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French E-Module for Production Écrite Débutante Learning Based on Project Based Learning Using Kodulars

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ABSTRAK

Terdapat kesulitan mahasiswa dalam menuangkan ide dan menulis kalimat sederhana dalam bahasa Prancis sesuai dengan kaidah yang benar. Selain itu, media pembelajaran yang digunakan masih didominasi oleh metode konvensional seperti buku cetak dan lembaran kertas, yang kurang menarik dan tidak mendukung proses pembelajaran secara efektif. Penelitian ini bertujuan untuk merancang e-modul pembelajaran bahasa Prancis Production Écrite Débutante (menulis untuk pemula) berbasis project based learning (PjBL) *berbantuan Kodular. Metode penelitian menggunakan metode* Research and Development (R&D) *model ADDIE. Subjek yang terlibat dalam penelitian ini yaitu 16 mahasiswa. Metode pengumpulan data yang digunakan adalah observasi dan kuesioner. Adapun instrumen yang digunakan adalah lembar kuesioner. Setelah data dikumpulkan kemudian dianalisis menggunakan metode analisis data kualitatif dan kuantitatif. Hasil penelitian menunjukkan bahwa, E-Modul yang telah dikembangkan efektif untuk digunakan dalam pembelajaran menulis bahasa Prancis bagi pemula. Sehingga, dapat disimpulkan bahwa E-Modul yang telah dikembangkan layak dan efektif digunakan dalam pembelajaran menulis bahasa Prancis untuk pemula. Penggunaan e-modul berbantuan aplikasi Codular dalam pembelajaran menulis berbasis* Project Based Learning (PjBL) *dapat menjadi solusi inovatif untuk meningkatkan keterampilan menulis mahasiswa.*

ABSTRACT

Students need help with ideas and writing simple sentences in French according to the correct rules. In addition, the learning media used are still dominated by conventional methods such as printed books and sheets of paper, which are less exciting and do not support the learning process effectively. This study aims to design project-based learning (PjBL)-assisted Kodular e-module for French Production Écrite Débutante (writing for beginners). The research method used the Research and Development (R&D) method of the ADDIE model. The subjects involved in this study were 16 students. The data collection methods used were observation and questionnaires. The instrument used was a questionnaire sheet. After the data was collected, it was analyzed using qualitative and quantitative data analysis methods. The results showed that the E-Module that had been developed was adequate for beginners to use in learning French writing. Thus, it can be concluded that the E-Module that has been created is feasible and effective for beginners to use in learning French writing. The use of e-modules assisted by Codular application in learning writing based on Project Based Learning (PjBL) can be an innovative solution to improve students' writing skills.

1. INTRODUCTION

The progress of the 21st-century world in the learning process requires the government to improve human resources, which can think critically and creatively, work together, communicate, and solve problems (Mardhiyah et al., 2021; Partono et al., 2021; Puspa et al., 2023; Yusra et al., 2024). One of the efforts that can be made to improve human resources is to emphasize the ability to think critically as outlined in the learning process, one of which is through writing skills. Learning media has developed along with information and communication technology into e-learning (Anggraeni et al., 2023; DS et al., 2022). One form of e-learning that can be used as independent teaching material is e-modules. This is based on the statement of other researchers who stated that e-modules can help students learn independently and are part of electronic-based e-learning that utilizes technological advances in the form of electronic devices in

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learning (Mariezki et al., 2021; Rismayanti et al., 2022). Writing skills are one of the productive and expressive language skills used to communicate indirectly and not face-to-face with other parties. Writing skills are the latest language skills and abilities mastered by language learners after listening, reading, and speaking skills (Lubis, 2021; Sukirman, 2020). Writing activities are a form of manifestation of language competence that language learners most recently master after listening, speaking, and reading competencies. Compared to the other three language competencies, writing competence is generally more challenging to master, even by native speakers of the language concerned. Thus, integrating writing skills in e-modules can be one of the solutions to improve students' language competence because e-modules allow independent and structured learning. Through the use of e-modules, students can develop their writing skills more effectively and efficiently by utilizing technological advances (Fajri & Chusni, 2024; Maulidiyah et al., 2023).

