VINOVAL (VISUAL NOVEL MODAL AUXILIARY): A SIMULATOR GAME TO INTRODUCE MODAL AUXILIARY TO STUDENT

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Abstrak: *E-learning adalah penggunaan teknologi informasi dan komputer untuk menciptakan pengalaman belajar.. Tujuan dari penelitian ini adalah pengembangan Vinoval. Desain penelitian ini adalah R&D. R&D adalah salah satu desain penelitian yang bertujuan untuk mengembangkan produk-produk pendidikan, seperti kurikulum, silabus, buku teks, media pembelajaran, dll. Juga, penelitian ini menggunakan kuasi eksperimental untuk mengumpulkan data. Subjek dari penelitian ini adalah kelas dua SMAN 2 Trenggalek tahun akademik 2019/2020 yang terdiri dari 36 kelas eksprimental dan 36 kelas kontrol. Instrumen yang digunakan dalam penelitian ini adalah kuesioner dan wawancara. Data yang dikumpulkan dengan kuesioner dianalisis secara kuantitatif, sedangkan wawancara dianalisis secara kualitatif. Produk ini dikembangkan melalui 5 tahap yaitu analisis kebutuhan berdasarkan kebutuhan siswa, teori yang berkaitan dengan produk, pengembangan produk, evaluasi hasil produk oleh ahli, dan pengujian produk di lapangan. Data ini diolah menggunakan SPSS 25 dan hasil dari t-test sig. 2 tailed adalah 0.000 (<0.05), ini berarti ada perbedaan signifikan antara eksperimental dan control grup. Dari penjelasan diatas, VINOVAL adalah produk yang efektif sebagai media pembelajaran untuk mengenalkan modal auxiliary. Produk ini disarankan untuk siswa yang mendapat manfaat pada penelitian ini.*

Kata Kunci: E-learning, Modal Auxiliary, Vinoval

Abstract: E-learning is the use of information and computer technologies to create learning experiences. The objective of the research was to develop of VINOVAL. The research design was educational R&D as one research design aimed at developing educational products, like curriculum, syllabus, textbooks, instructional media, etc. Moreover, this research implemented quasi-experimental research design to know the efficacy of the product. The subject of the research was eleventh grade students of SMAN 2 Trenggalek 2019/2020 academic year which consist of 36 experimental group and 36 control group. The research instruments were questionnaires, test, and interview. The questionnaires and test data were analyzed quantitatively, while interview data was analyzed qualitatively. The product was developed in five steps based on students' needs, recent theories related to the product, developing the educational product, evaluation from the expert who validates the product and field testing the product. The data was calculated by SPSS 25 and the result of sig. 2 tailed in t-test is 0.000 (<0.05), it means there was significant difference between experimental and control groups. From explanation above means that the product of this research, VINOVAL, was an effective learning media to senior high school students to introduce modal auxiliary material. Furthermore, it was suggested for people who find some benefit of this research.

Key Words: E-learning, Modal Auxiliary, Vinoval

INTRODUCTION

The important thing in learning language is grammar. Gerot and Wignell in Laksitaningratri (2015: 6) state that grammar is kind of theory of language, grammar use in every language and put together. It is about how it works in language. Therefore, grammar is words which can change their forms and combined in sentence and used in every language.

Further, modal auxiliary generally expresses a speaker's attitudes or mood, it also expresses when the speaker feels necessary, permissible, possible and probable, and called functional word that express specific meaning such as ability, obligatory etc (Sudirman, 2010:6). Furthermore, according to Betty, modal auxiliaries consists of; could, can, might, may, must, ought to, had better, should, shall, would, will. Therefore, modal auxiliary generally express when the speaker feels necessary permissible, possible, probable by using words such as could, can, might, may, must, ought to, had better, should, shall, would and will.

Additionally, technology is concerned with solving certain problems, using certain skills and knowledge of users (Lan and Young in Wahab, 2012: 62). Technology enables students to improve their ability in technology, and interpret their knowledge both verbally and visually. Thus, technology will recognize potential of children and distributed throughout the place and acceptable to all circles, also technological education enables students to learn creatively and improve their knowledge both verbally and visually. Technology in education is also called e-learning.

Hence, e-learning is a communication technology that provide some facilities to enhance knowledge, learning and to access online learning/teaching resources (Pande et al, 2016: 275). Therefore, e-learning is media to use the information and computer. Technologies to create learning experience and to access online learning/teaching resources without having to meet face to face directly between the teacher and students.

