

Feasibility Test of Web-Based Video Modelling Media for Learning Social Skills for Autistic Students at Inclusive Elementary Schools in Surakarta

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Abstract

This research aims to know the feasibility level of Web-based Video Modelling Media for Social Skills of Autistic Students in Inclusive Elementary School in Surakarta. The current study used quantitative design as the research method. The test procedure used is Alpha Testing and Beta Testing. The subject of this research were autistic students at Inclusive Elementary School in Surakarta. The technique of data collection is done by a questionnaire. Data analysis using quantitative data analysis. The research results obtained were that Web-based Video Modeling Media for Social Skills of Autistic students received an assessment of 83.7% from media experts, 87.47% from material experts, and 88.5% from IT experts and 89.01% from users candidate. So it can be inferred that video modeling media for the social skills of autistic students is very decent for used to learning the social skills of autistic students in inclusive elementary schools in Surakarta

Keywords: *Autism, feasibility, video modelling, website*

Abstrak

Penelitian ini bertujuan untuk mengetahui tingkat kelayakan Media Video Modeling Berbasis Web untuk Keterampilan Sosial Siswa Autis di Sekolah Dasar Inklusi di Surakarta. Penelitian ini menggunakan desain kuantitatif sebagai metode penelitian. Prosedur pengujian yang digunakan adalah Alpha Testing dan Beta Testing. Subjek penelitian ini adalah siswa autis di Sekolah Dasar Inklusif Surakarta. Teknik pengumpulan data dilakukan dengan kuesioner. Analisis data menggunakan analisis data kuantitatif. Hasil penelitian yang diperoleh adalah Media Video Modeling Berbasis Web untuk Keterampilan Sosial Siswa Autis mendapat penilaian sebesar 83,7% dari ahli media, 87,47% dari ahli materi, dan 88,5% dari ahli IT dan 89,01% dari calon pengguna. Jadi dapat disimpulkan bahwa media video modeling untuk keterampilan sosial siswa autis sangat layak digunakan untuk pembelajaran keterampilan sosial siswa autis di sekolah dasar inklusi di Surakarta.

Kata kunci: *Autisme, kelayakan, pemodelan video, website*

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INTRODUCTION

Autism according to Leo Kanner in 1943 (Atmaja, 2018) was described as an inability to interact with other people as well as having language disorders and having strong memory routes and an obsessive desire to maintain order in one's environment. As stated by White, Scahill, Klin, Koenig, & Volkmar, (2017) that social disorders in autistic children are diverse and involve speech, linguistic conventions and interpersonal interactions (Azzahra, 2020). So the most visible impact is on social skills.

There are many interventions to handle the problems of autistic children in these individuals, including social skills problems. Many researchers intervene to improve these deficient autistic behavioral skills. Starting from research related to developing social skills interventions to meet the needs of autistic children, developing play skills, self-care skills, and academic learning skills. This is done in order to improve the social skills of autistic children (Alzyoudi et al., 2014), There are autistic children who attend public or inclusive schools. Van Tran, Pham, Mai, Le, & Nguyen stated that inclusive education for autistic children is an organizational and learning practice where autistic children are in the same classroom as children in general (Van Tran et al., 2020).

Another form of intervention developed to improve the social skills of autistic children is video modeling. , Gariggan & Vandala (Aldi et al., 2016) also mention video modeling as an individual teaching procedure through video. Gariggan & Vandala Mentioned the details as individuals who viewed sample video recordings of models performing specific activities or other written activities. After showing a video involving the model, the child is immediately directed to carry out the activity or script that he observes in the video.

Several previous studies regarding video modeling were still in the form of video modeling soft files . Video modeling in soft file form has the disadvantage that it takes up storage space on the device and cannot be accessed flexibly by everyone. Technological innovation is needed so that video modeling users can be accessed individually according to the class schedule and using their respective devices using the available internet network (Bates & Wulf in Yusuf, 2017)

The need for development and innovation requires internet networks, computer devices or gadgets to be accessible by anyone and at any time in a flexible way (Bhati & Song, 2019) In simple terms, it can be said that all learning is carried out using internet technology and during the learning process it is felt by those who participate, then the activity can be called web-based learning. Therefore, the research developed a medium, namely Web-based Video Modeling, to improve the social skills of autistic students in inclusive elementary schools. The use of the website is intended for easy access by users.

