MODEL DEVELOPMENT OF SAVI–BASED E-MODULE FOR ARABIC INSTRUCTION AT ISLAMIC JUNIOR HIGH SCHOOL IN BANDAR LAMPUNG, INDONESIA

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ABSTRACT

This research aimed to get data of Arabic instructional processes; develop Somatic, Auditory, Visual, and Intellectual (SAVI)-based e-module for Arabic instruction at Islamic junior high schools (Madrasah Tsanawiayah - MTs); and obtain empirical data of SAVI-based e-module effectiveness to improve students' achievement in Arabic lesson. Models of Dick and Carey, as well as Hanaffin and Peck, were utilized and modified into four stages. It comprised of preliminary research, model designing and development, validation, evaluation and revision, as well as model effectiveness test implementation. Overall, the expert judgment on validity model was very good including experts in instructional design, instructional content, and instructional media. Generally, the response of students was also very good regarding one to one learner, small group, as well as field trial on acceptance and utility model. The tryout result of effectiveness model shows that the average pretest score is 48,1666, posttest is 75,775, and the difference between those is 25,608. The value of $t_{observed}$ is also higher than $t_{critical}$ (15,42807>2,02268). It means that SAVI-based e-module for Arabic instruction at MTs is effective to improve students' achievement.

Keywords: model development, e-module, SAVI module

INTRODUCTION

Learning Arabic is just like learning other foreign languages. It always deals with many obstacles such as internal, external, and also linguistic ones. Wenden cited in Asrori (2011) has asserted that language learning is a four-stage cognitive process. It includes selecting information via senses, comprehending, retaining, and recalling information. The preliminary research conducts at Islamic junior high schools (Madrasah Tsanawiayah - MTs) of Negeri 2 Bandar Lampung reveals that low retention, low motivation, lack of skills, and unsatisfactory learning achievement are several crucial problems faced by students in learning Arabic.

To cope with the problems, teachers are required to provide effective instructional processes and facilitate the students to have learning experiences through instructional model designed in accordance with the development and the aspect of multiple intelligences. It is in line with the philosophy of the foundation of instructional technology. Moreover, educational technology is the study and ethical practice of facilitating learning and improving performance. It is by creating, using, and managing appropriate technological processes and resources (Januszewski & Molenda, 2008). Likewise, Gardner cited in Smaldino, Lowther, and Russel (2008) have said that effective teachers should consider the different learning styles of their students and recognize that students varied widely in terms of strengths and weaknesses in each area.

The development of a certain instructional model is to improve the existing instructional program or be implemented the program. Seels and Richey (1994) have stated that development is the process of translating the design specifications into physical form. It means that in developing a model, the designer has to elaborate the detail ideas and organize them into a practical format. Meanwhile, design is the process of specifying conditions for learning (Seels & Richey, 1994). Then, the instruction is the arrangement of information and environment to facilitate learning.

The advancement of Information and Communication Technology (ICT) may contribute positively to the enhancement of educational and instructional field. The use of ICT allows better processing, packing, performing, and distributing information of Arabic instruction through audio, visual, audio-visual, and interactive multimedia as well. Multimedia utilization nowadays is instrumental in the learning process. It is in line with the notion of Leow and Neo (2014). They suggest that multimedia has introduced the pedagogical strength in facilitating student learning and supplementing learning with liveliness. It adds the richness and meaning to the information presented with the use of more than one medium. Multimedia involves the synchronization of media in producing the rich media outputs and is arranged in some chunks which are linked by the hypermedia.

One necessary example of enhancing the learning program with the use of ICT is the change of module format that used to be in the form of the printed module. Nowadays, there is a demand for electronic module or e-module. Module for instruction is the smallest independent unit of learning materials for self-study. According to Sitepu in Ibrahim (2010), book recorded electronically using the hard disc, disc, CD, or flash disc. It is accessible by using computer or electronic book reader devices. E-module is necessarily developed to allow students to carry out self-learning and improve their learning achievement. According to Wedemeyer and Keegan in Ibrahim (2010), with self-learning, students can learn the subject matter by reading books, observing, and listening to the program of instructional media without or with the limited help of other people.

