

DEVELOPMENT OF AN INTEGRATED GRADUATE PORTAL (IGP) FOR GRADUATE MARKETABILITY

¹KHAIRI ABDULRAHIM, ²SALAKOTA OFIQAT ADEBOSOLA, ³SHAHARUDIN ISMAIL, ⁴ZUL
HILMI ABDULLAH

¹Faculty of Engineering and Built Environment,

^{2,3}Faculty of Science and Technology,

Universiti Sains Islam Malaysia (USIM), Negeri Sembilan, Malaysia.

⁴Faculty of Information Technology and Science, INTI International University, Negeri Sembilan, Malaysia.

E-mail: ¹khairiabdulrahim@usim.edu.my

Abstract- Graduate marketability has become a critical issue as many graduates have problem in getting employed after completing their study in the university. This is mainly due to their inability to showcase their achievements and market their skills properly to prospective employers. This study firstly identifies the user requirements from all identified stakeholders, and secondly, based on these findings, develops a portal prototype that incorporates the integrated features called the Integrated Graduate Portal (IGP). Finally, the study evaluates the use of the IGP in facilitating graduate marketability. The aims of this portal are to facilitate graduate marketability by showcasing graduates' contents and skills using electronic portfolio (e-portfolio), to employers, and to reduce the communication gap between the employers, graduates and their university. Two phases of survey were conducted for this study. The first one was conducted to identify and gather the user requirements from all identified stakeholders (graduates, employers, lecturers and administrator). These requirements were analyzed and carefully selected prior to incorporating them during the development of the portal. Once the IGP prototype was developed, the second survey was conducted to evaluate the use of IGP to facilitate graduate marketability. The evaluation results showed that the IGP may help to facilitate graduate marketability. It was found that integration features such as graduates' e-portfolios, employers' job requirements information, verification of graduates' content by lecturers, and collaboration of graduates, employers and university in the IGP, are features that may aid graduates to facilitate their marketability. In conclusion, it is hoped that the use of the IGP may help the graduates to facilitate their marketability and bridge the communication gap between the graduates, employers, lecturers and university, therefore improving the interaction and collaboration between all stakeholders.

Index terms- Electronic portfolio (e-portfolio), graduate marketability, Integrated Graduate Portal (IGP).

I. INTRODUCTION

Graduate marketability is the ability of a graduate to obtain and retain job [1, 2]. It denotes the flexibility of the graduate to select suitable employment opportunities. This is because a highly marketable graduate automatically has more job opportunities than a graduate with low marketability. There is a demand to be highly marketable if one wants to have opportunities to contest and get the best jobs available. A marketable graduate should possess different sets of skills which include self-confidence, motivation, flexibility, problem solving, decision making, innovative, decision making and articulate skills [3, 4].

Graduate marketability has become a critical issue as many graduates have problem in getting employed after completing their study in the university. This is mainly due to their inability to showcase their achievements and market their skills properly to prospective employers.

In recent years, it has become important for a graduate to possess marketable skills and be able to showcase their marketability to have a greater edge in getting employment. As a result, acquiring knowledge and specific job skills have become the main objectives for students in the universities. This is because the basic elements which assist graduates

in meeting up with these demands are the marketability skills and personalities that are being taught during tertiary education.

As the internet has become a fast and easy method of disseminating information to different kind of people at the same time, it has become an effortless way of helping graduates to find jobs using portals. However, most of these existing portals focus more on helping applicants to search and apply for jobs [5] rather than assisting them in showcasing their marketability or verifying provided information among other things.

This study examined marketability problem of graduates and how it can be reduced by proposing an integrated portal that will address the gap between graduates, employers and their universities, and assist graduates to market themselves to prospective employers.

II. PROBLEMS WITH GRADUATE MARKETABILITY

Marketability refers to how desirable a candidate is for employment consideration and what he or she is worth as a prospective hire. It also refers to the ability of a graduate to bridge the gap between the job market and education. Graduate marketability is one of the Key Performance Index (KPI) of universities

[6] as the graduates are the human capital from the university's effort to increase manpower value for the job market. However, despite the fact that many graduates try to meet up with all these requirements, they are still lacking to market themselves to prospective employers.

