

Validity Of Development On Authentic Assessment Tool Of Curriculum 2013 Based In Information Technology

Oriza Candra, Syaiful Islami, Syamsuarnis, Elfizon, Hastuti, Habibullah, Fivia Eliza

Abstract: This study aimed to develop authentic assessment based on information technology, so that it could be used to provide assessments more quickly and easily accessible (using a personal computer, laptop or mobile). This system was named Information Technology based Curriculum 13 (K13) Authentic Assessment System. The K13 Authentic Assessment System based on Information Technology was developed using the procedure of developing research on Borg & Gall which was simplified into five stages: (1) analyzing product requirements; (2) developing initial products; (3) expert validation and revision 1; (4) small-scale field tests and revision 2; and (5) large-scale field tests and final products. The tools used to develop this scoring system were the 2013 curriculum, interview forms, research questionnaires, and information system modeling diagrams, with respondents from principals, vocational teachers and students in Padang City.

Index Terms: Validity, Authentic Assessment Tool, Curriculum 13.

1. INTRODUCTION

THE replacement of the KTSP curriculum (2004) into the 2013 Curriculum (K13), aims to anticipate the development of Information Technology (IT) that has hit the community (kompasiana.com, 2015). However, the efforts taken have not resulted in significant changes. According to Furqon Hidayatullah, as quoted by metronews.com, the application of K13 still leaves a number of problems, such as: the difficulty of changing the teacher mindset, low spiritual morals, the culture of reading and research is still low, lack of mastery of information technology, weak mastery of administration, and teacher tendencies which emphasizes more on cognitive aspects. Meanwhile, according to Syarwani Ahmad, as written in Sriwijaya Pos, the K13 training process carried out by the government was very short, the time of study had to be carried out, while the teacher was not ready [1]. The training process was carried out briefly and not fundamentally resulting in the teacher's confusion

Changes in curriculum from KTSP to K13, raise the question whether teachers can implement and implement it professionally. The concept of centralizing the curriculum (from the minister to the teacher), requires a long and tiered socialization process. This was illustrated by the results of a survey conducted by Tempo (2013, 10 July) by interviewing teachers in order to socialize K13 showing that there were still many teachers, principals, foundation administrators and

lecturers who did not know the K13 master design. K13 emphasizes on three domains of assessment, namely the domain: attitudes, knowledge and skills (Minister of Education and Culture Regulation No. 66 of 2013), because K13 has just been established and the socialization has not been maximized, the application of this curriculum still leaves many problems. One of them is the assessment problem, which is that there are still many teachers who have not mastered this assessment system so that the assessor used is an old assessment system (assessment of results). Other facts found in the field are teachers who have participated in K13 socialization and training, and there are still many who have not used authentic assessment systems. This is because the teacher feels that the authentic assessment system involves many aspects and methods of assessment. Teachers were asked why they were still using old assessments while they had been trained to use new assessments, on average answering this new assessment system took up a lot of teacher time so that the time spent guiding so mastering learning material (to reach the realm of knowledge and skills) would be reduced. The development of information technology that is so advanced should be able to be used to overcome various problems in human life, not to mention the problem of making time efficient in applying the authentic assessment system as stated above [2]. Educational practitioners can use information technology to facilitate the assessment process because this system can be programmed so that complicated work (if done manually) will be easy and fast (automated). The system can provide various formats and assessment aspects as must be done in an authentic assessment system. Using an automated assessment system as proposed, the assessment process will be effective and efficient. Abdallah Tubaishat, et al said that "... faculty members in the college use information generated to assess curricular efficiency and to evaluate the effectiveness of the learning outcomes for each course"[3]. The future of the educational system is practically determined by the development of technology [4][5]. Some educators and experts are against the trends of implementing EdTech tools and apps in every single aspect of the schooling system, mainly because technology is a source of distraction for students. However, proper technology integration guides students towards greater understanding of all concepts covered in class

- Oriza Candra, Faculty of Engineering Universitas Negeri Padang. E-mail : orizacandra@ft.unp.ac.id.
- Syaiful Islami, Faculty of Engineering Universitas Negeri Padang. E-mail : syaiful_islami@ft.unp.ac.id
- Syamsuarnis, Faculty of Engineering Universitas Negeri Padang. E-mail : syamsuarnis@ft.unp.ac.id
- Elfizon, Faculty of Engineering Universitas Negeri Padang. E-mail : elfizon@ft.unp.ac.id
- Hastuti, Faculty of Engineering Universitas Negeri Padang. E-mail : hastuti@ft.unp.ac.id
- Habibullah, Faculty of Engineering Universitas Negeri Padang. E-mail : habibullah@ft.unp.ac.id
- Fivia Eliza, Faculty of Engineering Universitas Negeri Padang. E-mail : fiviaealiza@ft.unp.ac.id

[6].