Obviously, the use of e-module may help students to be autonomous, improve their learning achievement independently, and facilitate suitable learning with varied intelligence, level, readiness, and time. An e-module which considers students' multiple intelligences should be based on Somatic, Auditory, Visual, and Intellectual (SAVI). SAVI-based e-module for Arabic instruction is believed to boost students' somatic, auditory, visual, and intellectual intelligence. Then, it can affect their learning achievement positively. In this context, somatic learning means students learn Arabic with physical activities, body movement, action, and games (Fachrurrozi, 2010). Auditory learning has to do with the optimizing the hearing sense in the process of learning Arabic. Moreover, visual learning tends to emphasize more on the use of the sense of seeing (Gilakjani, 2011). Meier (2000) has said that intellectual learning is learning Arabic through problem-solving activities, doing exercises, and practicing to implement knowledge and skills. He adds that it is the means in which the mind turned the experience into knowledge, knowledge into understanding, and understanding into wisdom. In learning Arabic, students should utilize all senses and use the language to communicate. SAVI-based learning holds the modern cognitive learning concept. It involves emotion, all body parts, all senses, and accommodates multiple intelligences as well as learning styles.

Furthermore, visualizing the learning program is urgently required to make it more attention-grabbing to attract students' interest and motivation in learning. Visualization is the disclosure of an idea or feeling by using drawing, writing (words and numbers), maps, charts, and so on. It is the process of changing into a depiction of the presented concept. At this time, visualization has been developed and used for the many purposes such as science, engineering, product design visualization, education, interactive multimedia, medicine, and others (Haryono & Desmalinda, 2014). Hence, it is crucial to visualize the Arabic learning program to improve students' retention and motivation in learning. SAVI-based e-module for Arabic instruction developed in this research allows them to learn interactively using attractive media with their pace.

There are several characteristics of SAVI-based e-module for Arabic instruction at MTs. First, it is equipped with 'link' and 'multimedia' services. Second, it can be operated through the computer, smartphone, or other multimedia electronic devices. Third, it can be accessed through the website. Last, it is used by incorporating somatic, auditory, visual, and intellectual activities in listening, speaking, reading, and writing lessons. Besides that, it can boost the motivation, improve retention and skills, and increase the learning achievement.

There are several objectives of this research. First, it is to obtain data of Arabic instructional processes at MTs. Second, it develops SAVI-based e-module for Arabic instruction at MTs. Third, it acquires empirical data of SAVI-based e-module effectiveness. It is to improve students' achievement in Arabic lesson particularly for the eighth-grade students of the even semester at MTs Negeri 2 Bandar Lampung.

METHODS

This research is conducted at MTs Negeri 2 Bandar Lampung from June 2014 to October 2016. The models of Dick and Carey, as well as Hannafin and Peck, are rigorously employed. There are several research stages. First, preliminary research covers preparation, survey, and needs analysis. Second, designing and developing include analysis of objectives and early behavior of the users, instructional analysis, formulation of specific objectives, design of the evaluation, development of instructional strategies, material development (in the form of pdf, powerpoint, audio, video, interactive quiz, and dictionary), design of storyboard, development of 'learnware web' e-module, and installment of SAVI-based e-module. Third, validating, evaluating and revising comprise of expert judgment validation, tryout of one to one learner, small group, and field trial, and revision. Fourth, implementing the model is to examine the effectiveness.

The questionnaire, interview, observation, and documentation techniques are utilized in carrying out the preliminary research. For the instrument of expert judgment validation, the Likert scale is used. Meanwhile, for the tryout of one to one learner, small group, and field trial, the researchers use Guttman scale. Before all instruments are used to collect data, it has been validated by experts. Furthermore, percentage formulation is implemented to compute the score of responses and paired t-test is to count the effectiveness of the product.

