

# Development of a Job Web Portal to Improve Education Quality

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**Abstract**—This research aims to develop a job web portal for the students in the Faculty of Computer Science and Information Technology (FCSIT), University of Malaya (UM). The main aims of this portal are to connect to the industries and acts as an online recruitment to support the students to find the right IT job after graduation. Furthermore, this system enhances the understanding concept and importance of the job portal for students in the universities. A survey was conducted to identify the students' problems with the existing portal of the faculty and to gather their requirements which can be incorporated in to the portal to be developed.

**Index Terms**—Knowledge sharing, web portal, job portal, online recruitment.

## I. INTRODUCTION

Unemployment is one of the serious social issues faced by both developing and developed countries. For example, in Europe the rate of unemployment has been increasing rapidly since the 1970's. Dorn and Naz [1] mentioned that one of the reasons for this problem is the unfair distribution or lack of information on job opportunities so people are unable to now the new job vacancies. It means that there are some jobs available, but jobseekers do not have access to that information. An efficient search of the internet might help to jobseekers in their job hunt. There are some web portals that provide an efficient way to search the web for online information on job vacancies for jobseekers [2].

Today, the internet has changed many aspects of our life, such as the way we look for jobs [3]. If one person wants to find a new job, he/she can submit a resume using word processing software like Microsoft Office Word, open a web browser to send the resume and receive an e-mail. Online recruitment has become the standard method for employers and jobseekers to meet their respective objectives.

The employers upload the job offerings in to the job portals. Online recruitment has been accepted not only by most of large companies but also the small ones. The organizations send information or jobs vacancies for posting on the portals and communicate with the applicants via the Internet and Email.

Gangle [4] defined the concept of online recruitment or e-recruitment as the use of the Internet to search for jobs which have been advertised electronically. Thus, the employers advertise the job opportunities, save the resume and curriculum vitae (CV) of applicants, contact the

jobseekers who are qualified, online.

Today, the Internet has become one of the key methods for getting information relating to job vacancies. Large institutions, like universities include information on career prospects in their websites which are also linked to recruitment sites.

The rest of this research is arranged as follows: First of all, the paper presents a literature review including the job procurement: old and new ways, importance of job portals and features of job portals, and then it argues the methodology continues by data analysis and discussion, the last part brings the conclusion.

## II. LITERATURE REVIEW

### A. Job Procurement: Old and New Ways

Job seeking usually involves different ways to look for jobs such as through personal contacts, direct telephone calls to employers, job agency office, scanning online job listings, etc. [3]. Before the Internet, became widely uses as a method of seeking jobs, jobseekers spent a lots of time using various methods to look for job openings. Today, jobseekers use online methods which are very convenient and save a lot of time. Galanaki [5] lists the following methods to be the traditional (old) ways for recruitment:

- Employment recruitment agencies
- Job fairs
- Advertising in the mass media such as newspapers
- Advertisement in television and radio
- Management Consultants
- Existing employee contacts
- Schools colleges or universities students services department
- Workers or professional referrals

These old job seeking methods are too slow, stressful, challenging and also lack quality [6]. In addition, the applicants have to consider the cost and the amount of time to get the information they need, and other preparations they have to make. Finding all available job vacancies is a main step at in the job-seeking process.

The Internet is now a powerful tool that jobseekers can use. Today, there are many sites that advertise job positions to be filled by people with certain skills in various fields. The Internet plays an important role in the area of human resource planning and development. Most planning and development organizations are now using computer technology and the Internet for staff recruitment. It should be noted that although the Internet has facilitated the process of job-seeking, it has not replaced the traditional methods, completely.

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### B. Importance of Job Portals

In the age of technology, the Internet has become the main source of information for jobseekers. Large corporations, institutions, and universities include information on career prospects on their websites. According to a survey, 70% of the workforce uses websites or portals on the Internet to search for jobs in France. These websites or portals provide a search engine to access information on job opportunities [7].

Sulaiman and Burke [8] found that most employers are keen to use online recruitment methods of getting staff. He mentioned that online recruitment methods have the ability to identify the best applicants. That is the reason why more developed countries such as Malaysia have started to use online job portal as one of the important way to recruit people to fill job vacancies. A study done in 2006, found that 21% of internet users in the EU used the web to search for jobs or to send job applications. In 2007, this had increased to 67% for unemployed people [5].

Most companies publish their job vacancies on their website, or use online jobsites. These methods result in great saving in costs. Mochol and Nixon [9] stated that the use of semantic web technology gives market transparency, higher speed of procurement but reduced transaction cost. Today, the Internet is used for a large number of business transactions. People find the Internet to be an effective communication tool. In a report in 2005, it was found that 90% of jobseekers in Germany use the internet to look for jobs. A reason for this high rate of Internet is that applicants are young and highly qualified and use the internet a lot, and many companies published their job opportunities online and via their portal.