2 ASSESSMENT ASPECT OF CURRICULUM 2013

The aspects contained in the curriculum include aspects: (1) Knowledge; (2) Skills; and (3) Attitude. The following is a description of each of these aspects. Attitude, is the hardest aspect to be assessed. Attitudes include temperament, manners in learning, social and religious attitudes. Many assessment difficulties in this aspect are caused by the teacher being unable to supervise students, so that the assessment done is not very effective. Knowledge, the assessment of aspects of knowledge in K13 is almost the same as the aspect of knowledge in KTSP, which together emphasizes the level of student understanding in terms of learning. Values from aspects of knowledge can be obtained through: Daily Deuteronomy; Middle Examination; Final exams; and the Class Increase Exam. The fundamental difference between K13 and KTSP is that the assessment of aspects of knowledge in K13 is not the main aspect. Skills, this aspect is a new aspect included in the curriculum in Indonesia. Skills are an emphasis on the field of skill or ability. For example, the ability to express opinions, discuss / discuss, make a report file, and make a presentation. Aspects of Skills themselves are one aspect that is quite important because if only with knowledge, students will not be able to channel their knowledge so that it only becomes a mere theory. Based on the aspects of the designation above, the homeroom teacher uses it to create a Learning Results Report Book. The value of the K13 report card is written in the form of an interval and eliminates the ranking system that previously existed in KTSP. Assessment on K13 Report Card is divided into 3 columns, namely columns: Knowledge, Skills, and Attitudes. Each column of values (Knowledge and Skills) is further divided into 2 columns, namely column numbers and column letters, where each column is filled using an interval value system.

3 METHOD

This study belongs to the type of development research (Research and Development), namely the development of the Authentic K13 Assessment Tool used to assess students based on the 2013 curriculum assessment system. The approach used is a qualitative and quantitative approach. A qualitative approach is used to describe the stages of developing assessment tools in detail in accordance with theoretical principles. While the quantitative approach is used to see the validity, reliability, and practicality of using information technology-based assessment tools through limited field trials and wide-scale field tests. Schools used to conduct practical tests are Public and Private Vocational Schools in West Sumatra. The development of ICT-based Authentic Assessment Tools is a software development research. There are two main stages of this research, namely: (1) development; and (2) testing (evaluation) of the appraisal device. This method was chosen because the development can be done in an integrated manner between users (teachers), information technology experts and educational technology experts [7]. The resulting prototype is then implemented into an authentic K13-based system of assessment tools for K13 through coding. System components consisting of user interfaces (user interfaces), links; and features, integrated into the final product. Evaluation is carried out by experts and users. The development of an ICT-based

authentic K13 system of assessment tools involves two areas of expertise, namely the field of information technology and educational technology. The instruments used to record expert and user opinions are validity and practical questionnaires. Because of that, before the questionnaire is used it is first tested for its validity and reliability. Test the validity by comparing the value of r count (for each question) with r table at the 0.05 level of significance. If the correlation number is above the critical value or the probability number is below or equal to 5%, then the questionnaire question item is said to be valid. Questionnaire reliability testing using Cronbach Alpha (α). A variable is said to be reliable if a value of $\alpha > 0.6$ is obtained [8]. Testing the validity and reliability of the research instrument has obtained valid and reliable values, meaning that the instrument can be used in research.

4 RESULTS AND DISCUSSIONS

Based on the data obtained at the stage of collecting system requirements and evaluating them, after no longer found deficiencies / errors, the prototype was then developed. The prototype produced is then evaluated and repaired together with prospective users. If it is deemed feasible, then the system is immediately produced. Conversely, if there are still shortcomings/errors, improvements are made. The advantage of this paradigm is that if there is a discrepancy between the user's request and the design made, the developer can quickly make improvements.

TABLE 1
ASSESSMENT RESULT OF INFORMATION TECHNOLOGY EXPERT

No	Indicator	Descriptor	Qualification
1	Correctness	System ability to do tasks in accordance with the objectives and specifications	Very Good
2	Robustness	Program ability to anticipate conditions abnormal in carrying out its functions	Adequate
3	Extendibility	Ease of system to be developed accordingly with demands for needs.	Very Good
4	Reusability	The existence of the program can be used return either partially or entirely to another application	Good
5	Efficiency	The use of authentic scoring systems is capable efficient use of resources.	Very Good
6	Portability	The ease of the program is transferred to the hardware different.	Good
7	Verification	The ease of tracking program failures and validation.	Good
8	Integrity	Program ability to protect themselves from illegal use and modification.	Adequate
9	Modularity	Program settings in modules.	Good
10	Readness	Program readability by someone other than programmer	Good