Learning writing skills or Production Écrite (PE) in the French Language Education study program at FBS Unimed is given from semester one to semester six. However, based on initial observations of second-semester students through daily Production Écrite assignments, the results were not satisfactory. The grades of the assignments and the final evaluation of PE students are still low, with more than 50% of students getting inadequate grades, some even failing. In writing activities in French, such as writing simple sentences in a diary about daily activities, it was found that students had difficulty expressing ideas and writing French sentences according to French rules. Errors found include sentence structure, grammar usage, and vocabulary. Students' difficulties in writing simple sentences reflect their lack of understanding and mastery of the basics of the French language, which should have been mastered in the early stages of learning.

In addition, the available learning media needs to be improved to support the learning process because it tends to be dominated by printed books, sheets of paper, photocopied sheets, and less attractive photos. This monotonous media is unable to motivate students to study harder and understand the material deeply. The learning model used also tends to be conventional and not project-based, so students become passive and less creative. One-way and not interactive learning makes students less actively involved in the teaching and learning process. As a result, the ability to think critically and creatively, the ability to work together, and the ability to communicate are not optimally developed. In fact, these skills are critical in mastering foreign languages and facing challenges in the world of work later. Therefore, innovation in teaching methods and the use of more modern and interactive learning media are needed to improve the quality of Production Écrite learning.

Based on the identification of several problems that have been revealed, one alternative as a solution to learning PE for beginners of Niveau A1 is the need for the utilization of e-modules assisted by modular applications, which are assumed to increase student competence when writing related to the themes studied through the Project Based Learning (PjBL) model approach. Project-based learning (PjBL) is a learning model based on giving assignments in the form of projects that can direct students to experience the investigation process so that students can develop knowledge, skills, and attitudes that become the basis of teacher assessment (Eddi Lion et al., 2022; Taufiqurrahman & Junaidi, 2021; Winaya, 2020). Project-based learning is a discovery-based/text-based/project-based learning model or approach that achieves 21st-century learning targets (4Cs): critical thinking and problem-solving, communication, collaboration, and creativity. This learning model was chosen because it can be associated with the characteristics of meaningful learning, student-centered, active learning, and collaborative learning. In addition, this learning model also exposes learners to practical problems through stimulus in learning (Putri, 2024; Sunni, 2024).

Learning media has evolved with the development of information and communication technology into e-learning (Affandi et al., 2020; Shodiq & Zainiyati, 2020; Sukmawati, 2020). One form of e-learning that can be used as independent teaching material is e-modules. This is based on statements from other researchers who state that e-modules can help students learn independently and are part of electronic-based e-learning that utilizes technological advances in the form of electronic devices in learning (Nanthi & Mutaqin, 2023; Salsabila et al., 2023). The research's news is that it uses the Codular application to develop an interactive e-module that can be used to learn PE for beginner-level students (Niveau A1). The e-module is expected to increase student's engagement in learning and help them overcome difficulties in writing simple sentences in French. Therefore, this study aims to design project-based learning (PjBL)-assisted Kodular e-module for French Production Écrite Débutante (writing for beginners). The use of e-modules assisted by Codular application in learning writing based on Project Based Learning (PjBL) can be an innovative solution to improve students' writing skills.

2. METHOD

This research is a type of research and development (R&D) with the ADDIE development model. Development research, based on Borg & Gall's statement, is a process used to develop and validate educational products. This is emphasized by other researchers who state that development research is a research method used to produce specific products and test the effectiveness of these products. The products resulting from development research are not only products that will be tested in the field but also include the process of developing initial products and improving existing products. The development model used is the ADDIE model developed by Dick and Carry (1996) to develop learning systems (Matsum & Sarmita, 2022; Sunarti, 2022). The subjects involved in this study were 16 students. The data collection methods used were observation and questionnaires. The instrument used is a questionnaire sheet. The stages of this research begin with the analysis stage, identifying problems faced by students related to media and learning models so that media development is needed. Second, in the design stage, the process involves making flowcharts, storyboards, and material preparations. Third, in the development stage, the activities carried out are developing e-modules and conducting expert validation. Fourth, in the implementation stage, the activities carried out are testing e-modules to students and asking for student responses to e-modules. Finally, in the evaluation stage, improvements to the e-module are made based on expert advice. Data analysis techniques in the development of this e-module are qualitative and quantitative. The data analysis technique used to analyze the research data is qualitative, while the calculation of the average questionnaire results and student evaluation/test results is quantitative.