Job portals are the starting point of jobseekers when searching for jobs. Thus, some job portals charge employers high fees to publish information on job vacancies. In spite of this, many employers still continue to advertise or publish information on job opportunities on the job portal, but limited in order to keep costs down. Many employers still believe that a jobseeker will visit job portals when searching for job vacancies [10].

A good job portal can also support knowledge sharing among the members. The number of online job portals continues to increase. It is believed that three quarters of people who are searching for jobs, use the internet and online portals. Gangle [4] stated that online recruitment has the following advantages: employers can identify a large number of eligible job seekers and get their information easily. It means that companies or organizations can extend the search domain, hence, they have better prospect of selecting the most qualified candidates. Internet provides employers a way to attract a higher number of candidates, especially, those who fulfill the job requirements. With online recruitment, people have access to the job information from anywhere in the world, while with the newspaper, information is disseminated at local level. One key aspect of job portal is the cost. Companies spend less to publish or advertise job vacancies on the portals or websites, as compared to the use of other media such as newspaper or job fairs. Furthermore, online recruitment is very fast, and saves time. Once the employers upload the job vacancy on the portal, the jobseekers are able to view it and send in their resume.

Therefore, cost and time saving are two significant advantages of job portals. Ganalaki [5], cited in Rosita & Nadianatra (2007), stated that the Internet is a tool without borders, and is an excellent method to reach a worldwide audience.

### C. Features of Job Portals

One of the ways to improve employment mobility is to provide online job offer services. Online job portals can help jobseekers as they contain all required information about available vacancies in a single point. Such portals enhance efficiency in job recruitment as applicants can match their qualifications and skills to the requirements of employers. Generally, searching for jobs on the internet involves a process of information collecting because the jobseeker gathers information contained in the job portals, during the search [11].

A good job portal shares information and experiences with its members/users. This save time and efforts and better decisions can be made [12]. Job openings requirements can be matched to an applicant's qualification and skills. In this way, job portals return not only the precise matches but also return the most similar match. The members of the European Commission (EC) stated that online job portals should have quite similar characteristics that include: an online searchable database of positions for job searcher; facilities to send CVs to the website; email alerts of jobs which match the users profile; extra instruction, for example, about working in foreign countries or career guidance; the capability to manage job applications; employers must have the ability to publish and manage job positions, search the CV database; and have online contact with potential jobseekers.

## III. METHODOLOGY

This work is part of fulfilling the requirement for master research in the Faculty of Computer Science and Information Technology (FCSIT), University of Malaya (UM). The purpose of this research is to develop a web portal for FCSIT. This portal to be developed is intended to share information with students and to assist graduates in their job search by establishing links between the faculty and related ICT organizations. This means that this knowledge system, should serve as online recruitment system. Today, most universities add career links to their portals to allow fresh graduates to obtain information on jobs and career prospects in the industry. Thus, the industry plays a significant role in helping the university to have the right curriculum to equip graduates with the appropriate skills to meet the industry's needs.

Determining the student's requirements is one of the key factors to achieve success in designing the proposed portal. One method of obtaining the needed information and data is to conduct a survey. A survey is one of the important methods used in quantitative research. The survey is used to collect information and data from the sample population (students).

This research used the questionnaire to conduct the survey to identify the main problems the students of FCSIT face when they graduate and start to look for a job. The

questionnaire tries to identify the students' requirements which will be incorporated into the web portal to be developed for FCSIT. Web Information Systems Development Methodology (WISDM) is selected as system development methodology for this research. WISDM is a new information system development that mixes the traditional methods with the web development technology.

#### IV. DATA ANALYSIS AND FINDING

Analysis of the data collected from the survey indicates that most of students are not satisfied with the current faculty portal.

The respondents said that they have problem to get the needed information when they are looking for a job. Also, there is not enough information and resources related to help them. The students in (FCSIT) want a knowledge sharing system to get such information and help them in their decisions.

The development of the new web portal is based on the feedback from the survey and the requirements of the students. In recent years, the structure of university portals has changed from static information to dynamic and transaction mode. It is very important for the faculty to provide the students with online access to different services and transactions such as online enrolment, course support and job information. Nowadays, most modern universities web portals provide information and services to achieve various goals and to improve the quality of education with these services.

#### V. DISCUSSION

Based on information from the literature review, as well as the students' requirements identified from the survey, a job portal was proposed for the Faculty of Computer Science and Information Technology (FCSIT), University Of Malaya (UM). This portal is a knowledge sharing system for the students to create a better academic environment for their studies.

##### A. Scope

The main scope of this study concerns the selection of tools used and the requirements to be met by the system. This research concerns the development of a knowledge system to implement E-recruitment in the FCSIT. The research attempts to provide a new link between students, unemployed graduates and the IT industry. This relationship will illustrate how knowledge-sharing is done through an online system to help students to find jobs.

