Maximizing Computer Based Test (CBT) Teslet Model for Education Quality Mapping

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Abstract. Mapping the quality of education is one step that can be done to anticipate and overcome problems in the world of education. Basically, the mapping of the quality of education is aimed at equitable distribution of education. To achieve these objectives, it is necessary to maximize the development of three aspects of quality consisting of inputs, processes and outputs. The process as an important part of the responsibility of teachers has an extraordinary role in gathering various information or data needed to determine the quality or the quality of education at a particular institution or school. Therefore, one solution that can be taken which is to develop a test model based on computer, commonly known as Computer Based Testing (CBT). CBT is a form of software that can be developed using a computer. The development of the CBT in question must also be accompanied by a quality problem model so that the policies taken can be effective. The test model testlet is an alternative that can be maximized considering that this test is a collaboration between the form of problem and multiple-choice questions with the level of difficulty of questions that are tied. By using this testlet, the teacher can not only obtain information about student competencies, but can also obtain information about individual characteristics. In addition, the use of this test model will make it easier for governments and educators to conduct quality mapping because it is more effective and efficient

Keywords: CBT, Testlet model tests, the quality of education

1. Introduction

These guidelines, Education is the pillar of nation building which will determine the sustainability of development. Therefore, education should be the maximum implemented with due regard to the various stages through which the process or proportionally. Thus, it is not surprising that education practitioners have many tasks in the development of various models of processes and implementation of education in the field with the aim to produce educational quality with output truly the face of changes in various domains of education.

The process of becoming a very important part in ensuring the quality of education that held. Specifically [1]explained that if the quality of education is determined by the quality of the input, process and output or outcome. A quality educational process intended to create an atmosphere where learning in ongoing, active, innovative, creative, and fun. In the aspect of this process, the teacher as an educator is also required to develop an assessment model must be in accordance with the times so as not to fall behind and provide valid data to determine the next policy toward educations learner and institutions in general.

Outline if the Computer Based Testing (CBT) is one solution that can be used in education to reduce the occurrence of cheating in the test execution time can be relied to promote the use of
technology in schools[2]. Through the use of CBT, the teacher can be assisted in developing various models required without limitation about the distance and time as well as more efficient in terms of time, especially in the correction process.

Advantages possessed by CBT as one application of technology development, will be more complete if accompanied by a varied models and were able to describe the characteristics of the individual learner. What this means is through a given problem by using the CBT applications, teachers can obtain information at once, whether the learners concerned actually answer the test-based ability or precisely just by guessing the answer to it. Model tests that can be used as a solution would be to anticipate the validity of the data or information obtained related to the competence of learners is one of them is a test model of testlet.

Testlet a test model that can be used in the assessment, especially in education. Development of Teslet test models not only be done using the full paper, but can also be developed by using a computer (computer based). Results of research conducted by Deborah (1999: 4) indicate if research on the use of computer testlet serves to improve the accuracy and efficiency when compared to using a pencil or full paper, although the same scoring form[3].

Specifically, testlet is defined as a group of multiple-choice grain which reveal information same [4] using scoring politomus which is generally used in the test description and test models testlet. More testlet according [4] is defined as one type that can be used to solve problems, especially in situations be efficient in giving the task or exercise ability of individual learners. Competence of learners through information obtained by utilizing CBT between collaboration with testletmodel test development, education professionals and teachers can do a mapping of the quality of education in the educational institutions concerned as well as within the scope of a broader education. Thus, the government and all those involved in education can do a variety of preventive measures and alleviation of various educational problems that occur. Therefore, the author was inspired to do a theoretical study entitled "Maximizing CBT Testlet Model for Mapping the Quality of Education".

2. Discussion

2.1. Computer Based Test (CBT)

Computer applications into one solution pavorit that serve as an alternative solution in the 4.0 era industry[5]. Computers are not only used to support the activities or business interactions, but also to float planting skills and competencies in education. Although there can be maximized with a good technique for many reasons, but the computer and its various applications on average can be accessed in various areas especially by formal educational institutions [6]. The use of CBT in education generally very helpful teachers in the response given analytical learners with duration and energy efficient enough [7]. Examples of assessment or assessment process conducted [8] showed a response that the students were satisfied and successful work on a given problem because of the features of the computer students can see the direct value, validity and transparency the process of assesment.

