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BLENDER SOFTWARE AS A CARTOON ANIMATION VIDEO BASED LEARNING MEDIA TOOL

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Abstract-This study aims to develop cartoon animation media using *Blender* Software in the Réception Orale Débutante course. This study uses the ADDIE Research and development model method which consists of Analysis, Design, Development, Implementation and Evaluations. This research is limited to 3 (three) phases, namely: Analysis, Design, and Development because it is in accordance with the needs and development of the media only on the validation aspect. In each of these phases, revisions have been made to ensure the quality of the data at each phase of development. There are two main data in this study, namely (1) data on the media development process which was collected through recording all media development activities. The instruments used to collect the data were researchers and research notebooks. The data were analyzed using narrative techniques. and (2) the validity data of the animated cartoon media were collected through expert validation using the instrument on the material validation sheet and the media validation sheet. Both data were analyzed using the average technique. The results of the validation test by material experts were 94.6% in the "very good" category while the validation test results by media experts were 80% in the "good" category. So it can be concluded that the cartoon animation media using *Blender* software in the Réception Orale Débutante course is declared valid.

Keywords: Development, cartoon animation media, Blender software, Réception Orale Débutante.

INTRODUCTION

Technological developments in education can be used as learning media. Utilization of technology as a learning medium can improve student learning outcomes. This is in accordance with the results of research (Sumiyati, 2014), (Pirbhai-Illich, 2009), (Ranjan, 2008), and (Petra, 2016) who conducted research on the importance of technology such as multimedia and the web in learning. The results of their research indicate that the use of web-based learning and learning using multimedia can encourage learners to become independent learners and improve their learning outcomes.

Based on the results of these previous studies, it is necessary to develop various innovative learning media by utilizing information and communication technology. This is because information and communication technology has become an important part of student life. Thus, the learning process will be more effective and efficient if it is supported by information and communication technology-based media.

Many factors affect student learning outcomes. (Sudikan, 2007) shows that there are 7 factors that influence learning outcomes, namely (1) curriculum, (2) learning methods, (3) teaching materials, (4) learning media, (5) teachers/lecturers/teachers, (6) students / students, and (7) assessment instruments. Based on this, a preliminary study was conducted to obtain data on the factors that influence the learning outcomes of listening skills/reception orale débutant. The results of previous studies indicate that learning media has a more dominant influence than other factors. The following is a description of the preliminary research data obtained through a questionnaire.

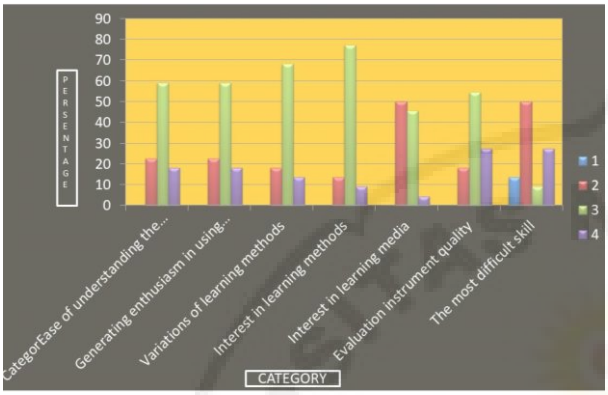

Figure 1. Questionnaire responses of semester 1 students to learning Récéption Orale Débutante

Based on the results of the questionnaire responses to 22 semester 1 students of Stambuk 2020 for the Récéption Orale Débutant course, the results of the questionnaire show that the quality of books, teaching materials, methods, media and instruments has an average score of 3 (good). However, in this questionnaire it is clear that on average students have difficulty in learning Récéption Orale Débutant (50%), Récéption écrite (13.6%), Production Orale (27.3%) and Production écrite (9.1%). In addition, the results of this questionnaire indicate that Récéption Orale is more difficult in learning French and learning media has a more dominant influence than other factors on learning Récéption Orale Débutante (50%).

The results of previous studies and the results of the needs analysis survey indicate that it is necessary to develop innovative learning media by utilizing information and communication technology. This is because information and communication technology has become an important part of student life. Thus, the learning process will be more effective and efficient if it is supported by technology and communication-based media. There is a technology and communication-based curriculum that should be used as a learning medium. The program in question is the Blender Software.

