



Development of Animated Video Learning Media Integrated with Quranic Verses on Molecular Shape Material for 11th Grade Student

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Abstract

This research was motivated by the limited availability of learning media used as a source of student learning which has an impact on the quality and learning process. Learning media used by educators are still simple and non-technological. Therefore, it is necessary to develop a learning media to be used as an additional learning resource for students. The learning media developed consists of animated videos integrated with verses from the Quran. The purpose of this research is to produce animated videos integrated with Quranic verses on molecular form material that are valid and practical. This research uses the Research and Development research method with the 4-D model (define, design, develop, and disseminate). Based on the results of the research conducted, it was found that 1) the animated video integrated with Quranic verses met the criteria of being very valid with a percentage of content feasibility on the material of 90.17%, content feasibility on the interpretation expert obtained a percentage of 95%, presentation feasibility obtained a percentage of 93.75%, presentation feasibility on the interpretation expert obtained a percentage of 100%, linguistic feasibility obtained a percentage of 92.41%, linguistic feasibility on the interpretation expert obtained a percentage of 96.87% and feasibility of grammatical obtained a percentage of 92.50%, 2) the animated video integrated with Quranic verses on molecular shape material has met the criteria of very practical with the results of student response questionnaires on the ease of use indicator obtained a percentage of 87.10%, the interest indicator obtained a percentage of 90.17%, the usefulness indicator obtained a percentage of 89.28 and time efficiency obtained a percentage of 90.62%. The results of this study indicate that the animated video developed can be used as a learning resource for students.

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INTRODUCTION

Chemistry is one of the branches of natural science that includes concepts, rules, laws, principles, procedures, and theories studied at the SMA/MA level. This is in line with the opinion of Kurniawati and Mitarlis (2020) which states that chemistry does not only study formulas and calculations, but also studies chemical facts, theories, and principles. This is not much different from the opinion of Herman et al. (2022) which states that chemistry has several characteristics, including abstract chemical concepts.

When chemistry learning is carried out, educators have the flexibility to choose various teaching aids so that chemistry learning can be tailored to the learning needs and interests of students. Educators can do various ways so that these goals can be realised, one of which is by using learning media. According to Kustandi (2020) learning media is a tool that can help in the learning process which serves to clarify the meaning of the message conveyed so that better and perfect learning objectives are achieved. The use of learning media can motivate

students to master the lessons given without feeling bored (Nur Azizah et al., 2022). According to Jediuty cited by Adventyana (2022) the benefits of learning media are to make the learning process more communicative and interesting because the media can be a place of interaction between students, educators and learning media and can support learning strategies and methods. One of the learning media that can be used to understand abstract learning materials is audio-visual media. Audio-visual media is learning media that combines audio (hearing) and visual (vision) that can help students understand the subject matter. One of the audio-visual learning media is animated video.

Animated video learning media is one of the learning media that is classified as practical, interesting, the material presented is more concise, clear and concise as well as interesting animated images so that it can make students interested in learning and also help students in pursuing and exploring the subject matter (Rahmawati, 2013). Animated video learning media has an important role to improve student understanding in learning chemistry. According to Sanjaya cited by Putri et al. (2022) stated that the presence of animated videos in the learning process can increase student learning motivation making it easier for students to understand abstract concepts that require visualisation with animated video-based learning media so that the teaching and learning process becomes interesting and fun.

Animated video learning media can be done by integrating science, namely between chemistry and religion. This is because students are expected to have a religious and spiritual attitude after learning the learning material. This has been stated in Permendikbudristek number 5 of 2022 article 10 paragraph 3 (a) concerning graduate competency standards which states that each student must have a religious and spiritual attitude. Animated video learning media integrated with Islamic values, especially verses from the Koran, is very important to do, because in essence all knowledge comes from Allah, so that the process of searching, applying and disseminating it must be in accordance with His will (Chasanah et al., 2019). Not only that, according to Herman (2021) integration is a way of combining scientific values and spirituality and other things so that they have a complete connection and avoid their separation in a discipline. One of them is integration in the academic field, namely science, especially chemistry, with religious values. The purpose of integrating science with Quranic verses is to prevent the separation (dichotomy) between religious science and natural science produced by secularism.