3. RESULT AND DISCUSSION

Result

At analysis stage a series of activities were carried out, these activities involved identifying and observing the target audience who were experiencing problems in learning, which were 2nd semester students of the French language education study programme in 2023 in learning writing skills or Production Écrite (PE). Observations were made of the Production Écrite daily assignment grades, with unsatisfactory results. Then observations were made by analysing the value of assignments on writing skills, the results were below 50% of students who obtained sufficient grades, then further observations were made by observing writing activities. In the writing there are still many who are wrong in using the wrong writing rules and often use sentences that are not complete. The next action is a needs analysis of 16 students in semester 2 of the French language education study programme by distributing online interview questionnaires via Google forms and The results of the needs analysis of the French e-module learning Production Écrite Débutante (writing for beginners) based on project-based learning (PjBL) assisted by Kodular illustrate that as many as 100% (16 students) stated that they needed alternative learning media that could be used for Production Écrite material more easily and interestingly, 69% (11 students) stated that they had seen electronic e-modules and 31% (5 students) had never seen electronic e-modules, 100% (16 students) stated that they were interested in learning Production Écrite skills if an e-module based on Project Based Learning (PjBL) was developed to support the learning process.

In design stage, the first step is to create flowcharts and storyboards and compile materials for the E-module to be developed, called the PED E-module. This preliminary phase is crucial as it lays the foundation for the structure and content of the e-module. Flowcharts will help in mapping out the instructional design, ensuring that the sequence of lessons is logical and coherent. Storyboards, on the other hand, will provide a visual representation of the content, allowing the developers to visualize the user interface and interaction elements, which are essential for creating an engaging learning experience. The resulting E-module will contain Niveau A1-based materials that students will explain both individually and in a group context. This dual approach is designed to cater to different learning styles and preferences. Individual explanations will allow students to learn at their own pace and review the material as needed. At the same time, group contexts will encourage collaboration and discussion, enhancing their understanding through peer interactions. By incorporating both methods, the E-module aims to provide a comprehensive learning experience that promotes active engagement and a more profound comprehension of the material.

PED learning through e-modules will be designed in accordance with the mechanism established by the National Education Standards Agency (BSNP). This ensures that the E-module meets the required educational standards and quality benchmarks. The BSNP guidelines will be followed meticulously to develop a curriculum that is not only pedagogically sound but also aligned with national educational objectives. This adherence to standards is vital for the credibility and effectiveness of the e-module as an educational tool. The result is the scope of material presented in the PED course adjusted to the RPS, which has been divided into six lessons. These lessons include material 0 introduction, material 1 se présenter, material 2 se présenter (suite), material 3 présenter quelqu'un, material 4 voyager, and material 5 passer

le weekend. Each lesson is carefully crafted to cover specific language skills and cultural knowledge appropriate for Niveau A1 learners. The introductory material sets the stage for the course, providing an overview and essential information. The subsequent lessons build on this foundation, progressively introducing more complex language structures and vocabulary. By the end of the course, students should be able to confidently use French in everyday situations, such as introducing themselves, talking about others, traveling, and discussing weekend plans.

In the development stage, researchers developed the E-module with the help of Kodular. The development step is to create a new project in Kodular, then design the product by adding UI elements such as buttons, text, and images, and then adding user input code blocks that aim to call web services, store data, and others. You can also add additional components, such as the database presented in Figure 1.