Blender software is well known for its 3D modeling and animation features which offer powerful creative tools. Blender integrates other modules, such as the real-time engine documented in the latest version for video games. Among the unrecognizable functions of this amazing software. There is an advanced video editing system called VSE for Video Sequence Editing (Video Sequence Editor) (Manual, 2018). The use of animated cartoons in French material can certainly be used as a model to represent something that is considered abstract. In addition, cartoons can also display material about *"Raconter sa Journée"* that students may have experienced in their daily lives.

Figure 2. *Blender* Software

One of the learning media used by the French language education curriculum at Universitas Negeri Medan is the book Tendance, which is one of the last French books published by CLE International in 2016, and written by Jacky Girardet, Jacques Pécheur, Colette Gibbe and Marie - Louise Parizet which is intended for beginner level French learners, namely level A-1, where this Tendance book is the last French language book. In this Tendance book, there are several installations/facilities, namely Méthode de Français (Material Discussion Book), Cahier d'activités (exercise/evaluation book) and Audio/Video CDs. Here, this research intends to enrich the Tendance book by developing cartoon animation video learning media using the Blender Software Program in the Orale Réception Débutante course.

RESEARCH METHOD

Research sites

This research was conducted at the French Education Study Program, Faculty of Language and Arts, Universitas Negeri Medan.

Measured Variables

There are two main variables that will be measured in this study, namely (1) the process of developing cartoon animation media sourced from cartoon animation media development activities from the analysis phase to the development phase and (2) the validation of cartoon animation media provided by the validator of media/material experts who in the form of criticism and suggestions about the product of research on the development of cartoon animation media using the Blender program.

Development style

In this study, the ADDIE development model includes aspects of Analysis (analysis), Design (design), Development (development), Implementation (application), and Evaluation (assessment). This research is limited to 3 (three) aspects, namely: analysis, design and development because it is in accordance with the needs and development of the media only on the validation aspect. The following is a development model chart in the research and development of Cartoon Animation learning media.

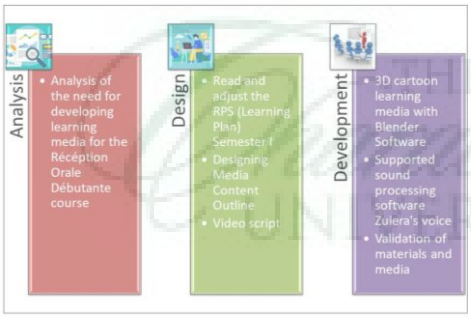

Figure 3. Model of cartoon animation media development.

The following describes the phases based on the image above.

1. **Analysis Stage**
   The initial stage in developing cartoon animation media includes analyzing the needs for developing learning media for the Réception Orale Débutant course by giving a questionnaire to

22 students to obtain data about the most dominant and influential factors in the learning outcomes of Récéption Orale Débutante.

2. **Design (Design)**
   The second stage in developing cartoon animation media is reading and adjusting the RPS (Learning Plan) Semester I in learning Réception Orale Débutante French Language Education Study Program as a reference material with the theme *"Raconter Sa Journée"*. The stage of designing cartoon animation media which includes designing an Outline of Media Content, containing what will be displayed or presented in cartoon animation media, after which it is described through a script.

3. **Development**
   Development is the stage of producing media based on an outline of media content and scripts that have been made previously. Manufacture of the script is very important because it makes it easier to create media. The software used in producing this 3D cartoon learning media is Blender supported by Zuiera's voice sound processing software.
   After that, material and media validation will be carried out. This validation is an activity process to assess whether the media design is valid. Media and material validation can be done by presenting several experts or experienced experts to assess the new product designed. Each expert is asked to evaluate the design, so that further its weaknesses and strengths can be identified. Design validation can be done in discussion forums. After being validated, the weaknesses will be known. These weaknesses are reduced by improving the design.

Data Collection Techniques and Research Instruments

Based on the data and data sources above, the process of developing cartoon animation media will be collected through qualitative data, namely observation and recording of the entire process of developing cartoon animation media. The instrument used to collect the data is the researcher as the main research instrument and the research notebook. The validation data for cartoon animation media will be collected through expert judgment. The instruments used to collect data and the validity of cartoon animation media are material validation sheets and learning media validation sheets.