Unemployment has been stated to be an issue that is related with the marketability of graduates. One crucial reason is the wide communication gap between the universities and employers which affect the graduates as they are not aware of many employers' requirements and so do not meet up with their requirements [7, 8]. For example, possession of employment skills are required for graduates to have better chances of marketability. Kee and his fellow researchers in their study determined that graduates need to be equipped with communication, innovation, teamwork, leadership, critical and problem-solving skills among others to assist in improving their marketability [6]. The other crucial reason is the lack of co-operation between them to work together in helping graduates to market themselves to increase their chances of getting jobs [9]. It is suggested that the universities, graduates, employers and other related stakeholders such as government or educational policy makers should develop mutual understanding and collaborate to facilitate graduate marketability [8].

Due to the current changing work environment demands, the need for graduates to be able to keep up with these changes is important for them to be able to stay marketable. The inability of graduates to secure employment can also be because of their lack of skills such as analytical, interpersonal skills, creativity skills, communication skills, problem solving skills and team working skills [3, 10, 11]. The American Sociological Association also discovered the top skills valued by employers which are analytical skills, communicational skills, leadership skills, computer literacy skills, interpersonal skills and research skills. However, graduates might possess these skills but might not have a way of showcasing these skills, hence; employers think they do not possess them. Another research was carried out by Nor'Aini to find out what skills graduates need in order to improve their performance and marketability [4]. Their result indicated that employers conceived that graduates need to improve on skills such as behavioral and technical skills.

Nor'Aini also cited the importance of close co-action between educators, governments and employers to help in the development of appropriate training and teaching programs which will help students acquire the knowledge, skills and abilities that will make students more marketable. It is important for educational institutions to have a working relationship with industry to meet the requirements

and needs of the employers [7]. Additional knowledge in business and project management are also some of the skills which are desirable for graduates to possess when entering the business world which majority of them do not [12].

Graduates may not also marketable since some fields already have more than enough graduates with the same qualifications [1]. As a result, competition is very tight while some other fields such as Sciences and Engineering field are still in demand, and thus graduates may still have the opportunity to be more marketable if they have the right qualifications. However, currently, employers require that graduates possess a lot of skills and knowledge or specific qualifications added to their Bachelor's degree pertaining to their area of concentration in order for them to be marketable and employable [1, 13].

Another cause of graduate marketability problem, is the communication gap between the graduates and the employers is very wide as the universities do not really show enough encouragement to the employers to work hand in hand with them to help in recruiting the graduates [12]. The Gallup Organization found out that less than 50% of the employers co-operate with the university [14]. Archer & Davison discovered that there was a need to improve the links between universities and employers in order to improve graduates' marketability [15]. Pandian and her team conducted a study on employability needs and university curriculum in Malaysia and they also found out that the major reason why there is limited job opportunities for graduate was as a result of lack of soft skills in graduates [3]. Baharun and Suleiman also mentioned that there is a gap between the knowledge, skills, and qualities possessed by the universities' graduates and the knowledge, skills and qualities required by the graduates' prospective employers [16]. This means that the current graduates do not match the needs of business.

All the problems mentioned before resulted in the need to provide suitable solutions so as to assist in facilitating the marketability of graduates.

The need to improve graduate marketability has become very crucial as graduates need to be able to keep up with the changes in the different work environments, and be able to show to the prospective employers that they have the skills and requirements which they are looking for. As the employers keep bringing out the lists of desirable characters they want in prospective employees planning to work for them [13, 17], the need for the graduates to be made aware of and to know what requirements the employers want has become a necessity. In order to aid in the marketability of graduates, it is likewise important that there should be a strong link between the universities, their graduates and the prospective

employers so that information such as graduates' portfolios and job requirements by employers can be shared and verified. This comes from the fact that Mansourvar reported that majority of the fresh graduates are unemployed because the employers identified that most do not have marketability skills needed in the industries [5]. Gatabazi also recommended the collaboration between universities and prospective employers through upgrading college programs to produce qualified graduates and enhance their marketability [18].