Computer Based Testing(CBT) is part of the Computer Based Assessment (CBA). CBT is commonly used to conduct formative assessment [6]. Furthermore, Fabienne explains if the CBA is very useful to know and identify the differences in output or outcomes of students, especially related to knowledge based on a given topic [9]. Everything can counted in a relatively short time. This excess to be one of the reasons for developing a computer-based test or CBT. CBT became one test model favored by learners. This is evidenced by some of the results of research conducted in various countries, to share a single of them, namely research conducted by [10] who found if most learners prefer CBT compared with conventional tests using multiple choices for more transparent and impartial

2.2. Model Test Testlet

Measurements in the form of tests in education often shaped grains group or multiple choices used to reveal the same information group or grains of multiple choices is known as testlet [3]. Basically testlet multiple choices because the level of difficulty is tiered and interconnected so that it can disclose information accurately and completely. Based on theoretical and empirical studies that have
been done [11] turned out to be in terms of scoring, testlet more practical than in narrative form because scoring can be done objectively and are politomus. This explanation has correlation or similarity to previous theories presented by Weiner. Politomus itself means point more than two categories so that more objective and effective in providing an assessment test than in narrative form. While there are weaknesses in politomus testlet scoring is to use the correct amount in total so that loss of information that contains the proper form of response facer test, but with GRM model approach facer ability test information will be explained. That is because the GRM is tiered or has a clear category.

Based on the definition that has been presented above, it can be concluded if testlet is a form of a multiple-choice test which consists of groups of interconnected items given to students to determine the effectiveness of the stimulus used during the learning process. However, specifically, testlet is the development of tests or about the model description. One description test model can be used two to three models testlet so that assessments can be implemented more effectively. If testlet can be maximized by using the CBT application time efficiency and accuracy of data or information obtained will be even better. Based on these.

2.3. Mapping the Quality of Education
States that elementary quality of a school's mission is development programs and services that meet the needs of users, such as students and the community[1]. This explanation is meaningless if the graduates produced by the institution, the school should be able to accommodate the things that cannot contribute or solutions in public life. As missal was produced graduates who are able to participate in all of the potential that exists to empower communities with individual character that is active, creative, independent, and certainly responsible. If the mission is not successful, it must be immediately know the cause and restored the process so that the ultimate goal can be achieved with the maximum.

Explains that the mapping of the quality of education is a concept developed for school mapping. This is usually done to make education policy[12]. Mapping in question in this case, of course the mapping that is standardized by taking into account various important aspects are a benchmark for the mapping [13]. Through this mapping, all the existing schools will be developed in accordance with the predicate or quality criteria respectively. Thus, schools that are still classified as lower-middle could be intensively developed by looking at the aspects that have not been fulfilled. The same effort is certainly done on schools have already met the standards in order to continue increasing the quality of service and output to reflect on the school or educational institution that is more advanced.

Testlet as one of the existing solutions have effectively equal term implementation tests to students in general. Testlet serves to determine the competence of learners and quality to determine the quality or educational institution concerned. In fact, through testlet model tests, the quality of learning that has been implemented can be seen as a whole with a great degree of accuracy because knowledge and honesty of students could be detected especially if developed using CBT.

Research conducted by [14] also shows that online learning (computer-based) is quite effective in determining the equity and quality of education. Premises accurate test results will be generated also an accurate mapping of the quality of education. This study could be one of the stakeholders of development policy recommendations in order to maximize CBT testlet models to map the quality of education in East Lombok and Indonesia in general in the hope of the future equity of educational quality can be achieved together[15].

3. Conclusion
Forms of CBT test development testlet models is one model that is developing new tests. It is based on the results of research are still rare and has not been used in general for education in East Lombok and Indonesia in general. Therefore, need to maximum development this test model considering the kind of data or information that can be obtained very complex or complete so that it can be used as a base, a foundation, and guidelines for mapping the quality of education.
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