A Preliminary Study on Computer-Assisted Career Counselling in Higher Education

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Choosing a career is one of the most important decisions that an individual will make in life. Career decision-making is a complex process. Hence, young students fail to choose their career path so often. Career uncertainty among students can lead to several economic and social problems, such as high school or university dropouts, skills mismatch, unskilled workforce, higher unemployment rate, increased job mobility etc. Therefore, offering career counselling services within higher education is important. Unfortunately, providing adequate personalised services of a qualified career counsellor is a challenging task in developing countries. As a solution, work is in progress for implementing a career path recommendation system targeting undergraduates in computing. As an initial step, a systematic literature review was conducted with the main aim of identifying the factors affecting the career path success of undergraduates. During the study selection, nine electronic databases were queried to retrieve a total of 1274 scholarly articles. Then the study selection process was conducted under three steps, namely, duplicate removal, selection criteria application for metadata, and selection criteria application for full text. The study reduction percentage of each of these steps were 22.8%, 91.4% and 67.8%, respectively. Then eight more studies were selected through snowballing, resulting in 35 scholarly articles for final analysis. As the results of the comprehensive analysis conducted, it was evident that support for career planning and development is mostly required by senior secondary or pre-tertiary students. Further, a thorough assessment of academic performance, knowledge, skills, personality traits, preference, and extra-curricular activities is required during career decision-making. Therefore, in addressing the practical limitations of traditional career counselling, it is recommended to utilize the capabilities of computer-assisted career counselling systems to assist students with their career planning.

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