

Junior High School Students' Perception about the Computer-Based Examination with Computer-Based Science Evaluation (CBSE)

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Abstract

Computer-Based Science Evaluation (CBSE) is one of just my assessment for measuring student knowledge tailored to the ability. Based on observations in Surakarta Country 1 that MTs has still not implemented the computer as a tool in the evaluation of the learning process. As long as this is still using paper in performing the evaluation. The purpose of the study is to describe the student's perception of the computer-based examination with Computer-Based Science Evaluation (CBSE). Place research at MTs Country, Surakarta Class VII 1 school year 2017/2018. Methods used i.e. descriptive – qualitative data collection techniques include documentation, interviews, observation, and question form. Data is already collected data triangulation method is done next. Results of the study i.e. score student perception of the use of CBSE demonstrated by feasibility question good, the feasibility of CBSE media very well, and the effectiveness of the CBSE is very good. The opinions of the students against the use of CBSE i.e. attractive, happy to use it, it's easy to understand the problem, the only difficulty in working on the problem. This research is expected to be the experience for students working on an online-based exam, as well as input for teachers and schools to implement an online-based exam in measuring students' ability after carrying out the learning process. The use of the CBSE is expected to be used in Deuteronomy daily (UH), Deut. midterm (UTS), a repeat of the end of the semester (UAS).

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INTRODUCTION

One of the teachers ability a must-have and be the most important thing is to create and develop the tools of assessment of student learning. One of the organizations of the world i.e. the IEA (International Association for the Evaluation of Educational Achievement) which is just my assessment Agency International, held a program that one of the Trends in Mathematics and Science Study (TIMSS). The program was held four years beginning in 1955 and Indonesia joined in 1999. In the year 2015 Indonesia ranked 45 of 48 with the average reaching 397 and 500 international standards.

TIMSS Encyclopaedia regularly publishes country that participated in TIMSS assessment related programs, educational documents, as well as math and science curriculum. One of the innovations program conducted in the year 2019, namely doing the development of technology-based assessments that are able to contribute to the educational world called eTIMSS. It can improve operational efficiency in the development, translation, printing, delivery, scoring and data entry (Mullis & Martin, 2017).

Development of computer-based assessment had been conducted using many different ways such as Balan et al. (2017) using adobe flash, diagnostic tests are two-tier (Nada et al., 2018), three-tier (Nurrohmah et al., 2018) with computers based-test (CBT) and e-diagnostic understanding of concepts (Salma et al., 2016). One alternative is to use Computer-Based Science Evaluation (CBSE) with the model of adaptive test that can overcome the shortcomings of the educational assessment model which takes place during this time. This model allows the use of a test question difficulty adjusted to the capabilities of the students. The use of these tests will yield optimal information and tests will stop after the information ability of students has been estimated. Engineering estimation approach using item response theory (IRT). The approach is based on the IRT test items and not based on tests (Hambleton et al., 1991).

Ease the process of the model adaptive test in the determination of the question to suit students' ability, the model using computer-aided media so that the results obtained will be more rapid, effective, and accurate in generating information. So, a computer adaptive test (CAT) can be interpreted as the test, because the process of presentation of the tests assisted by computer media are included in the selection of the grain problem until the processing of the test results. Weiss (2004) mentions some of the excess CAT that is more efficient and time-saving in the assessment, the given problem have difficulty level in accordance with the capabilities of the students.

CAT question bank requires calibrated with the number of questions already known its characteristics. The use of paper and pencils will take a long time and inefficient so that the necessary solutions using CAT (Guzel, 2011). Granting of computer-based assessment score is superior compared to paper and pencil (Rezaie & Golshan, 2015). In 2008 Puspendik has organized the exam using the CAT on the vocational secondary school (SMK), Rukli & Hartati (2011) apply in the selection of the college entrance examination, and Mindyarto et al. (2011) developed for cognitive diagnosis system Physics, as well as applications CBSE that use model CAT, will be implemented into the Middle School (SMP/MTs).

On research is done yet lays out about perceptions of students. The third such research only related to application development and applied in the world of education. The perceptions of students used to look at the opinions and input of students against the use of the application. So, need to be addressed how the comments and opinions of students in exams online with adaptive models test application using the CBSE. This is needed as input for educators to contribute to the follow-up to the world education in doing just my assessment on the students. Therefore, the need to research with the aim of describing the student's perception about the computer-based examination with Computer-Based Science Evaluation (CBSE).