Along with the times and science and technology, some schools have implemented the use of learning media. In addition, there are also some schools that have not utilised the media in the learning process optimally, this causes students to be passive in the face-to-face learning process due to a lack of enthusiasm for chemistry subject matter. In addition, when face-to-face learning is carried out, educators explain more in front of the class using conventional media assistance such as whiteboards, markers and textbooks, so that students tend to only receive explanations and record material provided by educators (Hasanah et al., 2023). The problems above are not much different from the problems found by researchers when conducting observations and interviews with educators and 11th Grade students at State Senior High School (SMAN) 2 Batusangkar. Based on the results of observations and interviews conducted, the use of media in the learning process is not optimal. Students are less interested in learning chemistry. This is because students have difficulty in understanding and learning chemical materials contained in teaching materials. Learners want to learn chemistry material by not using teaching materials alone. Learners emphasise the use of other supports, one of which is the optimal use of learning media. In addition, learning materials have not been integrated with Quranic verses. Based on the results of interviews with chemistry educators, Educators stated that the integration of Quranic verses in learning has not been done. Educators have known the importance of integrating the Quran or Hadith in learning as stated in Permendikbudristek RI number 5 of 2022 article 10 paragraph 3 (a), but

educators have not been able to apply it in the learning process. In addition, students also said that they were interested if integration with Quranic verses could be applied in the learning process in the classroom.

Based on this, learning media needs to be utilised in the learning process to increase student interest and motivation. In this case, audio-visual learning media is needed, namely animated videos that can support the learning process in the classroom. The material contained in the animated video is the shape of the molecule. Therefore, this research was conducted with the aim of obtaining learning media for animated videos integrated with Quranic verses on the material of molecular shapes that are valid and practical so that they can be used as learning media by educators and students.

METHOD

In this study, the type of research used by researchers is Research and Development (R&D) with the stages of define, design, develop, and disseminate. The define stage is carried out to see the initial conditions in the field and determine what learning media will be developed. The design stage is the design of learning media integrated with Quranic verses for learning. The develop stage is an activity to realise the final product in the form of learning media after passing the improvement process by several experts in their fields. The disseminate stage contains activities to disseminate and utilise products that have been developed and have passed trials on a larger scale. However, this research was only carried out until the third stage, namely the develop stage. More detailed stages can be seen in Figure 1 below:

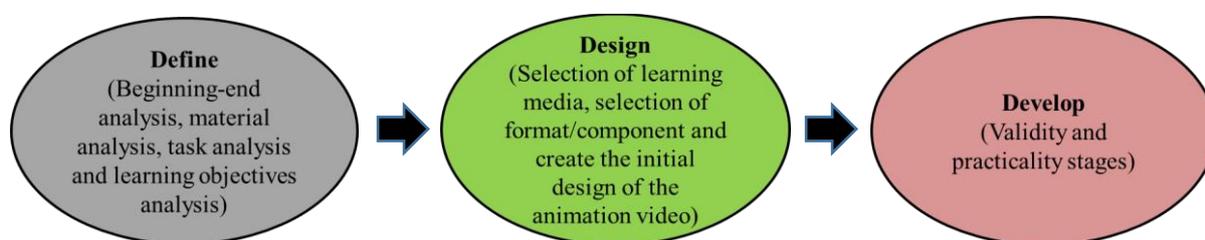


Figure 1. Stages undertaken in the study

Define Stage

This stage is the first step to determine the basic problems found in the chemistry learning process at State Senior High School (SMAN) 2 Batusangkar. There are several analyses carried out at this stage, namely the beginning-end analysis (interviews with chemistry educators, analysis of learner needs, analysis of teaching materials and analysis of learning media), material analysis, task analysis and analysis of learning objectives.