Data analysis technique

Based on the type of data collected, there are two types of data analysis techniques that will be used in this study, namely qualitative analysis techniques and quantitative analysis techniques. Qualitative analysis techniques were used to analyze the data of the cartoon animation media development process from the analysis phase to the development phase. The quantitative analysis technique is used to analyze the data from the expert assessment of the cartoon animation media. The instrument used to analyze the data on the process of developing cartoon animation media is the researcher. Then the instrument used to analyze the validity of the animated cartoon media is the Blender program.

Interpretation and Drawing of Research Conclusions

The data on the process of developing cartoon animation media is declared valid or valid if the entire process of developing cartoon animation media can be narrated chronologically and systematically based on valid data. The validity of the cartoon animation media is declared valid if the overall value given by the expert reaches a minimum value of 4 (adequate). Whether or not a learning media is feasible can be seen from the questionnaire data used in the form of a Likert scale.

FINDINGS AND DISCUSSION

This research focuses on the development aspect only, namely; Analysis, Design and Development. The cartoon animation media development activity using the Blender program in the Réception Orale Débutante course was carried out for 2 months, starting from January 27, 2021– March 27, 2021.

Table 1. Results of Student Questionnaire Analysis at the Needs Analysis Stage

Types of Questions	Answer	Frequency of Student Answers	%
How is the quality of teaching books (materials) used by lecturers in terms of ease of understanding for students?	very good	4	18,2
	good	13	59,1
	pretty good	5	22,7
	Not good	0	0
How is the quality of teaching books (materials) used by lecturers in terms of their influence in raising students' enthusiasm for learning?	very good	4	18,2
	good	13	59,1
	pretty good	5	22,7
	Not good	0	0
What is the level of variation in the learning methods used by the lecturers?	very good	3	13,6
	good	15	68,2
	pretty good	4	18,2
	Not good	0	0
What is your level of interest in the learning methods used by the lecturers?	very good	2	9,1
	good	17	77,3
	pretty good	3	13,6
	Not good	0	0
How is your level of interest in the learning media used by lecturers?	very good	2	9,1
	good	17	77,3
	pretty good	3	13,6
	Not good	0	0
How is the quality of the learning evaluation instruments used by lecturers?	very good	1	4,5
	good	10	45,5
	pretty good	11	50
	Not good	0	0
Which of the following skills do you think is the most difficult?	production orale	6	27,3
	production écrite	2	9,1
	réception écrite	11	50
	réception orale	3	13,6

Based on the table, it can be concluded that the quality of the books, materials, methods and assessment instruments used by the lecturers is in the good category. However, the learning media used by the lecturers are included in the poor category. The most difficult skill for students to master is learning réception orale débutante. In learning réception orale débutante, the aspect that most needs to be improved is the learning media. Thus, it turns out that the learning media for the réception orale débutante course still needs to be developed to enrich the Réception orale débutante learning media as part of the French language teaching program of FBS Unimed. The size to determine this category is seen from the most dominant answers given by students.

Some of the results of the development of cartoon animation media using the Blender software in the réception orale débutant course are as follows.

1. **Initial view/cover**
   The cover is the first part that appears when accessing this learning media which consists of the title of the thesis, the name of the researcher, the name of the thesis examiner, the logo of the Medan State University and an image that represents the content of the material.

Figure 4. Initial view of the Blender software

2. **Self-introduction display**
   After the cover display, there is a picture of a female character who talks and introduces herself which consists of the name and material to be explained.

Figure 5. Display of self-introduction

3. **Main view**
   The main page is a material page adapted from the RPS Récéption Orale Débutant. This page contains course learning outcomes, subject learning sub-achievements, texte de départ, descriptions of les routines de la journée, les verbes pronominaux, le verbe faire, la conjugaison des verbes, les activités quotidiennes, les jours de la semaine, exprimer l'heure et la frequence, les nourritures, summary and exercise.

