Development of electronic rubric to assess improvement of employability skills student

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Abstract. This research is carried out on the basis of the need for assessment tools to assess employability skills. Assessment which made refer to the applicable competency standard and adjusted to the needs of each proficiency field. The urgency of this research is to design an electronic rubric evaluation tool for educators. This study aims to develop electronic rubric in measuring employability skills due to the condition which not every skills assessment uses standard assessment tools, it encourages researcher to develop assessment tools that can be used as the process of measuring employability skills by work based learning. The research method that used is Design Based Research to develop prototypes of performance evaluation tool or performance assessment. The design of performance assessment in this research is web based using SmartRubric platform. The SmartRubric application uses browser technology and is accessed through a computer network. Besides using a computer or laptop system on this application is also using mobile, such as mobile phones, smartphone, tablet PC, Mac, Android, BB and others, as long as the device has a browser application for internet access. The SmartRubric application has a program that is stored on the Server and sent via the internet and accessed through a browser interface, so that it can be accessed using a web browser through an internet network or intranet. The use of SmartRubric application through computer software that is coded in a programming which supports web-based software namely HTML, JavaScript, CSS, Ruby, Python, Php, Java and any other programming.

1. Introduction
In 2020 economy of Indonesia will change and develop towards a global economy, so the companies and the industries are required to be able to compete in regional and global markets [1]. Therefore, Indonesia must be able to manage and develop its various resources properly. The way of the globalization economy era begins with the global economic life that is open-minded and knows no territorial boundaries, between one territory to another [2]. This was stated in various World Trade Organization (WTO) agreements that began with the multilateral trade agreement (GATT) at the Uruguay negotiations as well as the agreement on the implementation of free trade areas in Asia (AFTA) for countries in Asian region [3,4].

Entering the globalization era means also entering of free trade era, which requires every business people to enhance his competitive advantage if he wants to continue to be exist in the global market [5]. All business people inevitably have to prepare themselves if they want to remain successful in free trade era. There is no exception to the business people in Indonesia, bearing in mind that the Asian region will
immediately implement AFTA, which will be set for the elimination of all forms of protection for domestic business people in the form gradual reduction in the tariff structure (CPET) [6].

Competency Based Learning is believed to be able to improve the development of learning towards students [7,8]. Competency Based Learning is kind of study that promises students to obtain the competencies expected by the industry, Competency Based Learning is applied to the relevant stages to achieve competence. Learning systems like this are accepted by students, because this system can achieve good competence [9]. The competency-based curriculum has benefits based on an educational plan based on market needs, accreditation, transparency, and job analysis [10]. Not only learning, good assessment methods can also improve students' competencies. Competency-based assessment is believed to be effective. This will show that students are satisfied and able to improve their abilities [11,12]. Competency based learning system requires students to have skills in working, one of the things that must be mastered by students is work skills [13]. Employability skills are non-technical competencies that must be possessed by any person who wish to be absorbed by the labor market [14]. Assessment in learning has a purpose to determine the competence of students. One of the assessments used in education, especially in vocational education is rubric. Rubric is a scoring guideline used to assess student performance based on the number of scores from several criteria [15]. Rubric can be interpreted as a guide to assessing the performance or work of students consisting of scores and criteria that must be met to achieve that score [16]. In this modern era, everything is done with a digital system. Digital systems have the advantage of being more effective and practical. Digital systems in the world of education are not often used. Rubric is an evaluation tool developed in digital form [17]. The use of an electronic rubric is one of the strategies to assess students 'tasks or projects as well as the use of e-rubrics as an alternative that can be chosen in evaluating the evaluation of students' work [18,19].

E-rubrics are used by students during assessment. E-rubrics are used for assessment of students' skills [20,21]. E-rubrics can support assessment of learning so that assessment standards are better [16]. The reason E-rubric is appropriate is because students prefer to use e-rubric [17]. E-rubrics have also been implemented on campus for competency-based learning [22]. This study aims to design and create an E-Rubric as an introduction to assessment needs in which there is an assessment format in measuring the increase in students' employability skills by using a work based learning model.