Design Stage

At this stage, everything needed in product development will be prepared. There are several stages that will be carried out, namely designing animated videos integrated with Quranic verses by selecting learning media, selecting animated video formats/components and making initial designs of animated videos. Learning media is selected by considering the purpose of product development so that the developed product can be a tool in delivering learning materials. Then the format of the animated video integrated with Quranic verses includes an animated video cover, instructions for using the product, competencies to be achieved (learning outcomes and learning objectives), teaching materials (including explanations of material and Quranic verses) and a closing page. Furthermore, designing an animated video research instrument consisting of an animated video validation sheet, an animated video validity test instrument validation sheet, a practicality response questionnaire sheet and an animated video practicality response questionnaire validation sheet.

Develop Stage

This stage contains the actions of researchers to realise the final product in the form of an animated video after going through several stages. There are two stages carried out, namely the validity stage and the practicality stage. The validity stage was carried out by six validators including four chemistry lecturers and two interpretation expert lecturers who were carried out to ensure that the products made were accurate and of high quality. There are several aspects that are assessed, namely aspects of content/material feasibility, presentation feasibility, language feasibility and graphic feasibility. Then the practicality stage is carried out to see the use of animated video products that have been developed. This stage was carried out by means of interviews with educators and filling out response questionnaires by students. This animated video integrated with Quranic verses was tested on students of 11th Grade F3 class students at SMAN 2 Batusangkar. There are several aspects that are assessed including ease of use, interest, benefits and time efficiency. The data collected from the validity and practicality results were then tabulated. The tabulation results are sought for the percentage with the formula:

$$P = \frac{\Sigma \text{ Score of each item}}{\text{Maximum score of each item}} \times 100\%$$

Table 1. Validity and Practicality Categories

Score Interval	Criteria
< 20%	Not valid/practical
21-40%	Less valid/practical
41-60%	Fairly valid/practical
61-80%	Valid/practical
81-100%	Highly valid / practical

Source: (Mubarok, 2023).

RESULT DAN DISCUSSION

This research is a Research and Development study using the 4-D development model (define, design, develop, and disseminate). This research was conducted up to the develop stage with the following results:

Define Stage

At this stage, several analyses were carried out, namely interviews with chemistry educators, analysis of learner needs, analysis of teaching materials, analysis of learning media, material analysis, task analysis and analysis of learning objectives. In the results of interviews with chemistry educators, it can be concluded that the chemistry learning media used are still simple non-technology and less than optimal. So that in learning, educators are more likely to use teaching materials in the form of textbooks and LKPD (Student worksheet). In addition, educators stated that they have not implemented the integration of material with religious science. Educators know that this is important to do because it has become an independent curriculum demand as stated in Permendikbudristek article 10 paragraph 3 (a) which states that every student must have a religious and spiritual attitude.

In the analysis of student needs, it can be concluded that students still do not fully understand chemistry material. This is because they have difficulty in understanding the subject matter in the teaching materials, one of which is the material on the concepts and principles of molecular shapes. The material described in the teaching materials uses relatively long explanations, standardised and monotonous language. In addition, students also admit that the material explained is quite difficult to understand because some students are not in

accordance with the teaching method of educators who only explain the material on the blackboard. Based on the analysis of learners' learning styles conducted by the school, most learners in the class have an audio-visual learning style. Thus, these students are less than optimal in understanding the subject matter at school and at home. According to Widayanti cited by Azizah et al. (2023) stated that educators can support students' learning motivation with their learning styles in order to achieve maximum learning outcomes including audio, visual and kinesthetic. In addition, students are also interested if chemistry material is integrated with verses from the Quran. According to research by Fadhilah & Rahmawati (2024) integration can help students to grow and maximise critical thinking skills such as creating effective learning because students actively participate in learning, increasing students' learning motivation and building the ability to respect the opinions of peers.

In the analysis of teaching materials and learning media, teaching materials used by educators and students are quite varied in the form of package books and LKPD. However, the learning media used are still simple and not yet technology-based. The learning media is a balloon shaped like a chemical molecule. This learning media is satisfactory, but has several weaknesses, namely its monotonous appearance. Then this learning media is less interesting for students to learn. This is because the learning media used does not match the images listed in the textbook so that it makes students confused.