Further, Djamil et. al (2016: 8) states that a student who have a high motivation or interest in learning tend to be more successful in process learning than students with less interest. Meanwhile, students with less interest in learning will tend to feel forced while studying, so they will not get a good result from their study. Consequently, actually both general learning and e learning is officially important but, e learning is more interactive and can increase the motivation and interest of students to learn their material with modern technology. One of e-learning's varieties is visual novel as simulator game. Meanwhile, Lean et.al (2006: 228) states that simulation aims to duplicate a system or story. This type of learning represents aspects of the behavior or problem being studied.

Game simulations can be called as a fictitious situation to show the behavior and real results of the conditions that possible. The difference from this game with another is development of plot and character, also it has many plot and multiple endings. In short, visual novel is type of simulation games that combined with a conversation and familiar situation between NPC (Non-Playable Character) and player. Type of visual novel game is dominated by the storyline, conversation and drawings of characters in a novel that is told visually

With regards to some research reports elaborated above and in attempt to prove the efficacy of game-based learning through visual novel to introduce the modal auxiliary to students while maintaining the entertainment and educational aspect of a game. This research tries to answer the research problem that sound "How is development of VINOVAL?"
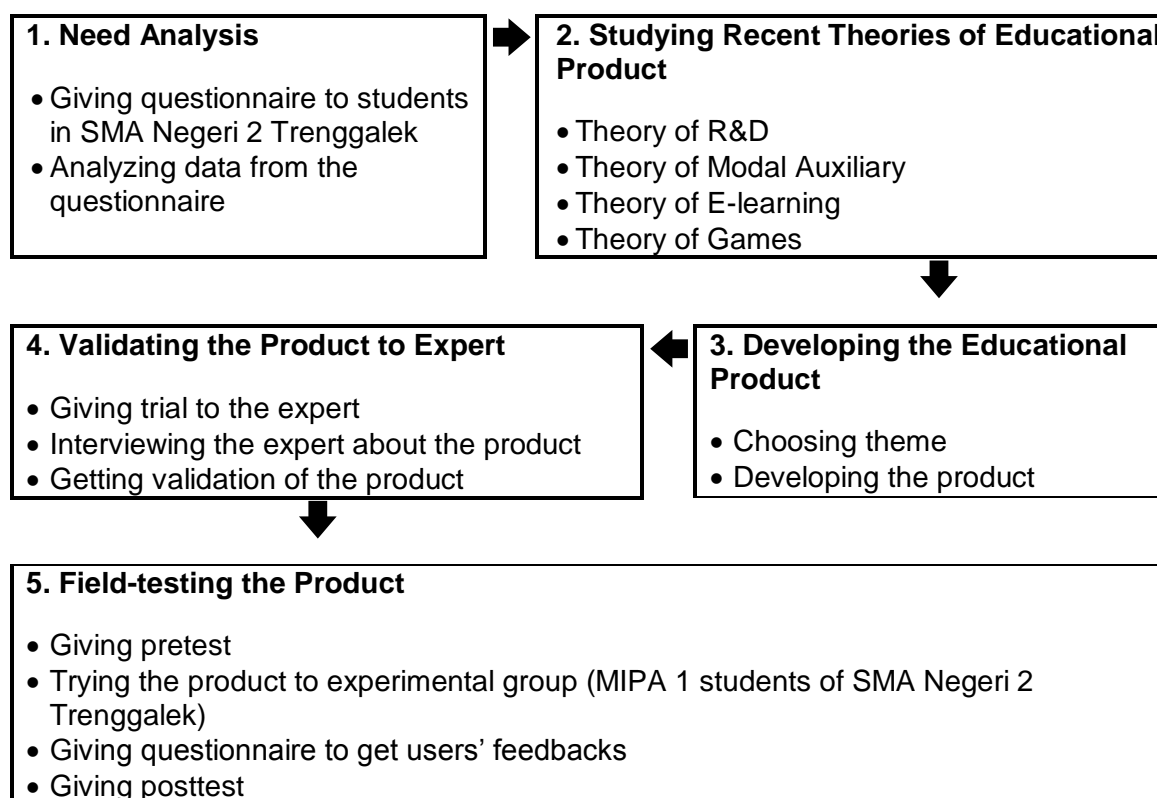
RESEARCH METHOD