RESULTS AND DISCUSSIONS

The preliminary research is carried out in June until October 2014. From that, the researchers find several things. First, the students' achievements are low due to their low motivation and retention. Second, curriculum and syllabus are available, but it is not applied with proper objectives, assessment, instructional strategies, and well-developed learning materials. Third, the existing multimedia like audio and video are not optimally used for enhancing listening, speaking, reading, and writing skills. Fourth, computer and Android sets, as well as Internet service, are available. These findings indicate the urgency to conduct research on the model development.

The phase of designing and developing model comprises of three models of the draft. Those are draft model 1, draft model 2, and final draft model. Draft model 1 identifies and analyzes the objectives by referring to the needs of the analysis result. The analysis of instruction and early behavior is described in Figure 1.

Though the instructional model of SAVI-based e-module, students own factual and conceptual knowledge, and are well-mannered, self-confident and skillful to interact using Arabic in their social life.

Students are skillful in using model of SAVI-based e-module in the Arabic lesson at MTs.	Students acquire the skills of listening, speaking, reading and writing in Arabic discourse well.

1	2	3	4	5	6		1	2	3	4	5	6

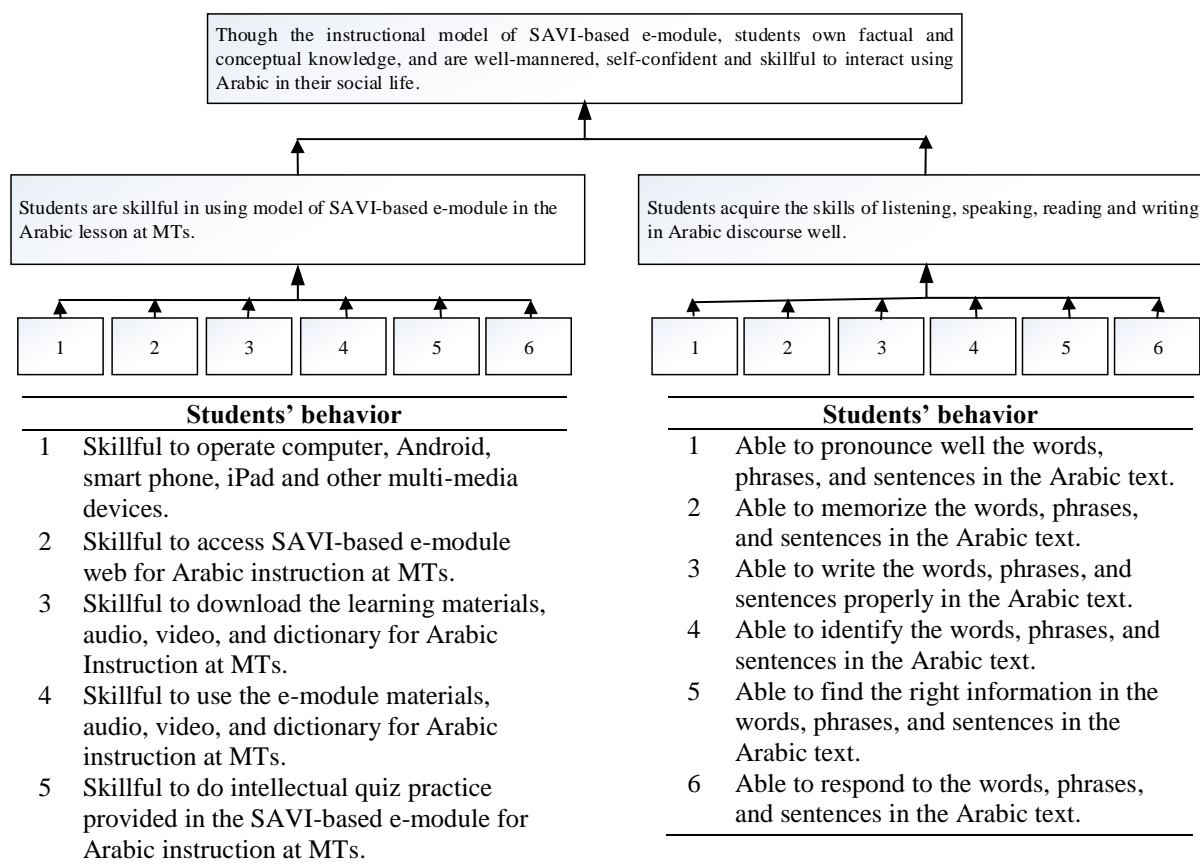| **Students' behavior**	**Students' behavior**
1 Skillful to operate computer, Android, smart phone, iPad and other multi-media devices. 2 Skillful to access SAVI-based e-module web for Arabic instruction at MTs. 3 Skillful to download the learning materials, audio, video, and dictionary for Arabic Instruction at MTs. 4 Skillful to use the e-module materials, audio, video, and dictionary for Arabic instruction at MTs. 5 Skillful to do intellectual quiz practice provided in the SAVI-based e-module for Arabic instruction at MTs.	1 Able to pronounce well the words, phrases, and sentences in the Arabic text. 2 Able to memorize the words, phrases, and sentences in the Arabic text. 3 Able to write the words, phrases, and sentences properly in the Arabic text. 4 Able to identify the words, phrases, and sentences in the Arabic text. 5 Able to find the right information in the words, phrases, and sentences in the Arabic text. 6 Able to respond to the words, phrases, and sentences in the Arabic text.