In the material analysis conducted, molecular shape material has characteristics, namely concepts, facts, principles and procedures. This material is quite difficult to understand, especially on conceptual material such as VSEPR (Valance Shell Electron Pair Repulsion) theory and hybridisation concepts that require more understanding to learn. Then the molecular shape material has not been integrated with Quranic verses. Then in the task analysis, the task scores obtained by many students are low. This is because some students do not understand the material they learn because they do not understand how the educator explains the learning material. In addition, only a few students repeat lessons at home because their textbooks are left at school.

Then on the analysis of learning objectives, it can be concluded that after students learn the material of molecular shapes, students are able to study the structure of particles in forming compounds in which there are basic concepts related to molecular shapes such as VSEPR theory, electron domain theory and hybridisation theory. In addition, students are asked to be able to predict the molecular shape of various compounds based on VSEPR theory, electron domain theory and hybridisation theory. In this analysis, the learning outcomes (CP) were elaborated. From CP, it is derived into learning objectives (TP).

Based on the analysis that has been done, learning media can attract interest in learning and improve the quality of student learning outcomes. The learning media that researchers want to develop is in the form of animated videos. Animated video learning media is one of the learning media that is classified as practical, interesting, the material presented is more concise, clear and concise as well as interesting animated images so that it can make students interested in learning and also help students to pursue and explore the subject matter (Rahmawati, 2013). In previous research, there were several studies conducted with the development of learning media. The first research by Sya'bania et al., (2020), research on the development of animated video media can increase learning motivation and learning outcomes tests compared to learning that does not use animated video media. The second study, Kutlu (2023), the results of the trial of animated video media on students, were able to improve learning outcomes as evidenced by the increase in students' post-test scores and further research, P. Putri et al., (2023) where animated video media is feasible to use in the learning process in class.

Design Stage

The second stage is the design stage. The design stage was divided into three parts, namely the selection of learning media, format selection and initial design. In the selection of learning media, namely in the form of animated videos integrated with verses of the Koran. Animated videos are also known as audio-visual learning media that use animation to create the illusion of movement by composing a series of images in sequence (Sari et al., 2024). Furthermore, the selection of video format refers to components such as opening, content, and closing (Khuzairah, 2024). The selection of the format will fulfil all components of the animated video integrated with Quranic verses. The animated video learning media display also contains animations, images, material related to molecular shapes, sample problems and there is also a simple experimental procedure for molecular shapes that is clearer and more interesting which can increase student interest in learning. The animated video format was chosen with effective and efficient use of time and easily accessible anytime and anywhere. Next, the initial design was carried out. The activities carried out at this stage are compiling the framework, type of writing, material, animation that will be applied in making animated videos. The design was done with Canva and Capcut software. The design of the animated video integrated with Quranic verses is 1) the cover of the animated video, 2) instructions for using the product, 3) competencies to be achieved, 4) introduction of animated characters, 5) indicators of material to be learned, 6) teaching materials, 7) molecular shape material integrated with Quranic verses. The material of molecular shapes integrated with Quranic verses, 8) practical experiments and 9) closing page. The animated video is designed with a size of 42.5 MB (1920×1080). The typeface used in the animated video for the cover part is Lilita One with a font size of 112 and Comica with a size of 30 to 40, the indicator of the material to be learned uses Neue Cyrillic and PT Sans fonts with a font size of 54, for learning materials using Gagalan fonts with a size of 130 and Arimo with a size of 35 to 45.

The next stage is to design research instruments, namely the animated video validation sheet, animated video validity test instrument validation sheet, animated video practicality response questionnaire sheet, animated video student response questionnaire instrument validation sheet, animated video interview guideline sheet and animated video interview guideline instrument validation sheet. Before the instrument is designed, the researcher first makes a grid. Then the instrument is designed according to the criteria.

Develop Stage

At this stage, the animated video produced from the design stage is tested for validity and practicality. Before conducting validity and practicality tests of animated videos integrated with Quranic verses, what is done first is to validate the validity and practicality test instruments with a validation sheet questionnaire. The aspects assessed to validate the two instruments to be used are: 1) questionnaire format, 2) language used and 3) questionnaire statement items. The results obtained from the validation sheet of the validity test instrument and the practicality test of the animated video are highly valid.

