

A CASE STUDY ON NPL/EXPERT SYSTEM BASED ON PAPERS PUBLISHED IN IEEE/ACM/SPRINGERS/ANY OTHER POPULAR JOURNALS.

EXPERT SYSTEM FOR ADVANCE EDUCATION

1.ABSTRACT

Expert systems are a well known area of Artificial Intelligence and have a huge impact in various fields of life. An expert system is a computer application that solves complicated problems that would otherwise require extensive human expertise. To do so, it simulates the human reasoning process by applying specific knowledge and interfaces. Expert systems also use human knowledge to solve problems that normally would require human intelligence. Education system will be revolutionized with the introduction of expert systems in this field because of the following: (1) educational planning and decision making ability, manage student records, student counseling, and special education programs; (2) teacher training and education, specifically, identifying training needs and using computer assisted instruction to teach information and skills; and (3) intelligent tutoring systems that guide students through instruction according to their individual strengths and weaknesses.

2.INTRODUCTION

The traditional classroom teaching method may be most popular teaching methodology these days and may remain on top for quite some years. The traditional chalk and talk method have several shortcomings including limited time spent on various topics, limited access to teachers and difficulty in transferring lecture information to the real world situations. Because of all these drawbacks innovative and interactive learning methodologies are gaining importance and so is the use of expert systems in the field of education. In the modern era, teaching requires more knowledge of multiple concepts and complex relationships, enhanced interaction with students where they can explore more with the course materials.

The introduction of Artificial Intelligence in the field of education can provide deeper levels of interaction of students with course material. Artificial Intelligence (AI) based techniques have found wide applications in educational field, where knowledge is always evolving and characterized by uncertainty. An Expert System uses human knowledge captured in a computer to solve problems that ordinarily require human expertise. Expert System may also be defined as an intelligent computer program that uses knowledge and inference procedures to solve problems that was difficult enough to acquire significant human expertise for their solutions.

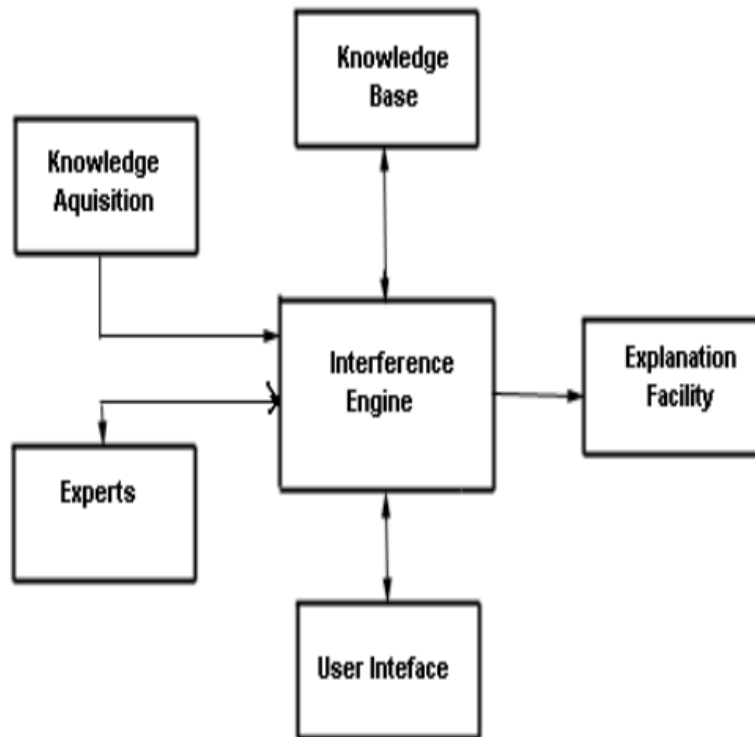


Fig 1. Configuration of an Expert System

3.APPLICATIONS OF EXPERT SYSTEM

1. Increase the probability, frequency, and consistency of making good decisions.
- 2.Enhance the utilization of most of the available data.
- 3.Free up the mind and time of the human expert to enable him or her to concentrate on more creative activities.
- 4.Expert system gives emphasis on individual student by keeping record of their learning ability and speed.
- 5.Expert system provides a convenient environment to ask queries and find out their solutions.

4.CONCLUSION

The paper shows that expert systems are gaining importance in the field of education. They are becoming an integral part of engineering education and even other courses like accounting and management are also accepting them as a better way of teaching. The expert systems available in the market present a lot of opportunities for the students who desire more spotlight and time to learn the subjects. They present a friendly and interactive environment for students which motivate them to study and adopt a more practical approach towards learning.

Expert system is not only beneficial for the students but also for the teachers which help them guiding students in a better way. Expert systems offer several advantages over traditional chalk-talk method and is bound to replace it in near future. The bottom-line of the paper is that expert systems for education are here to stay.