III. PHASES OF STUDY

This study firstly identifies the user requirements from all identified stakeholders, and secondly, based on these findings, develops a portal prototype that incorporates the integrated features called the Integrated Graduate Portal (IGP). Finally, the study evaluates the use of the IGP in facilitating graduate marketability. The aims of this portal are to facilitate graduate marketability by showcasing graduates contents and skills through the use of electronic portfolio (e-portfolio) to employers and to reduce the communication gap between the employers, graduates and their university.

Two (2) phases of survey were conducted for this study. The first one was conducted to identify and gather the user requirements from all identified stakeholders (graduates, employers, lecturers and administrator), which is explained in **sections IV, V and VI**. These requirements were analyzed and carefully selected before incorporating them during the development of the portal. Once the prototype of IGP was developed, the second survey was conducted to evaluate the use of IGP to facilitate graduate marketability. The result of this second-phase survey is discussed in **section VII**. The evaluation results showed that the IGP may help in facilitating graduate marketability. It was found that integration features such as graduates' e-portfolios, employers' job requirements information, verification of graduates' content by lecturers and collaboration of graduates, employers and university in the IGP are features that may aid graduates in facilitating their marketability.

IV. THE INTEGRATED GRADUATE PORTAL (IGP)

The development of the IGP is proposed in order to facilitate graduate marketability. The proposed Integrated Graduate Portal is a web-based portal that have integrated features and capabilities. The IGP will potentially assist graduates who are searching for jobs and want to increase their marketability, employers who are searching for prospective employees and want to have access to applicants' e-portfolios, lecturers who want to assist their graduated students in having better prospects of being

more employable and the administrator which is the university who will provide confirmation of graduates' previous studentship and employers verification. Figure 1 shows the proposed concept that consists of four identified stakeholders which are graduates, employers, lecturers and administrator.

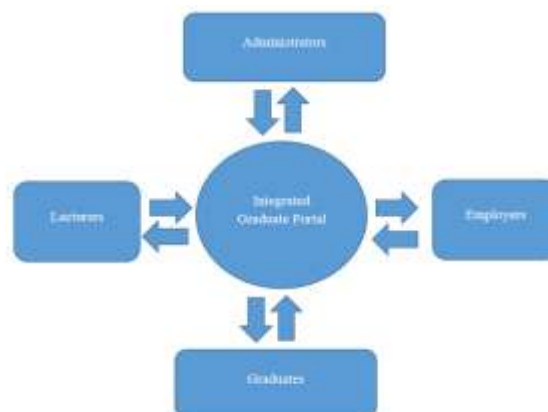


Figure 1: Concept of the Integrated Graduate Portal

Based on the concept of the Integrated Graduate Portal (IGP), a few roles of stakeholders in the proposed IGP have been identified as the following:

Administrator Role: This role is for the administrator of the IGP website and permissions for this role are strictly restricted. The administrator is in charge of verifying graduate's results and course works done in school. Verification and authentication of other stakeholders registered in the IGP are also carried out by the administrator.

Employer Role: The role is basically performed by prospective employers who perform the job of assessors, advisors, and employers for graduates in the portal.

Lecturer Role: This role is primarily performed by lecturers who taught the students when they were still in school. The content validation process and rating of uploaded work by the graduates is managed by the lecturers. They also serve as mentors and advisors for them.

Graduate Role: These are the graduated students of a particular university whose marketability needs to be facilitated. They are the one of the key users of the portal and they are to upload their respective resume and e-portfolios online.

The stakeholders of the portal can be classified into four (4) categories which are: Administrators who will manage and run the site, Employers who are looking for applicants that possess the needed skills to work in their workplace, Lecturers who will be assisting their graduates in improving their chances of getting jobs and Graduates who want to improve their

marketability and showcase their e-portfolios to prospective employers. The components of each of the different groups of stakeholders (graduates, employers, lecturers and administrators) in the IGP are shown in the figure 2.