After the validity test instrument is declared valid, the instrument can be given to the validator. The following presented the results obtained can be seen in Table 2 and Table 3.

Table 2. Results of Validation Sheet for Animated Video Integrated with Quranic Verses

No	Aspects to be validated	Score	Remarks
1	Content eligibility aspect	90,17%	Highly valid
2	Presentation feasibility aspect	93,75%	Highly valid
3	Aspects of language appropriatenes	92,41%	Highly valid
4	Aspects of graphical feasibility	92,50%	Highly valid
	Total	92,26%	Highly valid

Table 3. Results of the Validation Sheet (Interpretation Expert) of Animated Video Integrated with Quranic Verses

No	Aspects to be validated	Score	Remarks
1	Content eligibility aspect	95%	Highly valid
2	Presentation feasibility aspect	100%	Highly valid
3	Aspects of language appropriatenes	96,87%	Highly valid
	Total	97,08%	Highly valid

In Table 2 and Table 3, it can be seen that the overall validity test obtained a percentage of 92.26% and 97.08% which were categorised as very valid. Based on these results, this animated video learning media can support student interest and motivation in the chemistry learning process. This is evidenced by the active students during the implementation of learning both in learning the material and in doing simple lab work. Not only that, this learning media is also applied by chemistry educators in other XI classes outside the research class. This can be interpreted that with the increased interest and motivation of students and the application of animated video learning media in other classes is expected to support the chemistry learning process so as to achieve learning objectives and improve the quality of education.

After the validation, there were some suggestions from the validators related to the animated video developed and these suggestions have been added. The following figure presents the results of the revised animated video with the validator.



Figure 2. The revised animated video after the validation stage

After the practicality test response questionnaire instrument is valid, then the instrument can be used. The results obtained can be seen in Table 4.

Table 4. Results of Practicality Sheet of Animated Video Integrated with Quranic Verses

No	Practicality aspect	Score	Remarks
1	Ease of use	87,10%	Highly practical
2	Attractiveness	90,17%	Highly practical
3	Benefits	89,28%	Highly practical
4	Efficiency of time	90,62%	Highly practical
	Total	89,22%	Highly practical

Based on Table 4, it can be seen that overall the practicality test of animated videos integrated with Quranic verses obtained a percentage of 89.22% which was categorised as very practical. After learning activities using this animated video were carried out, many students gave positive feedback and responses. Learners stated that they understood and comprehended the material they learnt by using the animated video. Learners are also interested and want to learn other materials using the same or more interesting learning media. Not only that, learners stated that this animated video is easy to use and makes it easier for them to learn molecular shape material. In learning activities, students are active and enthusiastic in learning and understanding learning materials with animated videos. This is in line with the opinion of Putri et al. (2022) which states that animated video learning media can support a fun teaching and learning process, can attract student's attention in learning and can also increase students' understanding of material that is difficult to understand.

The validation aspects of animated video learning media are adjusted to the BNSP assessment aspects, namely aspects of content feasibility, aspects of presentation feasibility, aspects of content feasibility and aspects of graphic feasibility (Sarinastiti & Wibowo, 2021). If the four aspects are fulfilled, it can be said to be feasible as a learning resource (Arsanti, 2018). The validity test results for the content feasibility aspect by 4 validators reached an assessment percentage of 90.17% and 2 validators (interpretation experts) reached an assessment percentage of 95% so that it was included in the very valid category. This is because the material coverage in the animated video is in accordance with the learning outcomes (CP) and learning objectives (TP). The material presented in the video animation includes chemical concepts, facts, principles, and procedures that are in accordance with the CP and TP. The material in the video animation is also presented in a scientifically correct manner and in accordance with the material, and is related to everyday life. This is in line with the opinion of Setiani et al. (2022) which states that a good animation video has content suitability with learning outcomes and learning objectives. In research conducted by Putri et al. (2022) on the development of chemistry learning media in the form of animated videos categorised as very valid and very feasible which can be used in the learning process as a useful learning media to increase student interest and motivation to learn. Not only that, Kutlu's research (2023) on the development of chemical video animation media is categorised as very feasible to use. This animated video media can improve students' understanding of abstract chemical material and improve student learning outcomes. This is evidenced by an increase in student post-test results.