After the questionnaire was declared valid and realistic, then the questionnaire was used to determine expert opinion

(information technology and educational technology experts). This expert opinion is given after observing the internal part of the program and trying to run it. The same thing is done by the user, the teacher runs the assessment tool using a computer, laptop, and smartphone to access the facilities provided. The results of the assessment of information technology experts, educational technology experts, and the usage of each are shown in tables 1, 2 and 3. Through table 1 it can be seen that information technology experts assess the indicators of truth, expansion, and efficiency with excellent qualifications. Indicators of repeat compliance, portability, verification, modularity, and readability are assessed as qualifying. Only indicators of rigidity and integrity are assessed with sufficient qualifications. Based on this data, it can be said that information technology experts judge that good (feasible) assessment tools are used as ICT-based assessment tools.

TABLE 2**ASSESSMENT RESULT OF EDUCATION TECHNOLOGY EXPERT**

No	Indicator	Descriptor	Qualification
1	Objectivity	Capability assessment tools for give an objective assessment	Good
2	Validity	Assessment tools can be used for measure what will be measured.	Good
3	Practicality	Practical assessment tools used for measure learning outcomes from various aspects of assessment.	Very Good
4	Reusability	Assessment tools can be used for assess learning outcomes from various eyes lesson.	Very Good

Educational technology experts, assess indicators of objectivity and validity with good qualifications, and indicators of practicality and reuse are assessed with very good qualifications. Therefore, it can be concluded that educational technology experts assess the authentic assessment system as feasible in carrying out learning tasks.

TABLE 3**ASSESSMENT RESULT OF USER (TEACHER)**

No	Indicator	Descriptor	Qualification
1	Performance	Software performance in accordance with requests and specifications.	Good
2	Easy for use	Level of ease of use of software operations.	Good
3	User Friendly	Hospitality software to guide users.	Good
4	Usability	Use or use of software for users.	Very Good

Through table 3 it can be seen that the user assesses: performance, and ease of use, and friendliness with good qualifications. While the usability indicator is rated with Very Good qualifications.

5 CONCLUSION

The development of authentic ICT-based assessment tools has been implemented and published on the internet and provided links from the web of the schools used as the research location. After that, experts and users carry out testing in accordance with the field of expertise. Based on the results of the above tests it can be concluded that: (1)

Information technology experts assess the ICT-based authentic K13 assessment system in accordance with the specifications and criteria of ICT-based systems; (2) Experts in the field of educational technology, assess the systems developed in practical use to provide assessments in accordance with the K13 rating system; and (3) the user (teacher) assesses that the student is practical (has good performance, is easy to use, and can easily assess students) according to the type and format of the K13 assessment.

REFERENCES

- [1] S. Ahmad, "Penerapan Kurikulum 2013 Selalu Menuai Masalah," 2014. [Online]. Available: <http://palembang.tribunnews.com/2014/08/06/penerapan-kurikulum-2013-selalu-menuaimasalah>. [Accessed: 07-Mar-2018].
- [2] M. A. Zaus, R. E. Wulansari, S. Islami, and D. Pernanda, "Perancangan Media Pembelajaran Listrik Statis dan Dinamis Berbasis Android," *INTECOMS J. Inf. Technol. Comput. Sci.*, vol. 1, no. 1, pp. 1–7, 2018.
- [3] A. Tubaihsat, A. Lansari, and A. Al-rawi, "E-portfolio Assessment System for an Outcome- Based Information Technology Curriculum," *J. Inf. Technol. Educ.*, vol. 8, 2009.
- [4] N. Stephanie, "7 Benefits of technology integration in the education sphere. Diambil dari pada tanggal," 2016. [Online]. Available: <https://elearningindustry.com/benefits-technology-integration-education>. [Accessed: 07-Mar-2018].
- [5] F. Eliza, D. E. Myori, O. Candra, and S. Islami, "The Validity Of Trainer On Materials Science And Devices Subject At Department Of Electrical Engineering," *Int. J. Sci. Technol. Res.*, vol. 8, no. 9, pp. 642–645, 2019.
- [6] O. Candra, F. Eliza, S. Islami, and Y. Alisman, "Pengembangan Multimedia Interaktif Mata Diklat Memperbaiki Motor Listrik Guna Peningkatan Hasil Belajar," *Perspektif*, vol. X, no. 2, pp. 7–15, 2019.
- [7] H. Al Fattah, *Analisis dan Perancangan Sistem Informasi*. Yogyakarta: Andi, 2007.
- [8] S. Azwar, *Realibilitas dan Validitas*. Yogyakarta: Pustaka Belajar, 2014.