Figure 1 Draft Model 1of SAVI-Based e-Module for Arabic Instruction at MTs

Next, Draft 2 contains storyboard. It is on the menu for the website that consists of hints, materials, audio, video, intellectual quiz, and dictionary. It can be seen in Figure 2. Then, the final draft contains the procedure to operate the application of SAVI-based e-module. It is through website at www.koderi-iain.my.id. That can be seen in Figure 3.

From the menu displayed, it is obvious that it can be accessed by anyone who wants to visit without using username and password. In other words, the program of SAVI-based e-module for Arabic instruction at MTs is free for all.

The result of validation from the experts of instructional design on the draft of SAVI-based e-module amounts about 3,53 of average score. For instructional materials, it is 3,53 or 88,30%. Moreover, for the experts of instructional media, it is 3,50 or 87,50%. Overall, the score and percentage indicate that it belongs to the very good category. It means that SAVI-based e-module has fulfilled the criteria to proceed to the field trial.

Furthermore, the tryout result of one to one learner upon the draft of SAVI-based e-module obtains average score about 2,6 or 87,2%. For the small group, it is 7,15 or 89,45%, and it is 34,85 or 87% for the field trial. Generally, the response score indicates that it has the very good category. It means that SAVI-based e-module is well-accepted by students and can be used for Arabic instruction at MTs.
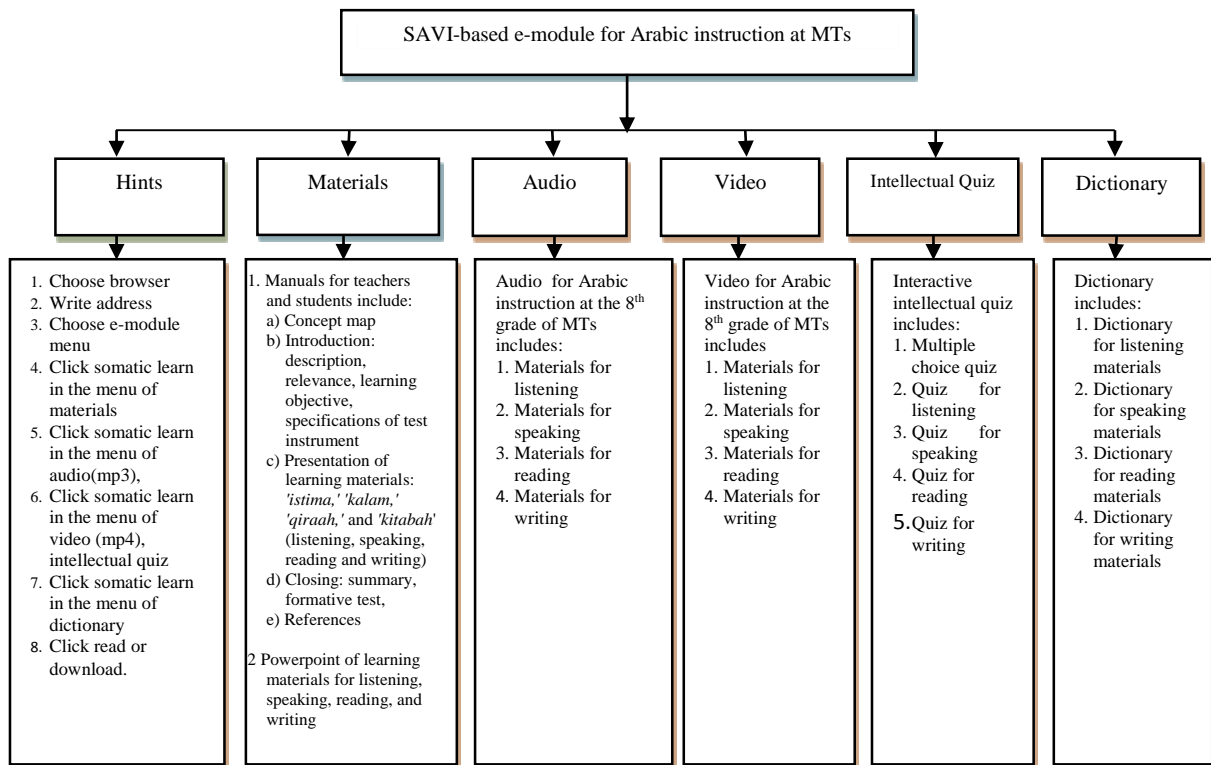
SAVI-based e-module for Arabic instruction at MTs					
Hints	Materials	Audio	Video	Intellectual Quiz	Dictionary