Then the results of the validity test for the presentation feasibility aspect by 4 validators reached an assessment percentage of 93.75% and 2 validators (interpretation experts) reached an assessment percentage of 100% so that it was included in the very valid category. This is because in the animated video there are components such as instructions for using the video, animated characters, CP, TP and sample questions. Each component has an important role in animated videos, such as instructions for using videos that are used to facilitate educators and students in using animated videos. Animated characters are useful to attract students' interest in learning as if there is an educator explaining the learning material in the animated video.

Then CP and TP are used as a benchmark by students related to what must be achieved after learning the material in the animated video. This is in line with the opinion of Afrianti & Yerimadesi (2024) who say that the presentation of learning instructions aims to facilitate the use of animated videos and assist students in carrying out learning. Asri & Dwiningsih (2022) stated that the presentation of other complementary elements such as sample questions is useful to facilitate students in learning.

Furthermore, the validity test results for the language feasibility aspect by 4 validators reached an assessment percentage of 92.41% and 2 validators (linguists) reached an assessment percentage of 96.87% so that it was included in the very valid category. This is due to the suitability of the language in the animated video with student development. The language used in the animated video is adjusted by researchers to the development of grade XI students with the aim of making it easier for students to understand and learn learning materials. In line with researchers Rosyidah et al. (2013) who stated that the use of language in accordance with the level of development of students can optimise students' understanding of learning materials.

Then the results of the validity test for the feasibility aspect of graphics by 4 validators reached an assessment percentage of 92.50% so that it was included in the very valid category. This is because the cover design of the animated video is appropriate and attractive. The size of the writing on the animated video can be read. Not only that, the animated video is presented with beautiful colours and is also equipped with interesting animated characters. An animated video will be interesting to learn if the images in the video have bright and beautiful colours, not black and white. This is in line with the research of Aulia & Fitri (2022) that the appearance of images on the material presented can make it easier for students to understand the learning material. According to Putri cited by Rifasyah et al. (2024) stated that learning materials should be packaged in a more attractive form such as with animation, images or videos so that this can increase student interest and motivation to learn the material provided.

The overall validity test results of the animated video obtained a percentage of 92.26% with 4 validators with a very valid category. This is because the animated video has fulfilled the desired eligibility requirements such as the existence of instructions for use, the existence of CP and TP, the material described there are pictures, the existence of animated characters and others. As according to the opinion of Mubarok (2023) shows that the animated video developed is included in the very valid category. This reveals that the animated video has fulfilled the eligibility requirements, namely that it can measure what will be measured, the material is in sync with the validity of science and this animated video is in accordance with the competencies/objectives to be achieved in learning. Then the results of the validity test on the interpretation expert assessed by 2 validators obtained a very valid statement with a percentage of 97.08%. This means that the suitability of the selection of verses with chemical material and in the interpretation of the Quranic verses on the material is appropriate. According to Yusniawan et al. (2019), the purpose of integrating chemistry and Quranic verses is to teach students that science comes from the Quran. Chemistry and the Quran never contradict each other, thus the process of learning chemistry students can think about the power of Allah SWT so that it can foster faith and devotion to Allah SWT (Hanifah, 2017).

After the animated video was validated and revised according to suggestions from the validators, a practicality test was conducted involving 1 educator and 32 students. Testing was carried out twice a meeting. According to Sainita et al. (2023), there are several aspects in the practicality test, namely ease of use, interest, benefits and time efficiency. This practicality test was carried out using an interview guideline sheet given to chemistry educators and a response questionnaire sheet given to students.

Before the interview guideline sheet is used, the interview guideline sheet is validated first and gets very valid results. The results obtained from the ease of use aspect are that the animated video learning media developed by researchers can facilitate educators in the learning process and can increase the activeness of students in learning and help students understand learning materials. In addition, educators also like the integration of material with Al-Quran verses that can support the smooth learning process and the language used is easy to understand. This is because the integration with Quranic verses is considered very useful by students because in addition to learning chemistry material, students also get religious knowledge related to chemistry which is expected to increase the faith and piety of students to Allah SWT. As according to the opinion of Hanifah (2017) said that chemistry and Al-Quran science never contradict each other, thus the process of learning chemistry students can think about the power of Allah SWT so that it can foster faith and devotion to Allah SWT.