The website that has been created will be tested for suitability. This product feasibility test is carried out by competent experts. Expert feasibility tests are carried out in 3 sub-fields related to the website being developed. These include media experts, social skills material experts, IT experts specializing in web and practitioners or potential users as representatives to determine suitability before being used by a large number of users (Sugiyono, 2015)

To develop appropriate media, it is necessary to go through development procedures. The development procedure carried out by researchers was ADDIE (a design which consists of 5 stages research model, there are Analyse, Design, Development, Implementatio, and Evaluation) was prepared by Branch. Because this research uses the ADDIE development model by Branch (2009) to determine the feasibility and suitability of the material, there is a need for material preparation and appearance in the design and feasibility testing at the development stage.

At the design stage (Branch, 2009: 59) there are several things to do, including preparing materials, preparing media designs, preparing testing stages, and preparing

cost or financial analysis. Due to research limitations, at this it is only carried out are preparing the material followed by preparing an assessment and creating a media concept.

Preparing media designs begins with compiling flowcharts and storyboards . Making flowcharts and storyboards is one of the steps in the design stage. The preparation material is adapted to aspects of social skills as expressed by Cartledge and Milbrun in Purnamasari & Khotmi, (2014). Where the content of social skills has been manifested in several videos. In previous research, a video could also be used to measure several original skills with a complete task analysis. Therefore, in the video modeling procedure, steps are taken to develop analysis tasks and scripts to find out the extent to which the video can measure several social skills.

The next part is development . In the development section, researchers used the developer's website . Researchers provide draft flowcharts and storyboards that have been prepared to developers . With the domain/hosting ".com" with the complete address www.videomodellingautism-plbuns.com , where there is a homepage containing hyperlinks to other pages, so that it is easily accessed by internet users (Furkonudin & Darmanto, 2016). assessment is assessed in terms of the video media itself by media experts. Media expert development instrument, prepared based on combined media assessment criteria from Riyana (2011)& Arsyad (2017) The aspects assessed include functions and benefits, visual media, audio media, typography, language, and programming media. To measure the validity of the material prepared at the design stage, researchers used material expert validation with the BSNP assessment criteria (BSNP, 2006). Where all material aspects are mixed with operational definitions, accuracy and validity of the material, as well as aspects that encourage curiosity. The assessment after media and material experts is website assessment. The website here is used as a container to accommodate material in videos so that it is more easily accessed. The website assessment instrument is well prepared based on Indrajit's study which is accessed via the Ministry of Education and Culture's homepage (Indrajit, 2020). Where there are 3 main assessment aspects, namely site design, site functionality and customer value.

After conducting trials with experts, the next stage of trial development is the stage where practitioners test the website-based video modeling media that has been developed. Testing was carried out by experimenting with the use of media by special supervising teachers and students. This trial is carried out by potential users as a small representative before being tested on users widely.

METHOD

This research uses quantitative methods Sugiyono, (2015) explains that quantitative methods are research methods used for research on certain populations or samples. Data collection used research instruments with a Likert scale, to determine the suitability of the media being developed, alpha and beta testing was carried out. Alpha testing was carried out by testing the feasibility of the relevant experts, namely 2 media experts, 2 material experts and 2 IT experts. Meanwhile, Beta testing tested the product on potential users, namely representatives of 3 Special Guidance Teachers (Shadow Teacher) for autistic students at Inclusion Elementary Schools.

