

"Application of Expert System for Quality Evaluation in Higher Educational Institutes"

Dr. Anil T. Gaikwad

Associate Professor

Department of Computer Applications

Bharati Vidyapeeth Deemed University, Pune.

Institute of Management , Kolhapur .

ABSTRACT

Expert System are widely used in medical and engineering filed in these years , we can use expert systems in educational field as well. The Researcher has studied the application of expert system for quality evaluation with respect to higher educational Institutes.

Expert Systems are widely used for various business applications from last decade . The Educational Institutes are the important sector which shapes the academic careers of the youth of the country.

The quality is a complex term which has to be quantified for educational Institutes evaluation. The parameters suggested by NAAC are widely accepted and are giving positive results in bringing quality awareness in the minds of the stakeholders of the educational system.

The Good quality Institutes in country will have direct impact on the skilled manpower required for the Industries and will generate good results in terms of employability of the students passing out of these Institutes.

Various quality control bodies are playing important role in a managing quality activities .Accrediting bodies for the accrediting of the Institutes in Higher education sector is the need of the education sector since quality awareness has been seen in the minds of stakeholders like parents, students, companies/employers and society at large. In India NAAC, NBA and ISO are widely accepted accrediting agencies with number of Institutes going for accreditation . This trend is growing rapidly .

The awareness of quality in higher education has forced the Institutions to go for accreditation from different bodies.

The researchers have designed the expert system for quality evaluation using NAAC Quality parameters.

Keywords: Quality Awareness , Quality Parameters , NAAC, Higher Education , AICTE, NBA, ISO, ESQAA

1. INTRODUCTION

The quality is complex term which has number of angles to rate the quality of any product or service. The Education is service sector now and it is most important for the youth who are involved to develop the nation as a whole. The quality at educational institute is major concern in India which has diverse culture, multi languages at different states and non uniformity of level of difficulty at different courses studied by the students community. The Expert systems are the advanced systems which are used to perform experts tasks by storing the knowledge. The Authors have identified the quality parameters inline with NAAC quality parameters and have designed the expert system to find out the status of quality at higher educational Institutes under study . Also they have generated the reports and grade of the Institute using these parameters. The grades are A , B, C and D. The remarks are Very Good , Good, Satisfactory and Unsatisfactory respectively for above grades. The A grade Institutes in the country will have positive impact on education system and its quality.

Status of Higher Educational Institutes:-

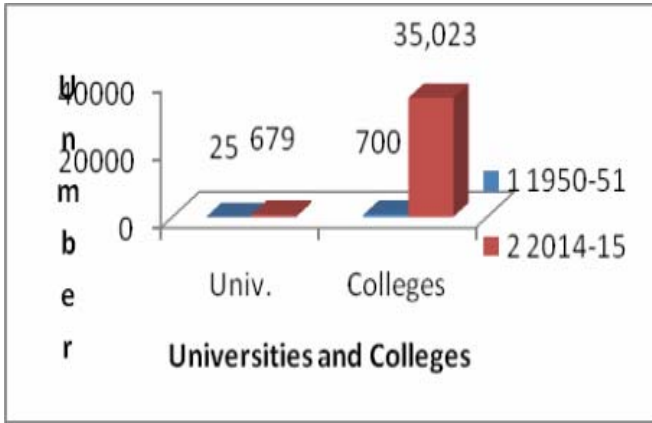
Growth of Universities and Colleges in HIE

Table-1 Growth of Universities and Colleges

Sr. No.	Year	Univ.	Colleges
1	1950-51	25	707
2	2015-16	687	35,623

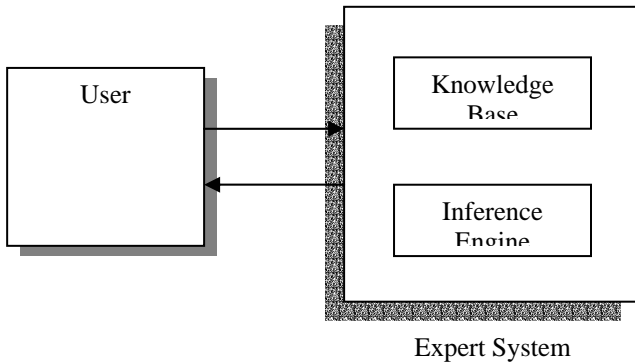
Source :- NAAC Publications -2015.

Graph-1 Growth of Universities and Colleges .