When viewed from the aspect of interest, educators say that educators are interested in using this animated video learning media, so educators also use it in other XI classes. As according to Torasila et al. (2024) stated that this animated video learning media can also be used as additional reference material inside and outside formal lesson hours. Educators can also hold self-study sessions by utilising this animated video as an additional reference for further understanding or a more in-depth explanation of the topic of learning material. Furthermore, from the benefit aspect, the educators stated that the animated videos are very useful. In addition to helping educators in delivering learning materials, these animated videos are used as an additional reference that helps students when studying at home and helps students in working on questions and assignments given by educators. When viewed from the aspect of time efficiency. Educators say that this animated video learning media has a fairly effective and efficient time when used in the learning process. According to Prasetya quoted by Siti Umaysaroh (2024) states that animated videos can further streamline the learning process in the classroom because they can overcome space and time limits.

The next practicality test was conducted on students of class XI F 3 by filling out a response questionnaire sheet. The results of the first aspect of the practicality test, namely ease of use, obtained a percentage of 87.10% with a very practical description. This is because the learning material in the animated video is systematic and easy for students to understand. The learning material is also accompanied by examples of problems and is also supported by instructions for using animated videos. This is in line with the research of Asri & Dwiningsih (2022) which also states that presentations such as sample questions can be useful to facilitate students in learning.

The results of the second aspect of the practicality test are interest which obtained a percentage of 90.17% in the very practical category. This is because the animated video is designed as interesting as possible so that students are not bored or bored in using it. Video media containing animation is one of the media that stimulates attention for students because in terms of appearance and colours used are diverse. In connection with this statement, Johar stated that the factor of the attractiveness of learning media is if seen in terms of colour selection, content, and appearance it can stimulate the attention of students (Rifasyah et al., 2024).

The results of the third practicality test aspect are the benefits that achieved a percentage of 89.28% with a very practical category. This is because animated videos can be learned either with or without a teacher and can also be learned anywhere, so that they can train students to become independent learners and can increase student interest and motivation to learn. This is in line with the opinion of Irawan et al. (2021) which states that animated video learning media can increase student interest and motivation to learn. The use of video media in the

form of animated video media can provide a good response to students so that it can make students motivated to learn and get a new learning atmosphere when studying learning material.

The last practicality test result is time efficiency which obtained a percentage of 90.62% with a very practical category. This is because the animated video developed requires effective and efficient time when used. This is in line with the opinion of Lia et al. (2023) which states that good learning media is learning media that requires effective and efficient time.

The results of the overall animated video practicality test obtained a percentage of 89.22% in the learner response questionnaire with a very practical category. This is because, all aspects of the animated video assessed by students on its practicality get a very practical value. In line with the opinion of Mubarok (2023) that the percentage shows that the animated video developed is included in the very practical category. Animated videos are declared practical if the animated videos developed can facilitate educators during learning and are easily understood and mastered by students (Lisnawati et al., 2024).

CONCLUSION

Based on the research that has been done, it can be concluded that the animated video learning media integrated with Quranic verses on the molecular forms material of 11th Grade in SMAN 2 Batusangkar developed with the category very valid and very practical. This can be seen in the results of the validity test of animated video learning media integrated with Quranic verses on molecular form material of 11th Grade class at SMAN 2 Batusangkar with a percentage of 92.26% and at the interpretation expert of 97.08% which is categorised as very valid and on the results of the practicality test obtained a percentage of 89.22%.

RECOMMENDATIONS

This animated video learning media integrated with Quranic verses can be utilised by educators as learning media during the implementation of learning. In addition, animated videos can also be used by students as learning media handbook and studied independently outside the classroom / wherever they are. Educators can also use the animated video as a reference to develop animated videos integrated with Quranic verses on other materials.

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