METHODS

The research was conducted at MTs Surakarta Country 1. The population in this research is grade VII in the lesson 2017/2018. Sampling was done by the technique of purposive sampling. Method of data collection is done by way of documentation, interviews, observation, and question form. Documentation is used to register the name, a number of students, and all the necessary data in the study. The interview is used to get information about the use of CBSE students. The observation is

used to see the condition of the schools and students. Question form is used to obtain data on the response of the students against the use of CBSE.

Research data obtained through the source stemming from the now, observation, interviews, and documentation. The data in the form of a percentage based on the aspects and indicators in Table 1. A technique used to analyze the data with a data triangulation technique that blends and generalize the result data into the form of a descriptive sentence in detail.

Table 1. Aspects and indicators of students ' perceptions of the question form

Aspects	Indicators
Feasibility Question	Test question easy to understand Material tests in accordance with the learning Test questions are rarely found in a previous study or test
Feasibility Of Medium CBSE	CBSE media very interesting The use of the CBSE in the awarding of the exams is something new and decent used
The Effectiveness Of CBSE	The use of CBSE makes it easy to process test Administering exams using effective CBSE Interested in using the next exam for CBSE CBSE gives feedback quickly and accurately CBSE exam use avoid cheating

RESULTS AND DISCUSSION

Research results from the spread of the now obtained the perception of students in solving problems using TIMSS CBSE type IPA on MTs Country, Surakarta 1 there are three aspects, namely the eligibility the eligibility question, media, and the effectiveness of the CBSE Table 2.

Based on Table 2 indicated that the percentage of obtained from the adopted criteria Widoyoko (2013) whose perception of students in solving problems using TIMSS CBSE type IPA including the good (78.3%), indicated by the display of eligibility matter of good (68%), the feasibility of CBSE media very well (84%), and the effectiveness of CBSE (83%). Based on the foregoing, the perception of third students in

completing TIMSS type IPA using matter CBSE included both.

Eligibility is a matter of gaining category either (68%). This is due to the good student in following the instructions given, can understand the language on the matter, a matter that is given in accordance with the learning materials that have been studied, and the matter given rarely in problems before. It can be seen from the question that appears easy to read and use words that are easily understood by students. The results of the interviews found students stated in the matter of images, it would be a better picture could be enlarged or view and given additional animations. Reserved shown indeed is the adaptation of a matter of TIMSS has three domains, which of the three is a matter that has the characteristics of a matter of reasoning,

deployment, and knowledge. While students in all schools used to the question of knowledge.

Table 2. the perception of students in using the CBSE

Aspects	Category	Indicators
The feasibility of the Reserved Feasibility	Good	Question in CBSE is easy to understand and test in accordance with the material learned
Medium CBSE	Of Very good	Look interesting and worthy of CBSE media used for exam-based online.
The Effectiveness Of CBSE	Very good	Medium CBSE exam process, facilitate effective, interesting to do the test again, the value can be seen directly, and avoid fraud.

Based on the research of Sufanti et al. (2014) that display a grain of good problem reflected in the raw language, easy to understand and makes students understand. The language used on the grain problem reflects a problem that's easy to read and easy to understand. Figure 1 seen one example of a problem that makes the students easily read it and gunning for easy in normal use.

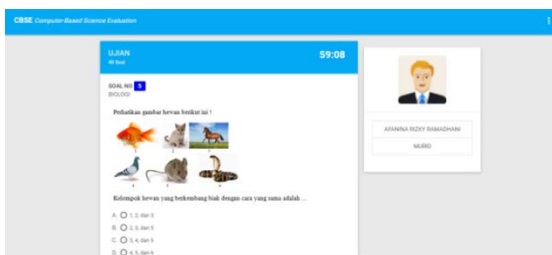


Figure 1. Display of problem Example

Feasibility of media based on research results, according to media experts declared worthy of use and very good this is evidenced based on the now presented to students that students easily use media CBSE time learning. Based on the research of Nurani et al. (2014) that the media must be validated in order to get revalidate and the corresponding meaning. Students easily apply them, fascinated by the medium used, the media has a color of clear images of attractive, easy to understand, so the ease in using it users who obtain the highest percentage that is 84% (very good). The feasibility of the media based on media seen CBSE used very interesting, new students find exams using CAT on CBSE media, the media being used is the test that helps in the accuracy

of examination and CBSE media worthy used in the next test.