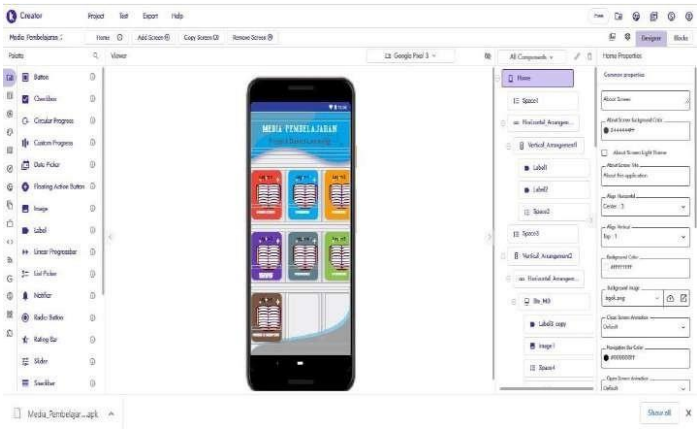

Figure 1. Development Stage with Kodular

The results of the development of E-Modules with Unity modular are applications compatible with Android devices, which aim to facilitate students' access to use. The following is the appearance of the e-module developed with the modular presented in Figure 2.

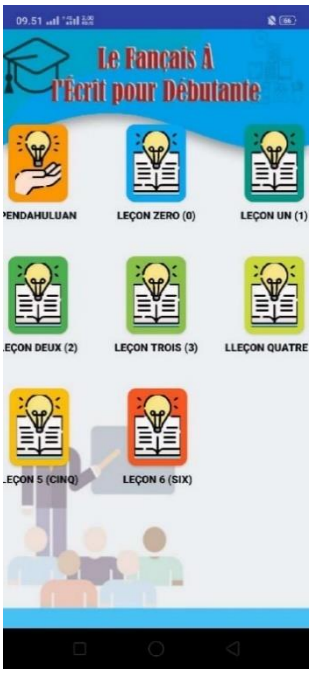

Figure 2. Display Of E-Modules Developed With Kodular

Then to measure the feasibility level of learning media in the form of E-Module Applications, researchers conducted validation by experts, made revisions to the E-module material and prepared trial preparations and analysed the results of trials that would be carried out in the French language education study programme. The results obtained after conducting material validation and media feasibility by French

language experts and learning design and media experts by considering content feasibility, presentation feasibility, language feasibility, programming and graphics show excellent results with a score of 95% which indicates that this media is in a very valid category.

Product implementation is carried out by applying the E-module that has been developed to teach writing skills to beginner learners of Niveau A1. This implementation phase is crucial as it tests the E-module's practicality and effectiveness in a real classroom setting. By integrating the E-module into the curriculum, students can directly experience the new learning tool, and educators can gather valuable feedback on its usability and impact. The implementation was carried out by conducting a media trial of French e-modules learning Production Écrite Débutante (writing for beginners) based on project-based learning (PjBL) assisted by Kodular to French students who were taking Production Écrite Débutante lessons. During this trial, the E-module was introduced and integrated into the lessons, allowing students to interact with the digital content. The PjBL approach encouraged students to engage in projects that required them to apply their writing skills in practical, real-world contexts, thereby enhancing their learning experience.

The results of the implementation of the E-Module conducted on students showed that students experienced an increase in writing skills in French. This improvement is evident from the results of the post-test conducted, which showed that 85% of students succeeded in answering the post-test questions correctly. The post-test results indicate that the E-module effectively enhanced students' ability to write in French, demonstrating the module's success in achieving its educational goals. This result shows a significant difference from the results of the pre-test conducted before applying the PjBL-based E-module in learning writing skills for beginners. Before using the E-module, only over 50% of students managed to answer and complete the pre-test questions correctly. The comparison between the pre-test and post-test results highlights the substantial impact of the E-module on students' writing skills. The significant improvement underscores the effectiveness of the project-based learning approach combined with the interactive and engaging elements of the E-module.

