Most Important Criteria to Evaluate and Optimize the Ability of Software Engineering Student

Omar Zughoul¹, A. A. Zaidan²

¹,² Department of Computing, Faculty of Arts, Computing and Creative Industry, Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia

Abstract: The number of fresh graduate students that cannot find a job are increasing because most of the companies are looking for the employee who have an experience. However, the fresh graduate student cannot get an enough experience through their bachelor degree, and at the same time, each student is different from others in understanding level. So, there are two main criteria that can be used by all companies to compare between each applicant, these criteria are GPA, Soft skills.

Keywords: software engineering students; GPA; Soft Skills

1. Introduction

Fresh graduate Students evaluation and assessments have been enhanced recently, the educational evaluation has become a necessary to measures the students’ performance. However, higher education committees behold the quality of higher education from the improvement of student performance, and these committees give a major attention to student learning outcomes based on evaluation dimensions [1]. Here, after evaluate the students, they will be prepared for the Labor market. The process of Recruitment will be done in order to select the best applicant.

In addition, Recruitment comprises the process of attracting, screening, selecting, and hiring the best applicants according to their skill, experience, and their fit to the organization. Recruitment is a lengthy process while effectiveness of cost should also be taken into consideration to assure success [2]. Acquiring the right applicants at lowest possible cost contributes toward having a workforce that is effective and efficient aside from giving the company a strong competitive advantage. In searching and attracting applicants and strengthening their human capital, companies globally irrespective of size employ strategies of recruitment, either formal or informal [3].

Employee engagement and retention is a growing concern in human resources (HR) offices across the United States [4]. Along with this trend, HR is continually challenged with gaining and retaining employees who are high performing. With this, companies view conducting assessments as an important HR selection practice and over 75% of companies are using some type of assessment to aid in hiring people from external sources to aid in productivity or retention. More specifically, over half are using personality assessments or cognitive ability assessments for pre-hire purposes [5].

Success of organization is highly contributed by having decision-makers that could make sound employee selection decisions [6]. Sometimes, the decision maker’s intuition becomes part of the selection process [7].

2. Literature Review

In this section, the criteria that must take in Recruitment process is described based on the previous studies. As mentioned, some of criteria that companies use to recruited employees are not suitable to use in fresh graduate case. For instance, the experience; because most of fresh graduate students doesn’t have any experience. So, the most important criteria for recruited the fresh graduate students are listed below.

Grade point average (GPA)

A grade point average (GPA) is a calculation of the average student’s total earned points divided by the possible number of points. This grading system calculates for all of his or her complete education career [8].

Hanson et al (2014) considers the GPA as a criterion in their study. They conclude that the Employees with high GPAs are not included as they are less likely to need improvement strategies, while employees with low GPAs are not included as the program would not be able to address all their needs. In [9] author examined the relationship of academic motivation types to total GPA and controlled for academic achievement as measured by entry qualifications upon entering the university.

In [10] authors said that Students with higher GPAs, who studied for longer hours and reported to be more motivated to succeed, did better academically. In addition, according to [11], GPA was proven once again to be the most important predictor of student outcomes, regardless of class section enrolment.
Soft skills
The soft skills are the skills that the students gained through his/her bachelor degree. According to [12], the top four skills desired were written communication, verbal communication, ability work in a team, and self-motivation and learning. In addition, team work is a reasons for continuing in practice. At Furman University, two experiential courses were offered to students, both of which required teamwork and interaction with a client [13].

Authors in [14] proposed a balanced scorecard model for software project management of students' teamwork. During educational process, within teamwork they need to organize, monitor and evaluate their work until results are completed and submitted to teaching staff.

The employee will be able to gather information from observation, experience, reasoning, and/or communication, analyze that information, generate alternatives, solve problems, and evaluate the process and solution. Critical thinking is based on intellectual values that go beyond subject matter to include clarity, accuracy, precision, evidence, fairness, and multiple perspective [15]. Curtin University includes up to nine graduate attributes in every unit of study. One of these attribute was think critically.

There are many causes of employee difficulty such as stress, poor time management, employment pressure while studying and life issues to name a few. However, a major cause is student workload. This is a precondition to good studying and learning and is among the most important course-related factors that account for student dropout [16].

