent Advances in Artificial Intelligence and Education: A Review. *Frontiers in Psychology*, 11, 587073. doi: 10.3389/fpsyg.2020.587073
5. <https://www.education.gov.in/nep-new>
6. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/Draft\\_NEP\\_2019\\_EN\\_Revised.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/Draft_NEP_2019_EN_Revised.pdf)