1. Choose browser 2. Write address 3. Choose e-module menu 4. Click somatic learn in the menu of materials 5. Click somatic learn in the menu of audio(mp3), 6. Click somatic learn in the menu of video (mp4), intellectual quiz 7. Click somatic learn in the menu of dictionary 8. Click read or download.	1. Manuals for teachers and students include: a) Concept map b) Introduction: description, relevance, learning objective, specifications of test instrument c) Presentation of learning materials: *'istima,' 'kalam,' 'qiraah,'* and *'kitabah'* (listening, speaking, reading and writing) d) Closing: summary, formative test, e) References 2 Powerpoint of learning materials for listening, speaking, reading, and writing	Audio for Arabic instruction at the 8th grade of MTs includes: 1. Materials for listening 2. Materials for speaking 3. Materials for reading 4. Materials for writing	Video for Arabic instruction at the 8th grade of MTs includes 1. Materials for listening 2. Materials for speaking 3. Materials for reading 4. Materials for writing	Interactive intellectual quiz includes: 1. Multiple choice quiz 2. Quiz for listening 3. Quiz for speaking 4. Quiz for reading 5.Quiz for writing	Dictionary includes: 1. Dictionary for listening materials 2. Dictionary for speaking materials 3. Dictionary for reading materials 4. Dictionary for writing materials

Figure 2 Draft Model 2 of Storyboard Menu of SAVI-Based e-Module

Figure 3 Final Draft of SAVI-Based e-Module

Based on the effectiveness test of SAVI-based e-module, the average of pretest is 48, while the posttest is 70. Thus, the disparity of pretest and posttest is 22,175. The score of $t_{observed}$ is 5,93. With degree of freedom around 39 and 5% of level of significance, the $t_{critical}$ is 2,03. With 1% of level of significance, it is 2,72. Comparing the value of $t_{observed}$ (5,93) and the value of $t_{critical}$ (2,03) at the 5% of level of significance and 2,72 at the 1% of level of significance, it can be stated that $t_{observed}$ is higher than $t_{critical}$ for 2,03 < 5,93 > 2,72. It means that the students' learning achievement can be improved with very good category using SAVI-based e-module for Arabic instruction at MTs.