Data analysis techniques were carried out using media experts, material experts, IT experts, and Shadow Teachers as a practioner. Qualitative data in the form of suggestions and responses will be analyzed and considered as material for revision of the media. Quantitative data from questionnaire validation will be explained using the Sugiyono (2015) formula:

$$NP: \frac{R}{SM} \times 100\%$$

Information :

NP : Percent value

R : score obtained

SM : Maximum Score

Furthermore, the results of the feasibility percentage score obtained will be interpreted using the following criteria:

| | |
|-------------------------------|---|
| Very Decent | $X \geq (Mi + 1,8 (Sdi))$ |
| Decent with minor revisions | $Mi + 0,6 (Sdi) \leq X < Mi + 1,8(Sdi)$ |
| Decent with moderate revision | $Mi - 0,6 (Sdi) \leq X < Mi + 0,6$ |
| Worth a major revision | $Mi - 1,8 (Sdi) \leq X < Mi - 0,6$ |
| Not feasible | $X < (Mi - 1.8 (Sdi))$ |

Next, so that the feasibility analysis test results can be trusted, a reliability test is carried out. Using the formula adopted from (Wulandari et al., 2019) as follows:

$$PA: 100\% \times \left(1 - \frac{A - B}{A + B}\right)$$

Information :

PA : Percentage of Agreement

A : The highest score given by the validator

B : the lowest score given by the validator.

If the test results show $\geq 75\%$ then the instrument can be said to be reliable.

RESULTS AND DISCUSSION

The data was obtained from the results of filling out the instrument are in the form of a questionnaire given to experts and prospective users regarding the suitability of video modeling media for the social skills of autistic students. Before respondents provide assessments, respondents first test existing products in the form of web-based video modeling media. Test results by media experts in the form of assessments or suggestions are explained and product revisions are made according to the suggestions. Media expert development instrument, prepared based on combined media assessment criteria from Riyana (2011)& Arsyad (2017). Aspects assessed include functions and benefits, visual media, audio media, typography, language and programming media. The following are the results of media expert test data:

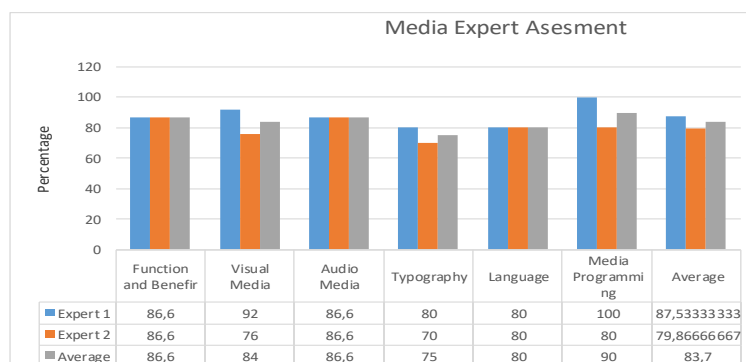


Figure 1, Media Expert Asesment shows that feasibility in terms of Function and Benefit aspects from two experts obtained an average score of 86.6%. Based on the visual media aspect, the average score was 84%. The Audio Media aspect received an average score of 86.6% as did the Function and Benefits aspect. The typography aspect got a score of 75%, the language aspect got an average result of 80%, and the last aspect, namely programming media, got a result of 90%. So the overall average value is 83.7%. The limit to be said to be very feasible on this media expert instrument is 84%, so with this result it can be said that the media is feasible with minor revisions. Reliability results in the media expert test by obtaining scores as shown in Figure 1 with calculations using the percentage agreement formula, obtained a score of 82.35% of the reliability value so that it was included in the reliable category.

With the appropriate category with minor revisions, the media developer received a note of advice from experts as a minor revision to the video media, namely the use of a brighter and more attractive theme considering that users are in the age range of children and the use of letters in the video title is made clearer using an easier font . readable compared to calligraphic writing. In this media assessment, experts assess the media according to appropriate criteria with minor revisions. The changes conveyed by experts are that the media background is too dark and less attractive as well as the use of letters or the choice of text type that is not clear and illegible. The readability of this writing is one of the factors in preparing video media, as stated by Walker & Hess in Arsyad (2017), one of the media criteria Good ones are judged by quality including readability both in terms of writing and the quality of documentation. Therefore, the researcher changed the type of font used and changed the video background used.(Arsyad, 2013)

The validation test results are then carried out by material experts. To measure the validity of the material prepared at the design stage, researchers used material expert validation with the BSNP assessment criteria. Then, from the data results, the product is explained and revised according to the suggestions. The data results are shown in Figure 2.