2. Method
The research method that used is Design Based Research to develop prototypes of performance evaluation tool or performance assessment. The design of performance assessment in this research is web based using SmartRubric platform. The SmartRubric application uses browser technology and is accessed through a computer network. Besides using a computer or laptop system on this application is also using mobile, such as mobile phones, smartphone, tablet PC, Mac, Android, BB and others, as long as the device has a browser application for internet access. The SmartRubric application has a program that is stored on the Server and sent via the internet and accessed through a browser interface, so that it can be accessed using a web browser through an internet network or intranet. The use of SmartRubric application through computer software that is coded in a programming which supports web-based software namely HTML, JavaScript, CSS, Ruby, Python, Php, Java and any other programming [23].
3. Result and discussion
Electronic rubric design which is developed by researchers is using web-based platform. To access this application, visit https://www.smartrubric.com/. The system in this application has been equipped with several main features, namely: login, Assessment, Rubrics, Classes, Students, Admin. Along with the development of technology, ICT devices are more mobile. The system in this application can also be used using mobile applications, such as Mobile, Smartphone, Tablet PC, Mac, Android, BB and others, as long as the availability for internet access in the devices.
Figure 2. Starting page of SmartRubric.

Figure 2 illustrates the SmartRubric home page, on this page the researcher can develop evaluation tools that can be arranged in the form of assessment rubric. Rubric is an assessment guide, which consists of predetermined performance criteria. Rubrics function is to evaluate students' performance. One technique that can be used in evaluating students' responses is through the rubric of assessment [24].

Figure 3. Log in page SmartRubric.

Figure 3 illustrates about the SmartRubric Log-in page, on this page the researcher can development evaluation rubric. Rubric is usually being a form of specific assessment instrument to assess and evaluate the appearance of students or assess the product which produced as the completion of performance tasks [25]. Rubric is a criteria-based assessment guides consisting of fixed measurements (4 points, 6 points, or as appropriate) and characteristic descriptions for each score. Rubrics describe the degree of quality, ability, or understanding throughout a series [26].

After the researcher develops the assessment rubric, then the researcher enters the assessment rubric that has been compiled on the SmartRubric system.
Figure 4. Display of assessment employability skills.

Figure 4 illustrates the employer skill assessment display on the SmartRubric page, on this page the researcher made the design of assessment as an evaluation tool is one of the important factors in achieving learning objectives, the successful implementation of learning according to the objectives seen from the learning process and the final results. Therefore, the evaluation tool has an important role in achievement of learning objectives and student competencies. The employability skills needed by vocational education graduates in Indonesia are adjusted to the needs of the company for the employability skills of prospective workers. Employability skills needed by prospective workers, especially prospective workers in the technology and engineering fields, information and communication technology, health, arts and crafts in tourism, agribusiness and agro-industry as well as business and management are as follows: communication skills, foreign language skills, computer/ICT skills and ability to work in team.

4. Conclusion

Online Evaluation System is an e-learning application in the context of the Learning Evaluation System which is designed to facilitate the evaluation process. SmartRubric is a formative assessment application designed to facilitate the workload of lecturers in carrying out the evaluation process, SmartRubric contains an assessment guide, which consists of predetermined performance criteria, which are used to evaluate student performance. SmartRubric as a web-based platform uses browser technology to run it and is accessed through a computer network. Along with the development of technology, ICT devices are more mobile. This system can also be used using mobile applications, such as: Mobile, Smartphones, Tablet PCs, on various platforms such as Mac, Android, BB and so on as long as the device has a Browser application for internet access. SmartRubric has a simple, user-friendly interface that makes it easy to show progress in achieving student competencies, and can report individual student performance reports as feedback to students in seeing progress from performance and competencies that must be mastered in accordance with the objectives of learning.

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