SAVI-based e-module for Arabic lesson has been revised regarding the general and specific objectives, materials and exercises, pictures and statements, contrastive colors and statements, the speed of downloading and uploading in accordance with the suggestion given by the experts of instructional design. The revision is carried out for the performance quality of SAVI-based e-module. The average score of validation by the experts of instructional design is 3,53 or 88,26%. It means that SAVI-based e-module is considered as very good and effective to enhance the Arabic lesson attainment.

Jonassen in Munir (2012) has stated that multimedia design is highly needed to help learners to achieve the expected learning objectives. Thus, an innovative and real instructional design may boost the motivation, remind the position of oneself in the instructional process, build information about the strength of learning, and maintain the spirit of learning. Model of SAVI-based e-module which highlights somatic, auditory, visual, intellectual senses encourages students to practice learning by moving and doing the concept. According to Asher in Fachrurrozi (2010), learning a language is dealing with body movement to lessen the psychological pressure and to enable learners to develop their language potency faster.

The Arabic visual materials are very helpful for students to use their sense of seeing via computer and smartphone. They can learn better by looking at the real examples, texts, diagrams, concept maps, videos, pictures, and others. Pike in Silberman (2009) has suggested that the employment of visual media in presenting the lesson might improve memory from 14% to 38%. The research shows that there is an increase up to 200% when visual media are used in vocabulary lesson. Besides that, the use of visual media could save time to 40% when it is used to explain a concept orally.

The materials of SAVI-based e-module use pictures, audio, video, and exercises in each topic as the stimulus for students to positively respond in the Arabic lesson. The stimulus and response technique is referring to the activity of learning as the response of students from the stimulus given. According to Galloway in Soekamto (1993), people are significantly influenced by their surroundings. Learning is the behavioral change as the result of Stimulus-Response (S-R) paradigm. It is a process of providing a certain response based on the external stimulus. This theory indicates that the materials of Arabic with the use of pictures, audio, video, and interactive exercises in each topic can become the stimulus which can ignite positive responses from students. Referring to the expert validation of Arabic instructional materials which amount 3,53 or 88,30, it means that the SAVI-based e-module is indeed a very good and effective model to improve students' Arabic lesson achievement.

Next, the materials of Arabic lesson provided in SAVI-based e-module have fulfilled the principles of motivation and retention in learning. Monitoring and responding constructively to students' motivation signals during instruction are an important teaching skill. This is because classroom motivation is a reliable predictor of students' subsequent engagement, learning, and achievement (Lee & Reeve, 2012). Furthermore, Galloway in Soekamto (1993) has stated that motivation is divided into two, intrinsic and extrinsic motivation. Intrinsic motivation is the internal drive from the learners themselves to keep learning and achieve success. Meanwhile, the extrinsic motivation is something that should be manipulated by the teacher or instructional designer so that learners are subconsciously encouraged to learn. For instance, it could be by reinforcing that the

extrinsic motivation might eventually switch to the intrinsic one. Moreover, retention is something remaining in someone's memory which can be recalled after learning. According to Chauhan in Soekamto (1993), there are some points that can be considered to enhance retention. First, it is by creating material that allows learners to master it through repetition or practice. Second, the material learned must be meaningful and orderly arranged. Third, the concept establishment should be clear with the use of aids such as audio, visual, or audiovisual. Last, learning activities should involve students' varied senses.

Model of SAVI-based e-module for Arabic instruction at MTs according to the experts of instructional media has also fulfilled the criteria of SAVI approach and utilized integrated technology. Seels and Richey (1994) have stated that integrated technology is the way to produce and distribute learning materials by making good use of varied media controlled by the computer. It is the combination of several components of printed media with the computer device.

