A Review Paper on Student-Graduate Advisory Expert system

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Abstract— **Academic advising of the postgraduate students is considered as a fundamental rule and one of the significant positive services and responsibilities for the academic staff follow up in most of the e-leading educations. The expert system is considered as one of most achievement areas in artificial intelligence and highly appreciated for application with e-learning and teaching methods. The aim of this paper, is to survey the most expert systems used in advisory model and replaced with the manual registration and advising system of face to face communication and discussion in Instructor office. The method used of determined the key factors related to student advising and expert system models though open access databases. The finding of this section reviews out nine selected expert systems in order to explore the strengths, and limitations of existing expert system approaches to advising undergraduate students.**

Keywords—Expert systems, Student Performance, University Systems, E-Learning, Online application

I. INTRODUCTION

Due to the growing number of students and academic programs in the educational institutions, there are large huge amount of valuable knowledge expressed in those institutions. This in turn has created the need for automated techniques form acquires huge amount of knowledge and an expansion of analysis process. The educational systems become more and more electronic and provide a lot of services for many types of student's needs [1]. Therefore, this study focuses on the expanding needs for smart and expert systems especially in Middle East area. Our main consideration factors deployment form Oman higher educational institutions. There is a lot of key word factors need high effort of search and construction in all expert systems in the whole available systems around. One of the most important factors is the student academic performance, student feedback, student satisfactions and advisory system [2] [25].

This in turn has created the necessity for automated techniques which acquires huge amount of knowledge and an expansion of analysis process. The educational systems are becoming more and more electronic and provide a lot of services for many types of student needs. This study focuses on expanding need for smart and expert systems for advising students. Our main consideration factor is higher educational institutions. There are lots of key word factors which enable construction of expert systems; one of the most important factors is the

student academic performance, student feedback, student satisfactions and advisory system [1][4][23][27][28].

The others authors describe that faculty are not accustomed to the integration of personal and educational growth of students in the process of registration. Accordingly, the students communicate with their advisor for a variety of causes such as their Grade Point Average (GPA) [29]. The challenge is the academic advisor, faculty, staff, and administrators available to the student any time. In addition, faculty along with the staff and administrators consider this issue as playing an essential 'not peripheral' role to the educational experience. Some organizations such as National Academic Advising Association (NACADA) (2004) and American Association of State Colleges and University (AASCU)(1994). emphasize that the quality of academic advising is based on providing appropriate real-time or delayed interaction between faculty, advisors and students, and among students to support students in making informed choices about career and academic goals and basically to orient students to the distance-learning environment providing an environment in which faculty as advisors, as well as professional advisors can work toward achieving competencies that is needed to be an advisor of distance learners, and advising on the level of students' needs and students' preferences [5], [6], [22], [24].

This paper has many sections, introduction of advisory expert systems. Second, literature review of existing models and systems with different application of advising system usage and achievements. Third, the methodology used in this paper and Fourth, the results and finding of the tested groups at AlBuraimi University College (BUC) [29].

II. EXPERT SYSTEMS

The expert system is one of most achievement areas in artificial intelligence. Expert system is based rule-based decision engine that helps the non-expertise users for improving their skills. It is the program that construct based on knowledge gaining from the experts [7]. The expert system is the program that stores the knowledge in a knowledge-base and executes a set of procedures and preconditions to arrive at the final results with the help of the specialists to be able to reach the optimal situation [15][26][28]. The expert system stores the knowledge from the expertise and self-knowledge which called Meta