The research design was Research and Development (R&D). Basuki (2017: 21) states that research and development (R&D) is a research carried out by educational practitioners to get findings that is beneficial to design and develop new products/procedures/materials such as curriculum, syllabus, textbooks, instructional media, etc. Meanwhile, Latif in Basuki (2017: 21) defines educational R&D as one research design aimed at developing educational products, like syllabus, textbooks, curriculum, instructional media, etc. Further, the researcher also used quasi experimental to know the efficacy of the product which was conducted in senior high school. According to Ary (2002: 316) quasi experimental is a design that do not include random assignment and used where true experimental are not feasible. To conduct the research, there are five steps.

The first step in this research is Need Analysis; the researcher checks the validity and reliability of questionnaire before gives the questionnaire to the students. If the data is valid, the researcher continues to gives the questionnaire to students to gather information about what they need in learning grammar. After that, the researcher analyzes the data to understand the student need. The second is Studying Recent Theories of Educational Product, such as the theory of R & D, Modal Auxiliary, E learning and Games. Third, Developing of Educational Product, this step is done based on need analysis and studying recent theories. In this step, the researcher chooses theme of the product, creates the dialogue, and arranges the aspects of product. Fourth, Validating the Product to Expert, the expert of this validation is the lecture of learning media in

STKIP PGRI Trenggalek. In this step, the researcher interviews the expert using interview guide about the product. Then, there are two possibilities. If the product accepted, the researcher moves on to the next step. If the product rejected, researcher revises the product base on the evaluation of the expert. Fifth, Field Testing the Product. The last step is to field-test the product. In this step, the researcher implements the quasi experimental design with control group to collect the data from students of 2nd grade SMA Negeri 2 Trenggalek. Ashari (2017: 40) states that the quasi experimental is used to find out the differences of ability between classes are treated and classes are not treated.

Furthermore, the researcher gives a pretest before trying the product. After pretest, the researcher tries the product to students. Then, the researcher gives the posttest to students. The last step, gives questionnaire to students that have tried the educational product to know the impression and feedback from them. The following figure shows the detail of development steps of the product in this research:

Figure 1. **Research and Development Procedures**
(Adapted from Basuki, 2017:21)

1. Need Analysis

- Giving questionnaire to students in SMA Negeri 2 Trenggalek
- Analyzing data from the questionnaire

2. Studying Recent Theories of Educational Product

- Theory of R&D
- Theory of Modal Auxiliary
- Theory of E-learning
- Theory of Games

4. Validating the Product to Expert

- Giving trial to the expert
- Interviewing the expert about the product
- Getting validation of the product

3. Developing the Educational Product

- Choosing theme
- Developing the product

5. Field-testing the Product

- Giving pretest
- Trying the product to experimental group (MIPA 1 students of SMA Negeri 2 Trenggalek)
- Giving questionnaire to get users' feedbacks
- Giving posttest

Ary (2002: 163) defines the population is all members of any class of people, objects, or events, it is larger group which is the generalization is made. Thus, the population is not an only human being, but also everything around which has

characteristic. While sample is a small group that is observed and a part of population. Thus, the subject of this research was eleventh grade students of SMA Negeri 2 Trenggalek academic year 2019/2020. MIPA 3 or experimental group consists of 36 students; 12 male students and 24 female students. Meanwhile, MIPA 1 or control group also consists of 36 students; 12 male students and 24 female students.

In this research, there are 3 kinds of instrument; questionnaire, interview, and pretest-posttest. Further, the data analysis of this research is consisting of 4 categories. First, validity and reliability instrument, the researcher uses content validity to test the validity of instrument of the research. Content validity focus on providing evidence on the elements that existing in measuring instrument and processed by rational analysis and judged by experts, Frankel et.al in Yusup (2018: 18). Sekaran and Bougie in Muldyagin (2018: 18) state that reliability value which less than 0.60 is considered poor, 0.70 is considered average and can be accepted, while the value more than 0.80 is considered good.

Second, data analysis questionnaire, the researcher uses the Likert scale to analyze the data of the students' questionnaire on need analysis and evaluating the process. Likert scale is a wide scale used to measure attitudes. The responses used on the scale are statements that support and reflected in five response categories; The researcher uses the Likert scale to analyze the data of the students' questionnaire on need analysis and evaluating the process. Ary (2002: 224) said that Likert scale is a wide scale used to measure attitudes. The responses used on the scale are statements that support and reflected in five response categories; they strongly agree, agree, neutral, disagree, and strongly disagree. Further, Syofian et.al (2015: 6), Likert scale data can be analyzed by summarizing the respondent's score, and then find the percentages.