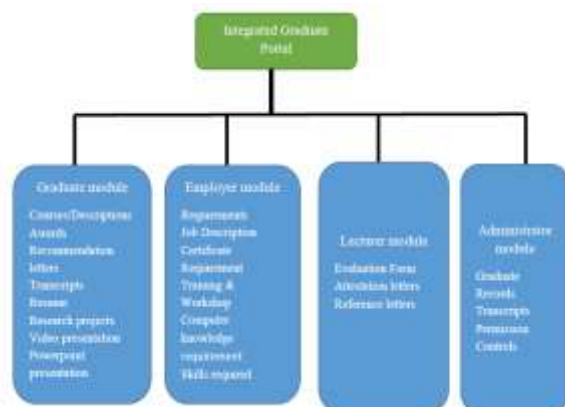


Figure 5: Components of the Integrated Graduate Portal

V. THE PROPOSED IGP FEATURES

Some of the features which can be found in the Integrated Graduate Portal include:

Verification of Graduates' by Lecturers - Verification of graduates is proposed to be carried out in the IGP by lecturers through provision of testimonials, attestation and reference letters. When employers are able to get graduate's reference and attestation letters from lecturers, it is believed that the employers will feel more at ease to consider the applicants better as these letters signify that the lecturer knows the kind of person the applicant is before providing him or her the reference or attestation letters. Verification of graduates is done through attestation and reference letters by lecturers for employers to confirm graduates' character, attitude and achievements among other things.

Content and document management — services that support content and document creation and provide mechanisms for authoring, approval, version control and scheduled publishing.

E-portfolio – graduates can create and showcase their achievement to employers.

Entitlement — the ability for portal administrators to limit specific types of content and services users has access too.

Collaboration — all stakeholders can communicate synchronously (through chat, or messaging) or asynchronously through threaded discussion and email digests (forums)

Rating – Lecturers can rate some of the graduate's content such as resume, so graduates can be able to

find ways of making their contents better to facilitate their marketability

Job Creation – Employers can create job and job requirements for graduates to access.

Recommendations – Jobs and resumes can be recommended according to the different groups of stakeholders' access

Reference Letters - Lecturers can provide reference letters for graduates which the employers can access.

VI. POTENTIAL BENEFITS OF THE PROPOSED IGP TO STAKEHOLDERS

Due to interaction among all stakeholders, they may be able to understand one another better than when they were strangers. Stakeholders may also learn from their interaction with one another and new skills can be developed. It can become a way of bringing out new ideas, inventions and so on. This may also help graduates to decide if they want to apply and work for a particular employer or not. Potential benefits of the proposed IGP to graduates, lecturers, university and employers are discussed in this sections.

Potential Benefits to Graduates: It may provide graduates with a medium of presenting themselves to prospective employers. Graduates can find the information they need about different employers, their requirements and positions they offer. The use of the Integrated Portal might also enable graduate to use information technology to make and support decisions in the process of solving real-world problems and particularly in the areas of marketability and assist them in utilizing technology-based research tools to locate and collect information pertinent to the task, as well as evaluate and analyze information from a variety of sources. It may assist them in their career portfolio creation.

Building technology skills and fostering self confidence in their own abilities can be derived from e-portfolios and resources and ideas are also shared through it. Chances of internships, trainings and on the-job trainings in companies, industries and workplaces may also be increased as a result of the relationship with prospective employers through the use of the IGP. It may as well help them in the creation of their career portfolios. Graduates may use the IGP to find training being given by employers and they can apply for them. These trainings may help them to improve their practical skills and knowledge. They can make use of this portal to contact different employers and ask for advice or help from them. Interaction with prospective employers may enable graduates to get ideas for their final year projects or any kind of research work they want to venture into.

Through the rating by the lecturers on some of the contents that has been uploaded on the portal by the graduates, the graduates will be able to know whether the contents upload on the portal is good or not according to the rating of the lecturers. If the ratings are low, applicant can edit his or her content in order to make it better and thereby be able to provide better content for showcasing himself/herself on the portal. Since the administrator will be in charge of approving and verifying employers' information, they indirectly influence in helping their graduates gain better and easier access to different opportunities after completion of their education.

Potential Benefits to Lecturers: The use of the IGP can create more familiarity between the lecturers and their graduated students as graduates can choose whichever lecturer they want as their mentor. They will also be able to assist the graduates by providing some of the letters needed such as the attestation and reference letter for them easily on the portal in order to let employers know the kind of person the applicant is.