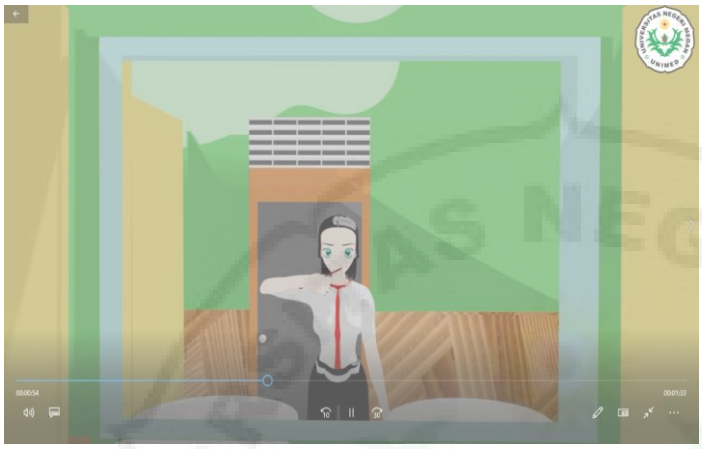

Figure 6. Tekte de depart “Raconter la Journée”

Figure 7. La Librairie de Cecile video

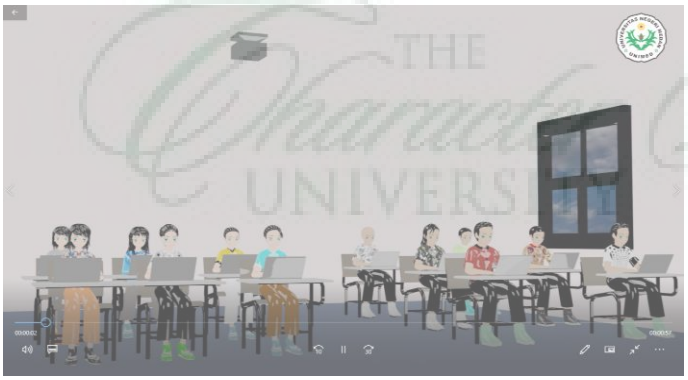

Figure8. Dans la Classe Video

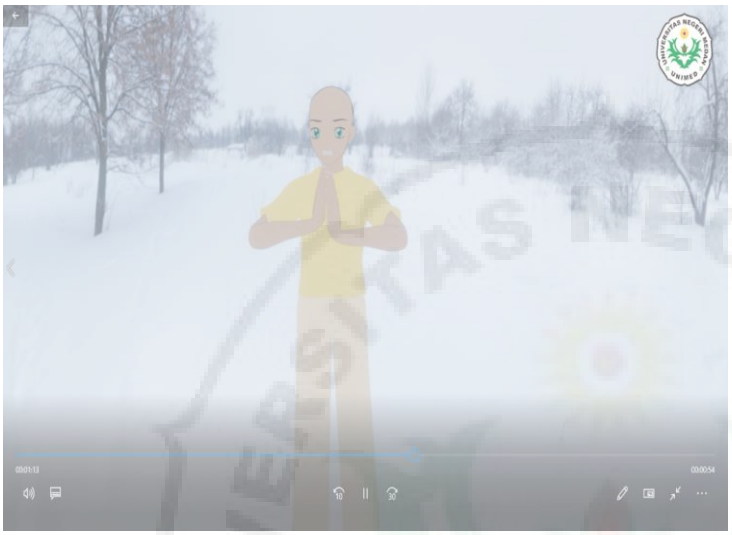

Figure 9. Video Material about Raconter la Journée

4. Cover screen

The closing view is the last part to close the learning video. This view contains references or bibliography that serves as a source of information used in the preparation of the material. Then pictures of researchers, thesis supervisors, thesis examiners, material validators and media validators as well as thanks from researchers.

Figure 10. Closing view on cartoon animation video

After developing cartoon animation learning media using blender software in the réception orale débutant course, the product was validated by media experts. Before the material was feasible, the researcher made several revisions based on the opinion of the validator. The final result of this validation is shown in the table below.

Table 2. Final results of material validation and media validation

Validation	**Criteria**
Material expert	94,6 (very good)
Media expert	80 (good)
Average	87,3 (good)

The results of expert validation on both aspects: material and media indicate that teaching materials and cartoon animation media using Blender software in the réception orale débutante course are valid or feasible and can be used in learning réception orale débutante. This emerged from the validation results with an average of 87.3 which was included in the "good" category.

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