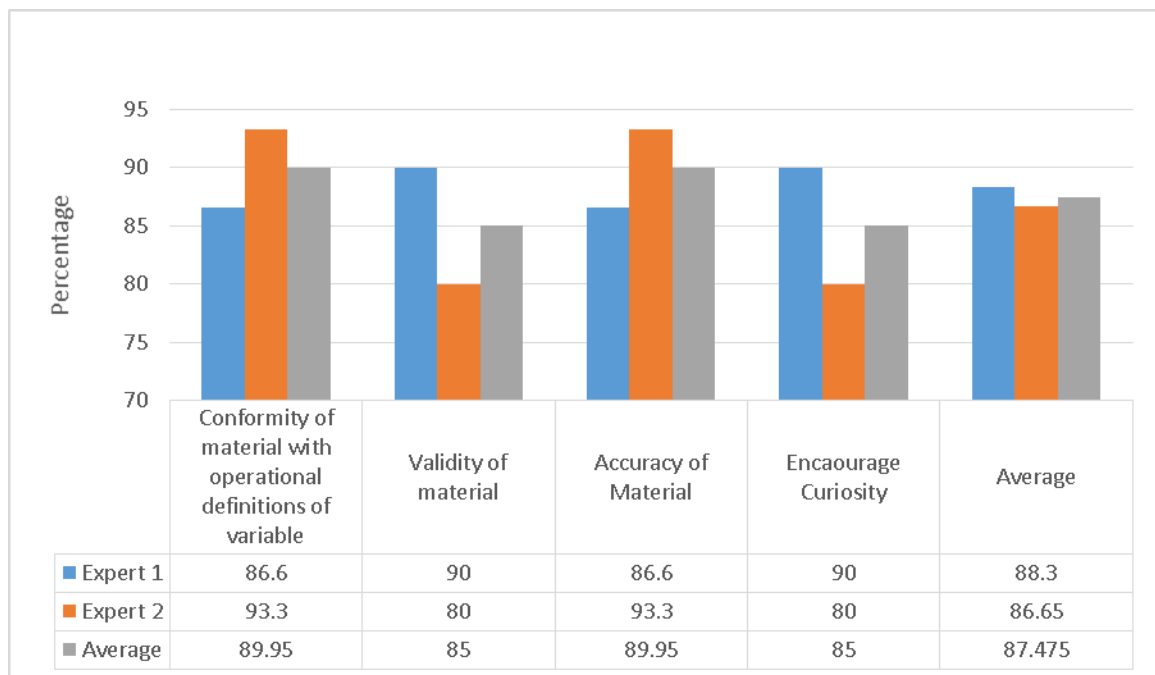
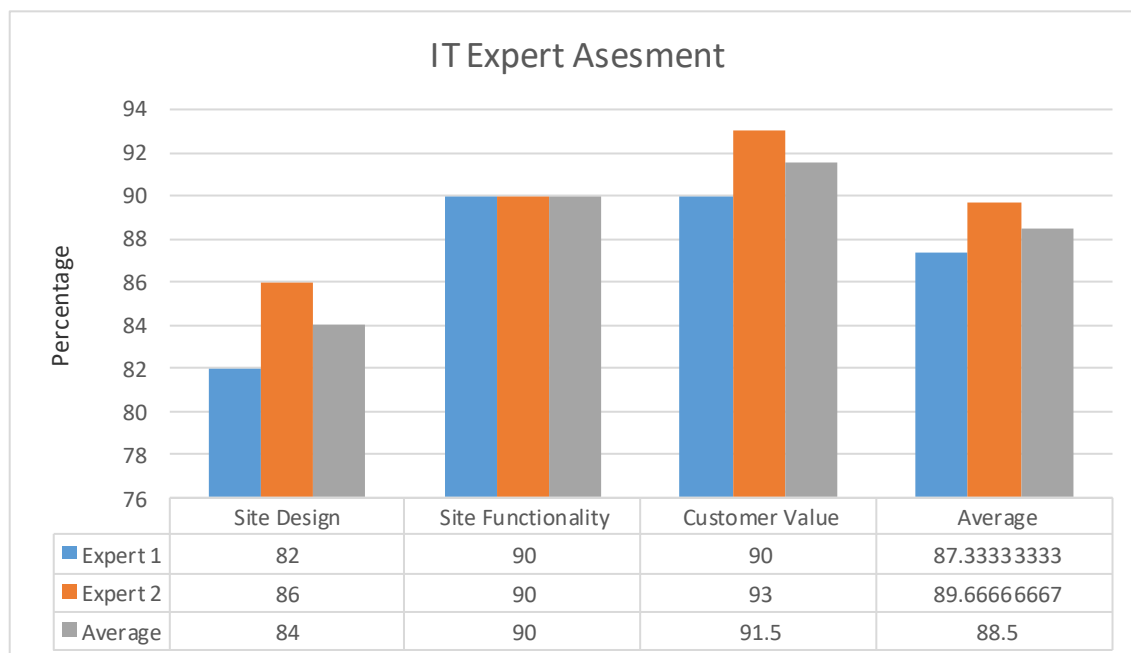