Table 1. **The Score and Answer Scale of Questionnaire**

Score	Answer Scale
5	The respondents strongly agree with the statements
4	The respondents agree with the statements
3	The respondents neutral with the statements
2	The respondents disagree with the statements
1	The respondents strongly disagree with the statements

To find out the score range from the response, the formula used is as follows:

Maximum score : 5 x number of item (Q) x number of respondent (N)

Minimum score : 1 x number of item (Q) x number of respondent (N)

Score range   : maximum score – minimum score

After summarizing the total score, the researcher finds the interpretation based on the criteria in the following diagram:

Figure 2. **Continuum Diagram of Students Questionnaire Result**

1(Q x N)	2(Q x N)	3(QxN)	4(QxN)	5(QxN)
Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
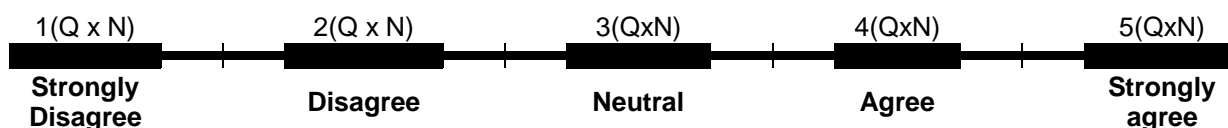
Third, data analysis interview, the interview data from validating to the expert is analyzed in qualitatively. Sugiyono in Handayani (2014: 35) states that qualitative data can be analyzes with data reduction, data display, and drawing conclusion in a descriptive way. Fourth, data analysis pretest-posttest, t-test is used to determine the significant effect of using Vinoval after collecting the data from pre-test and post-test.

FINDINGS AND DISCUSSIONS

Finding on Need Analysis

After the students give the feedback of need analysis questionnaire, then it was processed by find the percentages of the score and continued with score range formula to analyze the feedback from the final score. The following table shows the interpretation of the questionnaire result of students' need analysis:

Table 2. **The Finding on Students Need Analysis**

Finding on students' need analysis questionnaire	The students **strongly agree** that gadget can be learning media
	The students **agree** that they are motivated learn modal auxiliary using gadget game
	The students **agree** that gadget game is very interesting
	The students **agree** that learning while playing with gadget game is very fun
	The students **agree** that gadget game can be an effective learning media
	The students **agree** that besides effectives, gadget game also efficient
	The students **agree** that learning while playing with gadget game is easy to understand
	The students **agree** that they are motivated to learn with interactive media
	The students **agree** that they are interested to learn with interactive media
	The students **agree** that learning while playing with interactive media is

| |
|---|
| very fun |
| The students **agree** that learning modal auxiliary with interactive media is effective. |
| The students **agree** that interactive media is also an efficient media |
| The students **strongly agree** that one of element that make me motivated to learn modal auxiliary is colorful media |
| The students **strongly agree** that in my opinion, learning with colorful media is interesting |
| The students **strongly agree** that colorful media is needed to increase the interest of learning |
| The students **agree** that they are interested using visual media to learn modal auxiliary |
| The students **agree** that visual media can make learning modal auxiliary is very fun |
| The students **agree** that modal auxiliary is very suitable to package in the form of visual media |
| The students **agree** that with visual media, the material is easier to understand |
| The students **agree** that with visual media, learning modal auxiliary can be more effective and efficient |

Maximum score per item   : 5 x 36 = 180

Minimum score per item   : 1 x 36 = 36

The following continuum diagram show the score range and interpretation of each item score. Meanwhile, from the students' need analysis questionnaire result, obtained data as follow; maximum score (5 x 20 x 36) = 3600, minimum score (1 x 20 x 36) = 720, score range (3600 – 720) = 2880, total score = 2866