Model of SAVI-based e-module as the integrated technology media may attract the students' attention to learn Arabic autonomously, in or out of the class. Wedemeyer and Keegan in Ibrahim (2010) have explained that autonomous learning takes place when learners could study by themselves without the presence of a teacher. The students can learn the lesson by reading books and looking at and listening to the programs of the instructional media without help or with minimum help from others. Based on the evaluation from the experts of instructional media, the average score is 3,5 or 87,5%. It means that the model of SAVI-based e-module is categorized as good and can be used to enhance the achievement of Arabic lesson.

Based on the theory of motivation, retention, autonomous learning, and integrated technology, SAVI-based e-module as instructional media has the several functions. First, it allows autonomous learning. Second, it overcomes the weakness of conventional learning. Third, it combines somatic, auditory, visual, and intellectual aspects in the process of learning. Fourth, it boosts the motivation. Fifth, it learns more systematically. Sixth, it augments teacher's creativity. Last, it materializes the principle of incessant accelerated learning.

In addition, Heinich in Suparman and Atwi (2013) has stated several indicators of effective and efficient instructional program. It could facilitate learners to acquire the expected competencies; motivate learners to find more about the knowledge and skills studied; make students have retention on the contents or learning materials; and apply the knowledge studied in a proper context. Similarly, Bulger, Mohr, and Walls (2002) have mentioned four aces of effective teaching. It includes outcomes, clarity, engagement, and enthusiasm which might contribute to the success of the instructional program. The presence of SAVI-based e-module for Arabic lesson at MTs which integrated somatic, auditory, visual, and intellectual learning principles is accommodating the requirements of an effective instructional program. Thus, it allows students to achieve maximum result in their study.

After conducting the pretest and posttest to 40 students, the effectiveness of SAVI-based e-module model for Arabic instruction at MTs is computed using t-test with two related samples. The average score of the pretest is 48,1666, and the posttest average score is 73,775. It indicates that students' progress toward 25,608. For the t-test calculation, it gets $t_{observed}$ around 15,42807 and $t_{critical}$ about 2,02268 with degree of freedom for n-1 at 5% of level of significance. It is obvious that $t_{observed}$ is higher than $t_{critical}$ (15,42807 > 2,02268). In short, model of SAVI-based e-module model for Arabic instruction at MTs is effective to enhance students' learning achievement.

There are several limitations of this research for model development of SAVI-based e-module model for Arabic instruction at MTs. First, this is not the sole learning source, so it is suggested to use other learning sources to complete each other. Second, this product relies on Internet service. When the internet signal is good, it is recommended to download the materials, audio, video, and dictionary.

Third, to apply this product, special skill is needed. It is to operate devices such as computer, Android, or smart phone. Last, this product should always be upgraded.

Furthermore, there are several implications in the research. First, the use of the product can augment students' motivation and learning achievement. Hence, it can be used in all MTs. Second, this product may increase the effectiveness of learning process for both teachers and students. Third, the availability of the product is very limited, so it has to be optimally used to facilitate learning. Fourth, as this product may improve the effectiveness of learning, it is urgent for the Ministry of Religious Affairs office in provincial or district level to hold the training program for Arabic teachers to develop such model not only at MTs but also for Madrasah Aliyah (MA) level.

CONCLUSIONS

From the teaching and learning process of Arabic at MTs Negeri 2 Bandar Lampung, it can be summed up. First, students' experience retention problem. Second, students are lack of motivation to learn Arabic. Third, students' Arabic skills and achievements are low. Thus, it is necessary to develop e-module equipped with 'link' and 'multi-media' services based on SAVI.

The result of validation from the experts of instructional design, materials, and media shows positive responses. It indicates that the model of a SAVI-based e-module model for Arabic instruction at MTs is beneficial. Similarly, the result of the tryout of one to one learner, small group, and field trial reveal good responses. It means that SAVI-based e-module model can be used for Arabic instruction at MTs even though the students are varied in intelligence. Moreover, the result of effectiveness test points out that students' achievement can be increased significantly with the use of the SAVI-based e-module model for Arabic instruction at MTs.

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