Figure 2, namely the material expert test results, shows that in the aspect of material suitability with the definition of operational variables, the final result was quite high, namely 89.95%. in the validity aspect of the material it shows a score of 85%, while in the aspect of material accuracy it shows a result of 89.95%. and in the aspect of encouraging curiosity, the results were 85%, as were the aspects of the validity of the material. So the final average result in the material expert test obtained a percentage of 87.475% with very feasible criteria. The Percentage of Agreement value shows a result of 92.32%, thus obtaining a reliable category.

The preparation of video material is adapted to aspects of social skills as expressed by Cartledge and Milburn in Purnamasari & Khotmi, (2014). Where the content of social skills has been manifested in several videos. In previous research, a video could also be used to measure several original skills with a complete task analysis. Therefore, in the video modeling procedure, steps are taken to develop analysis tasks and scripts to find out the extent to which the video can measure several social skills. With these very decent results, it can be interpreted that all aspects of the alignment of the material with operational definitions, the accuracy and validity of the material, as well as aspects that encourage curiosity, have generally met the appropriate standards. All indicators are adapted to the needs and characteristics of autistic students.

he next expert test is the IT expert test related to the website.



Based on Figure 3, the test results of web specialist IT experts show that the value of the site design aspect with indicators of website appearance, user interface, user friendliness obtained an average score of 84%. In the Site Functionality aspect with indicators of availability of search facilities, suitability to individual needs and security of website access, the score was 90%, while in the customer value aspect with indicators of commercial value, providing good information, and the user manual mechanism, the score was quite high, namely 91.5%. . so the average final score was

88.5% in the very decent category. The percentage of agreement value obtained in this IT expert test is 93.71 so it is in the reliable category.

The website here is used as a container to accommodate material in videos so that it is more easily accessed. The website assessment instrument is well prepared based on Indrajit's study which is accessed via the Ministry of Education and Culture's homepage (Indrajit, 2020). Where there are 3 main assessment aspects, namely site design, site functionality, and customer value. All aspects get very decent marks. With these appropriate criteria, the website will be more easily accessed by internet users (Furkonudin & Darmanto, 2016).

After obtaining feasibility from experts, the next stage is the practitioner test, namely the assessment carried out by potential users or part of Beta Testing. As previously explained, the user is a special tutor for autistic students and is tested on students. The following are the results of the assessment test by representatives of prospective users which will be taken by only 3 people as part of the practitioner test. The results can be seen from Figure 4.