Figure 3. **Continuum Diagram of Students' Need Analysis**
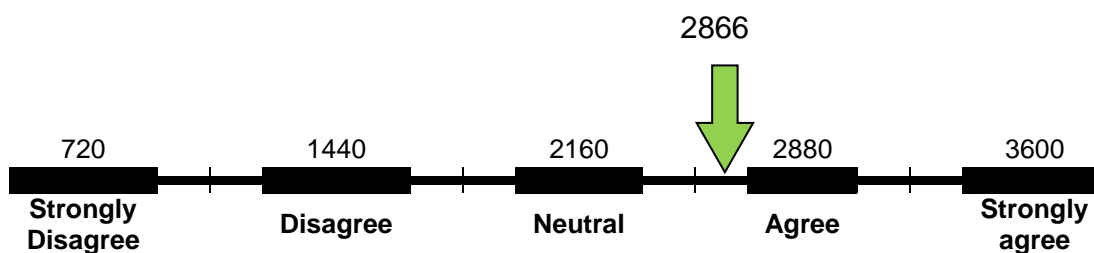
Hence, the next step is developing the product, this product is Vinoval (Visual, Novel, Modal Auxiliary). The development of this product was based on some steps such the finding on need analysis, studying recent theories, studying theory of R&D, studying theory of modal auxiliary, and studying theory of visual novel.

After the product was developed, the researcher consulted the product to the expert of English language learning media to give evaluation and suggestion to have acceptable and approved product, Sri Utami Dewi, M.Pd. Then, after the expert accepted the

product, the researcher continued the procedure to the next step. Field testing the product.

Finding on Field-Testing

The following table shows the interpretation of the questionnaire result of students' field testing.

Table 3 **The Finding on Students Field Testing**

	The students **strongly agree** that Vinoval is suitable with my needs
	The students **strongly agree** that Vinoval motivated me to study English
	The students **strongly agree** that Vinoval is an interesting learning media to learn modal auxiliary
	The students **strongly agree** that Vinoval can be an effective learning media
	The students **strongly agree** that the content of Vinoval is suitable for self-learning
	The students **strongly agree** that Vinoval has an interesting display
Finding of students' field-testing questionnaire	The students **strongly agree** that Vinoval is a fun game
	The students **strongly agree** that the content of Vinoval is suitable with senior high school level
	The students **strongly agree** that the topic of Vinoval is match with contexts
	The students **strongly agree** that with Vinoval, the ability of communication can be developed
	The students **strongly agree** that the material of Vinoval is easy to understand
	The students **strongly agree** that the topic of Vinoval is follow the times
	The students **strongly agree** that Vinoval is easy to be played
	The students **strongly agree** that with Vinoval, I can study modal auxiliary easily
	The students **strongly agree** that Vinoval gives me a new experience about study while playing

Maximum score per item   : 5 x 36 = 180

Minimum score per item   : 1 x 36 = 36

The following continuum diagram show the score range and interpretation of each item score. Meanwhile, from the students' need analysis questionnaire result, obtained data as follow; maximum score (5 x 15 x 36) = 2700, minimum score (1 x 15 x 36) = 540, score range (2700 – 540) = 2160, total score = 2482

Figure 4. **Continuum Diagram of Students' Field Testing**
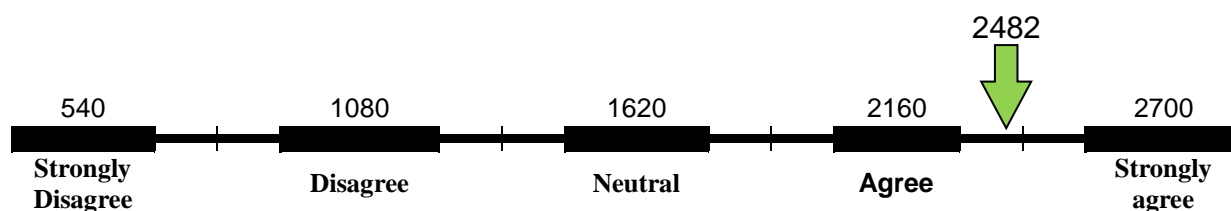
In the field-testing steps, there are 2 tests that conduct to the subjects, pretest and posttest. For result of **pretest experimental**, the pretest exercise consists of 25 multiple choice questions. From the 36 students of experimental group, the maximum score was 76 and the frequency was 1 and the minimum score was 4 with the frequency also 1. Thus, for **control groups,** with the same questions, from the 36 students of control group, the maximum score was 88 and the frequency was 1 and the minimum score was 12 with the frequency also 1.