##### B. System Schema

The goal of this research is to design a web portal as a knowledge sharing system for the undergraduate students in the FCSIT which will provide them with enough information to help them in choosing the job. The top level of the system framework includes the job portal creates a link between unemployed graduates and the ICT organizations and companies. This portal also should be as online recruitment system to help fresh graduates or final year students to find

jobs through online services. This link between the faculty and the industry, with emphasis on sharing knowledge can enhance the quality of the educational environment. The framework of the system, gives rise to an improved online research environment for users. In today's academic environment, the availability of information and knowledge is an essential component of students' learning. When fresh graduates who are potential leaders for a country, cannot be absorbed for work in the industry, it becomes a major social problem. This situation also exists in Malaysia. Suresh Ram stated that 70% of students, who finished their studies at tertiary level education, cannot find a job. This shows how important it is to have access to the right information to find a job. It is important for the universities that provide information to jobless graduates on the jobs or career opportunities. Sulaimun and Burke [8] emphasized that it is necessary for the universities to pay more attention to their knowledge management system or web portals to have the necessary information for the students. Fig. 1 shows the schema of the proposed job web portal, in illustrating the relationship between the students and the faculty, and the unemployed graduates and the potential employers.

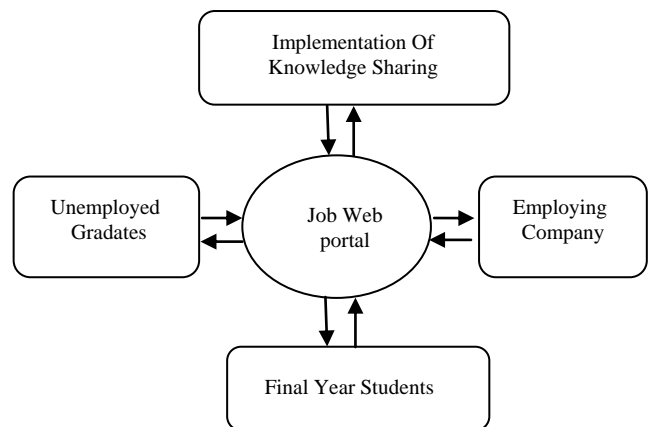


Fig. 1. The conceptualization of the relationship between web portal, students and companies.

#### VI. CONCLUSION

This research has focused on improving the education environment in FCSIT by developing a knowledge sharing system that acts as a job portal. A job web portal provides an efficient search for online information on job vacancies for jobseekers. The main goal of this portal is to attempt to produce the right graduates based on the industry needs. However, it is important that be aware the job web portals can never fulfill all the problems of jobless graduates.

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#### REFERENCES

- [1] J. Dorn and T. Naz, "Integration of Job portals by Meta-search," in *Proc. 3rd International Conf. on Interoperability for Enterprise Software and Applications*, Funchal, Portugal, 2007, pp. 401-412.

- [2] S. Bsiri, M. Geierhos, and C. Ringlstetter, "Structuring job search via local grammars," *Advances in Natural Language Processing and Applications*, pp. 201, 2008.
- [3] M. Mansourvar and N. Y. Mohd, "Web portal as a knowledge management system in the universities," *World Academy of Science, Engineering and Technology*, vol. 70, pp. 968-974, 2010.
- [4] M. Gangle, "The only way is up? Employment protection and job mobility among recent entrants to European labour markets," *European Sociological Review*, vol. 19, pp. 429, 2007.
- [5] E. Galanki, "The decision to recruit online: a descriptive study," *Career Development International*, vol. 7, pp. 243-251, 2002.
- [6] S. Mauno, U. Kinnunen, and M. Ruokolainen, "Job demands and resources as antecedents of work engagement: A longitudinal study," *Journal of Vocational Behavior*, vol. 70, 2007, pp. 149-171.
- [7] A. Doyle, *Internet Your Way to a New Job: How to Really Find a Job Online, Happy about*, 2008.
- [8] N. Sulaiman and M. Burke, "A case analysis of knowledge sharing implementation and job searching in Malaysia," *International Journal of Information Management*, 2009.
- [9] M. Mochol, H. Wache, and L. Nixon, "Improving the accuracy of job search with semantic techniques," in *Proc. Business Information Systems, 10th International Conf., BIS 2007*, Poznan, Poland, April 25-27, 2007, Springer, pp. 301-313.
- [10] M. Mansourvar, *Development of a Job Web Portal to Capture Industry's Needs*, 2011.
- [11] A. Weber and H. Mahringer, "Choice and success of job search methods," *Empirical Economics*, vol. 35, no. 1, pp. 153-178, 2008.
- [12] M. Mansourvar and N. B. M. Yasin, "Knowledge portal: a tool to capture university requirements," in *Proc. 2011 International Conf. on*

*Graphic and Image Processing, International Society for Optics and Photonics*, October 2011, pp. 82850F-82850F.



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