1. Expert System

Figure 1.0 Basic outline of Expert System



Source: - “Artificial Intelligence” – A modern Approach
Peter Norvig “Artificial Intelligence – A modern Approach 3rd
Edition Amazon Publications 2012. P. Nos. 23-27

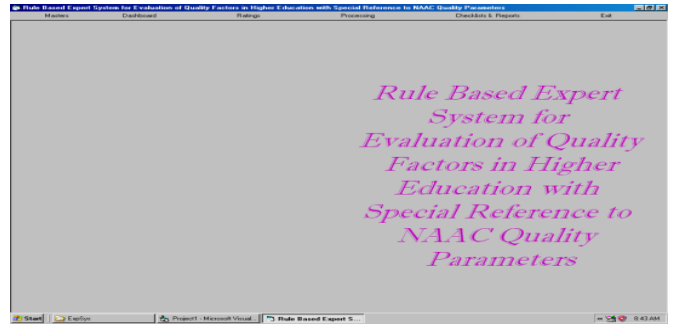
Figure 1.0, illustrates the basic concept of a knowledge-based expert system. The user supplies facts of other information to the expert system and receives expert advice or expertise in response. Internally, the expert system consists of two main components. The knowledge base contains the knowledge with which the inference engine draws conclusions. These conclusions are the expert system’s responses to the user’s queries for expertise.

4. Reports through Expert system 5.1 Sample Forms and Reports

ESQAA Main Form

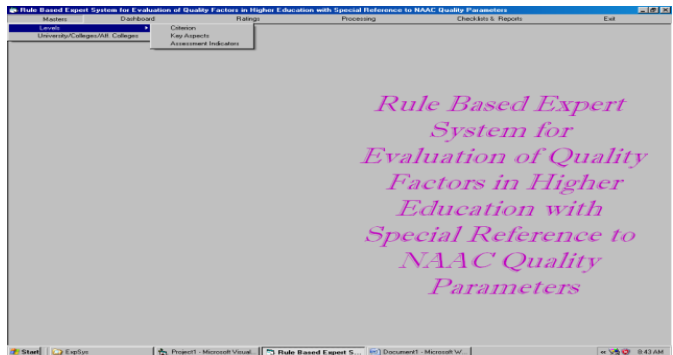
This is the Main form of the Expert system ESQAA which consists of Main options like Masters, Dashboard, Processing, Checklist and Reports and Exit Option. User starts by

selecting the Information for Masters and add various information required.



ESQAA Sub Manu

This is the form which has options of Masters in which two sub options are available Levels, University, Constituent Colleges or Affiliated College. Levels have Criterion, Key Aspects and Assessment indicators this information is required for further processing.



The average score of the Institute is 3.10 and grade is ‘A’
Very Good

Name of the Institute: - Rayat Shikshan Sanstha's Prof. Dr. N.D. Patil Mahavidyalaya, Tal. Shahuwadi, Dist. Kolhapur, Malkapur -415101 (Second Cycle)”.

Grade of the Institute is displayed. The Existing System is studied in the 1st phase with logical design at 2nd stage. The 3rd stage creates the new logical design using quality parameters. At 4th stage rules are written and at 5th stage the expert system is development. The output is given by the expert system in the form of Letter grade A, B, C or D . Also the score.

CONCLUSION

The Expert System is useful for finding the Quality of higher educational Institutes . The best part of it is it avoids human intervention. The Quality in education is evaluated by systematic planning of academic and non academic activities through out the year. The Expert system developed is useful in generating the grade of the Institute measured on 4 scale system. The institutions can see the criteria wise score of the institute and get advice for improving the grade in particular span of time. The Reports generated and enclosed herewith as a sample to test the results of the expert system. The Expert system designed is going to help the Institutes Management to find out its improvement areas to benefit the students and stakeholders of education at large.

REFERENCES

1. Joseph Benjamin “Evaluating the Ranking – grading Criteria for sustaining Quality in Higher Educational Institutions” University News May-27 – June 02, 2013 p.8-9
- 2.C. R. Kothari, Research Methodology, New Age International Publishers, New Delhi, Second Revised Edition (2004).
3. Sheela Ramchardan and Hema Nalini”The Roadmap to Competency and Quality in Higher Education” University News 51(04) Jan-Feb-2013 Page 2-3 ISSN -0566-2257.
4. websites www.aicte.org.naac.org

AUTHOR PROFILE

Dr. Anil Gaikwad is working as Associate Professor in Bharati Vidyapeeth Deemed University, Pune. Institute of Management in Computer Application Department . He has Teaching experience of 21 years for PG Courses in Management and Computer Applications . He has research experience and has published 21 Research papers in National and International Journals of repute. He is having desire to work for society and he has been on NSS Unit from last 9 years as Programme Officer. He has developed Expert System for Evaluation of Higher Educational Institutes in India.

===