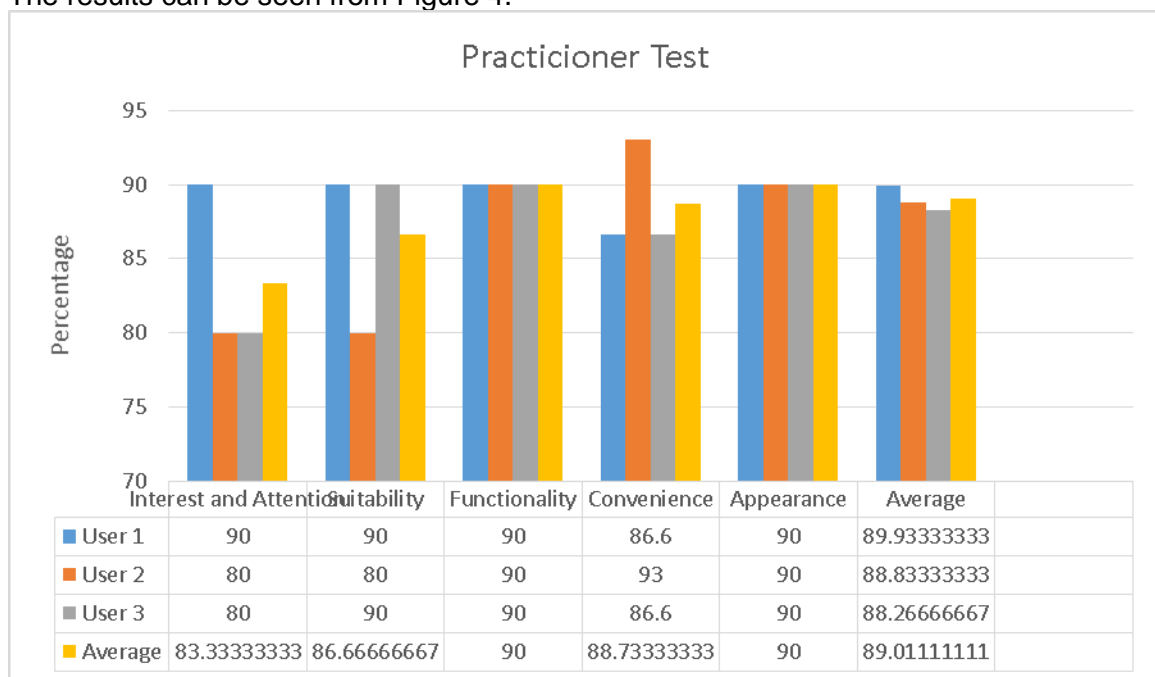


Figure 4 shows that the Interest and Attention aspect obtained a score of 83.3%, while the suitability aspect obtained a result of 86.67%, and the web media functionality aspect for users obtained a result of 90%. Ease of use achieved a result of 88.73%. and in the display aspect, the results were 90%. So the average final gain is 89.01% so dividing this media is very feasible. The percentage agreement value obtained a result of 92.48% with reliable results.

With the assessment results from media experts, material experts, experts, IT, and users or practitioners, the feasibility score is very decent if on average. The reliability of the four instruments obtained very reliable results. With these results, this web-based video modeling media is suitable for use to improve the social skills of autistic students in learning settings at inclusive elementary schools in the city of Surakarta.

CONCLUSION

Based on the results of the research and discussion above, Web-based video modeling media can be recommended as suitable for use in learning social skills for autistic students in inclusive elementary schools in the city of Surakarta, according to the assessment of media experts, material experts, IT experts and users. Each gave an assessment score of 83.7% from media experts, 87.47 from material experts, 88.5 from IT experts and 89.01 from users. This score received a very appropriate category if averaged to be used in learning social skills for autistic students in inclusive elementary schools in Surakarta City. The implication of this research is that web-based video modelling are ready to be provided on a larger scale. The suggestion for future researchers, they can develop web based video modelling with behavioral aspect more than social skills only.

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