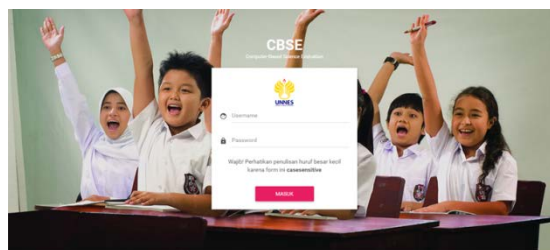


Figure 2. An example of an early appearance Media

In Figure 2 the display media, colors that contrast with the teacher that clearly makes it easy for students to perform the test at the start of the login to complete the test using the CBSE. Color and interesting images can spur the desires of the students in doing a matter a lot more. This is in accordance with the research Mulyati et al. (2016) that color, the other media i.e. pictures, graphics, and text can attract the attention of students. An interesting media can facilitate the work of the student to give the stimulus.

The results of the interview in discover students stated that the use of the test system using daily as a test, CBSE exams, midterm and final exams of the semester happens pros and cons, there are students who argued that the test used the CBSE is able to reduce cheating that occurs when work exams and most students do not agree using CBSE since CBSE exam use occurs the pressure higher than reason is fear of writing exams using the internet network is not smoothly, the computer used to death, and a short work time.

Information and communication technology (ICT), has huge potential as a means or tools to develop the skills in the learning process. Kazimoglu et al. (2012) stated that the technology will help facilitate the development of this type of thinking skills ranging from the most basic level up to the level of high-level thinking skills. Use the CBSE is one way to improve students ICT skills and need training (Fahrurrohman, 2016). The design of a medium is said to be interesting if the designs with the word mutual as simple and easy to read, concisely written sentences, clear, solid and easy to understand, the elements that exist in the visual media. In addition, the layout, the look of the text, images and illustrations, the size and form of presentation of images, selection of paper and color (Purwanto, 2013).

From the perspective of computer-based language teaching, various studies have demonstrated the efficacy of freelance technologies in established again the process of teaching and learning (Weller, 2011). Whereas in the language teaching Chambers (2010) said that the application of computers, especially the internet has it easy for the student to learn the grammar and vocabulary. Kern (2006) holds the technology serves as a middleman between teachers with students. Efficacy of something that technology in the process of teaching and learning a lot depends on the role of the teacher.

Teachers should be wisely using existing technology by using a corresponding pedagogy (Ahmad & Tamuri, 2010). The balance of knowledge teachers in knowledge pedagogical must be balanced with the ability of ICT. It should be in a neat design and use of technology simply would help achieve the objective of teaching. Kern (2006) argues the internet applications need to maximized usage in language teaching. Parallel to the development of the internet, social media is now becoming increasingly popular internet applications. Social media is interpreted as a set of internet applications that are fostered based on ideology and Web 2.0 technology that justifies user income and association of materials (Kaplan & Haenlein, 2010).

The use of technology can be applied in one learning media on just my assessment. The effectiveness of the use of the CBSE as just my assessment gained 83 percentage% (very good). The effectiveness of CBSE views upon students do not encounter any difficulties in using the media of CBSE, CBSE media can understand instructions with ease, using the exam CBSE effective use and more time-saving machining test. In addition students interested in using CBSE exams CBSE suggest further used in the test, use of the CBSE exam on giving feedback faster, direct examination results can be known and accurately and can reduce fraud the workmanship of the exam.

CONCLUSION

Computer-based exam with CBSE students according to good, seen from the aspect of the eligibility question, feasibility, and effectiveness of media CBSE. Reserved and media used, capable of attracting students use CBSE as one assessment. It can be implemented in the process of learning assessment at the time Deuteronomy daily (UH), midterm (UTS), and the semester final exam (UAS) to reduce the cheating happened and lighten the load of corrected the teacher.

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