Potential Benefits to University: IGP may help in improving the relationship between the university and the employers which will increase the chances of graduates getting employment. The public relations of the university with all stakeholders are also ameliorated. The marketability of their graduates might also be increased through its use. One other benefit to the institution that can be derived is that it may assist them in reacting to calls for better answerability and outcomes-based certification.

Potential Benefits to Employers: The IGP might bring the employers more in contact with the graduates they might employ in future so they can get to know them a little bit better. Employers may also decide to help graduates more in achieving their goals, maybe in terms of scholarships, funding and so on. They may also take part in helping them to develop their marketability skills. It may also help in sharing information employers want to share with prospective employees like forms of co-operation in a course of study or possibilities of gaining a scholarship.

Employers may as well be able to understand what the graduates have to offer according to their work. The quality of graduates as job applicants likewise may be increased and give employers more confidence to employ them. Graduates might possess more skills demanded by employers and thus improve their level of satisfaction on prospective employees for hire. Employers can be capable of providing on the job training for graduates matching their areas of specializations and professions who they can in the long run employ in their workplaces. The IGP may improve the process of getting information by the

employers in that, they will already have access to graduate student portfolios, they will be able to verify and authenticate the information given through the institution and the lecturers' assessment. It may likewise give room for new opportunities of better systematic co-operation with companies in job trainings in research and academic levels.

VII. EVALUTION OF THE PROPOSED INTEGRATED GRADUATE PORTAL (IGP)

Based on the evaluation result from the graduates and employers respondents on the IGP Portal prototype, the following are the findings:

- Most of the users claimed that the new portal with the integrated features is **very user-friendly**. The interface has to do with the graphics used in the portal such as the icons, colors and the display output in the interface design. The interface of the IGP is designed in a way that that the elements mentioned above is included in the proposed portal. Users can navigate easily within the portal and find all the information that they want. The layout was also designed in a simple and uncomplicated way. When respondents were asked if the interface of the IGP is user friendly, 80% of the graduate group of respondents agreed that the portal is user-friendly while 20% disagreed. 77% of the employers group of respondents agreed that the portal is user friendly while 33% disagreed. The portal was designed in a way that the users will be able to find and see information easily and without stress. Thus, this may be one of the reasons why the respondents stated that the portal is user-friendly.
- IGP allows graduates to **create their e-portfolio contents, resumes and search job vacancies**. 75% of the graduate respondents agreed that the creation of their e-portfolio content was easy to perform in the IGP while 25% of them stated that it was not easy to create their content. Easy creation of e-portfolio contents will increase the motivation of the graduates to make use of the IGP to facilitate their graduate marketability.
- IGP provides a means for **verification of graduates to be carried out by lecturers** through provision of testimonials, attestation and reference letters. 67% of the graduates respondents agreed that obtaining attestations and verification letters from graduates is a good verification method; 20% said not exactly while 13% said no. However, in the employers group of respondents, 69% of them said yes, 16% said not exactly and 13% said no.
- IGP allows the employers to **search graduates resumes and e-portfolio content, create and**

manage jobs, facilitate collaborate between the university, graduates and employers.

In this way, the portal has established a link between the graduates and potential employers. In addition, users' time can be saved as they will be able to find exact data. 80% of the employer respondents said that the resume search is useful; 8% said not exactly while 12% said it is not useful.

Based on the results, the IGP is deemed to achieve the objective to be an integrated portal that can facilitate graduate marketability.

CONCLUSION

Graduate marketability has been explained as becoming a critical issue affecting graduates. This is partly due to the graduates' inability to properly showcase their achievements and market their skills to prospective employers. Thus, the development of the Integrated Graduate Portal (IGP) is proposed to facilitate graduate marketability.

The user requirements are first explained, before developing the IGP prototype. An evaluate survey was then conducted and the results showed that the IGP may help in facilitating graduate marketability. It was found that integration features such as graduates' e-portfolios, employers' job requirements information, verification of graduates' content by lecturers and collaboration of graduates, employers and university in the IGP are features that may aid graduates in facilitating their marketability.

It is hoped that the use of the IGP may help the graduates to facilitate their marketability and bridge the communication gap between the graduates, employers, lecturers and university, therefore improving the interaction and collaboration between all stakeholders.

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