Authors in [17] conclude that Self-assessment of students’ knowledge as the basis for constructing their career and educational plans is inadequate to the realities of school and work. However, as English language is now the word language, it is imperative that everyone could communicate in it. The evaluation of a person’s language is based on some criteria. First is the capacity in writing using English language. As example, the process of selection in Dumlupinar University includes English Proficiency Exam. Here, students are required to sit for an exam known as English Proficiency Exam. This exam comprises a multiple-choice questions and the students can score a maximum of 80 points [18]. Following the evaluation of the results of the written exam, the students would sit for an oral exam. This is for determining their level of speaking skill. In the contest of employees, evaluation using oral examination is more challenging in comparison to the use of a written exam.

According to [4] the major of Business and Tourism Translation-Interpretation at Ho Chi Minh City Open University (HCMC OU) has been introduced to the training program since 1998. The purpose of the program is to train students to be fluent in four languages skills as well as to equip them with specialized knowledge to use in professional work. Buyse and Lievens conclude that the interviews and personality tests are often used to measure non-cognitive (e.g., interpersonal) characteristics. Recently, situational judgment tests (SJTs) have drawn attention since there is evidence that SJTs can be valid predictors in medical admission contexts, they found that the SJT might be a useful supplement to cognitive tests [19].

Razmjou claims that theoretical knowledge and practical skills alone are not adequate to prepare students to face the developments in the field. Nižnan use data from an online adaptive system slemapy.cz for practice of geography facts (e.g., names and location of countries, cities, mountains) [20]. The system estimates student knowledge and based on this estimate it adaptively selects questions of suitable difficulty. Here, next section is discussed the review studies that done regarding to the criteria for recruitment the fresh graduate students.

Authors in [21] stated that the most important criteria that used in the literature for evaluate students are GPA and soft skills. However, GPA and soft skills are considered as a main concern for evaluating students studied in different departments.

3. Discussion
The previous studies show that there are two main criteria to evaluate fresh graduate students in order to recruit them. These criteria are; 1) GPA, 2) soft skills. However, soft skills are the skills that each student may gained through the bachelor degree, for instance, communication skills, teamwork, leadership, …, etc. Furthermore, by referring to the studious regarding the GPA criteria, it shows that the students can be evaluated by his/her GPA. Soft skills criteria are also important; if the employee got a high mark in bachelor degree but he/she doesn’t have a communication skills or other skills, how he/she can communicate with others employees and clients. On other hand, if the employee having a soft skills and he/she cannot study well or understand the issues it will be a problem. So, these criteria are very important to recruit fresh graduate students.

4. Conclusion
Fresh graduate students are looking for a good job, but the most common problem that face them is that they don’t have an experience. However, every fresh graduate student has a CGPA and some of the skills that gained in his/her bachelor journey. That’s the only criteria that most of students have after graduate. Companies need to evaluate the applicants based on these criteria; in case if the applicants are fresh graduates. Here, the company will decide which criteria is more important than the other one. For instance, if the job description is about the professionalism in communication they will give the importance to the soft skills.

References


Author Profile

Omar zughoul received the B.S degree in computer information system from Yarmouk university, Irbid, Jordan, in 2011, and the M.Sc. degree in software engineering from UNITENUniversity, Malaysia, in 2014. He is currently pursuing the Ph.D degree with Universiti Pendidikan Sultan Idris, TanjungMalim, Malaysia. His research areas are student evaluation, student assessment, student appraisal, and educationaldomains.

A.A Zaidan received the B.Eng. degree (Hons.) in computer engineering from the University of Technology, Baghdad, Iraq, in 2004, the M.Sc. degree in data communications and computer network from the University of Malaya, Malaysia in 2009, and the Ph.D. degree in artificial intelligence from Multimedia University, Malaysia in 2013. He was the leader or a member for many funded research projects. He is currently a Senior Lecturer with the Department of Computing, University Pendidikan Sultan Idris. He has published more than 160 papers at various international conferences and journals. His research areas are student evaluation, student assessment, student appraisal, and educational domains.