While, for the posttest exercise consists of 25 multiple choice questions. From the 36 students of **experimental group**, the maximum score was 92 and the frequency was 5 and the minimum score was 76 with the frequency 7. Thus, the result of **control group**, from the 36 students of control group, the maximum score was 88 and the frequency was 1 and the minimum score was 16 with the frequency also 1.

Hence, here the results of independent sample t-test for posttest between control and experimental groups based on IBM SPSS 25: The "Independent Samples Test" with Sig. (2-tailed) of posttest was $0.000 < 0.05$, then as the basic rules of making the independent sample t-test, it can be concluded that H0 is rejected and Ha is accepted. It means, there was a significant difference between the average student learning outcomes in the experimental and control groups. So, Vinoval as the product of this research is an effective learning media to senior high school students especially for introduce modal auxiliary.

Discussions

Based on the research finding explained above, the discussion of the findings on this research is elaborate as follows:

Table 4. **The Discussion of The Research Finding**

VINOVAL (Visual Novel Modal Auxiliary): A	Discussions
	Regarding to the content material of this research they are modal auxiliaries that divided into two modes, story mode and

Simulator Game to Introduce Modal Auxiliary to Students	exercise mode
	Regarding to the product development steps on this research that took five steps was in line with expert explanation they are; need analysis, studying recent theories of education product development, developing the educational product, validating the product to expert and field-testing the product. Latief in Basuki (2017: 21) stated that there are five procedures of development. They are need analysis, studying recent theories of education product development, developing the educational product, validating the product to expert, and field-testing the product. Meanwhile, to conduct the research it is also uses quasi experimental with pretest before field testing and posttest after field testing.
	Regarding to the product of this research (Vinoval) that was in line with the students' need that was explained in the finding above.
	Regarding to the form of product (E-learning) on this research was in line with expert explanation. Pande et.al (2016: 275) states that e-learning is a communication technology that provide some facilities to enhance knowledge, learning and to access online learning/teaching resources.

Meanwhile, there was some disability in conducting this research First, the researcher was unable to explain directly and provide a "demo" about how to use Vinoval to students, it was making the students had difficulties to understand the instructions from the researcher. Second, Vinoval cannot be given directly and must be delivered to students via Google Drive. So, they had to install the application by themselves. It made the researcher and students had more struggles to obtain the data. Third, the students' responses when filling out the questionnaire was so slow because it was based online. Fourth, the researcher had difficulty when validating the product to experts. Fifth, the product that was developed still less flexible because of the limitations of technology and knowledge that the researcher had. Sixth, the researcher had limitations in gathering documentation when the treatment is treated. So, there was a lack of documentation in this thesis.

CONCLUSIONS AND SUGGESTIONS

The outcomes of this research called Vinoval (Visual Novel Modal Auxiliary). The research procedure was adapted from Latief, in (Basuki, 2017: 21). Thus, there are five steps conducted to create a Vinoval as learning media in this research. They are need

analysis, studying recent theories developing the product, validating the product to experts and field testing the product. Meanwhile, to conduct the research it was also uses quasi experimental with pretest before field testing and posttest after field testing. First, gathering the data of need analysis from experimental groups, then the result of need analysis showed that the score was agree in Likert scale. Second, gave the pretest to students both experimental and control groups to know the score of students that given treatment with Vinoval and not. Third, the researcher was studying recent theories about theory of Research and Development, theory of E-learning, Modal Auxiliary, and Visual Novel. Fourth, the developing product was done by need analysis and the content of this product was inspired from Grammar book by Betty and Internet sources. Fifth, the product had been validated by the expert who gave evaluation and suggestion. Sixth, field-testing was conducted to experimental groups to know the development of the product toward 2nd grade of Mipa 3. The findings of the field-testing showed that the product got the good responses from the students. Seventh, gave the posttest to both experimental and control groups after treatment to know the difference score between the two groups. The developing of Vinoval was good and implemented by experimental groups in learning while playing with modal auxiliary material.

In conclusion, based on the finding of the research explained above, this research had been able to answer the research question that states; How is development of Vinoval?" Furthermore, this research had been able to achieve the objective of the research which is the development of Vinoval (Visual Novel Modal Auxiliary) as a simulator game to introduce modal auxiliary to students

After giving the findings and conclusion explained above, there are some suggestion for people who find some benefit of this research. First, for the students learning English, it is suggested to use Vinoval to make the study funnier because it is study while playing a game. Second, the next researcher may use the research finding of this research as the information and reference for their research.

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