The results of the E-module Application Product are evaluated based on the suggestions of media and material experts. These evaluations are crucial to ensure that the E-module is compelling and engaging for students. By incorporating expert feedback, the development process can address any shortcomings and enhance the overall quality of the learning tool. Improvements are made in the application by adding a variety of questions and increasing the scope of the material. This enhancement is aimed at broadening the content coverage to ensure comprehensive learning. By diversifying the types of questions, students are exposed to various formats and challenges, which can help in reinforcing their understanding of the subject matter. These additions are specifically designed to cater to different learning paces and styles, thereby increasing the effectiveness of the E-module and maximizing the potential for student understanding in learning to write French for beginners.

The suggestion from the media expert is to add a variety of colors and images to the design of the E-Module Application. The intention behind this is to enhance the aesthetic appeal of the E-module. A visually pleasing design can significantly impact students' engagement and interest levels. By incorporating a diverse palette of colors and relevant images, the E-module can become more attractive and less monotonous, which can help maintain student attention and interest throughout the learning process. Thus, the product in the form of E-Modules is able to attract students' interest in learning because it has an aesthetic design. An engaging design not only makes the learning experience more enjoyable but also aids in better retention of information. When students find the learning materials visually appealing, they are more likely to interact with the content actively, leading to improved learning outcomes. Therefore, the combination of enhanced content and aesthetic design ensures that the E-module is both educationally effective and visually stimulating, providing a balanced approach to learning French for beginners.

Discussion

This study has several significant advantages. First, the use of e-modules assisted by the Codular application offers an innovative approach to French language learning, especially in the development of writing skills. This e-module is not only designed interactively and interestingly but also able to increase students' motivation to learn and actively participate in the learning process. With interactive features such as interactive questions, practical exercises, and immediate feedback, Codular e-modules are able to present a more exciting and practical learning experience (Fitrio & Merliza, 2023; Murod et al., 2021; Pradnyana et al., 2021). Secondly, the Project Based Learning (PjBL) approach integrated into this e-module allows students to learn through projects that are relevant to everyday life (Handayani et al., 2024; Izzah et al., 2021; Jalil & Shobrun, 2023). Through this approach, students not only develop their writing skills but also improve their critical thinking, collaboration, and problem-solving skills. They are invited to face real challenges that require problem-solving and creativity, which significantly enhances their learning beyond

the boundaries of the traditional classroom.

Thirdly, this study makes a meaningful contribution to the academic literature regarding the use of technology in language learning. By providing empirical evidence on the effectiveness of Codular e-modules in improving students' writing skills, this study provides a solid basis for further development in the implementation of technology in the context of language education. Fourth, the results of this study can serve as an essential reference for lecturers and curriculum developers in designing more adaptive and effective learning strategies. The information and findings from this study can help them better identify students' needs and adapt teaching methods to suit technological developments and 21st-century learning demands. Thus, this research not only provides concrete solutions for improving students' writing skills but also directs the direction of future technology-based education development.

Although it has many advantages, this study also has some limitations. First, this study was only conducted on second-semester students in the French Language Education study program at FBS Unimed, so the results may not be generalizable to all students or other institutions. The solution to overcome this limitation is to conduct a follow-up study involving a more extensive and more diverse sample from various study programs and institutions. The last limitation is that this study has not measured the long-term impact of using e-modules on students' writing skills. Therefore, further research needs to be conducted to evaluate the sustainability and long-term effectiveness of this e-module.

This research has several important implications in the context of developing French language learning for beginners using the Project Based Learning (PjBL) approach assisted by Kodular e-modules. First, the results of the research are expected to contribute significantly to improving the quality of Production Écrite learning in the French Language Education education environment at FBS Unimed. By integrating technology into learning, it is expected that the developed e-module can be an effective solution to overcome students' difficulties in writing correct French sentences. Furthermore, implementing PjBL as a learning approach will change the way students learn and interact with learning materials. Through project tasks that demand problem-solving, collaboration, and creativity, students are expected to improve their writing skills and develop soft skills that are important in the future world of work. This research also has implications for the development of technology-based learning models for language subjects.

The use of Kodular as a platform for developing e-modules shows the potential for technology applications to improve students' interaction with the subject matter. This is in line with the global trend of information and communication technology becoming an integral component of the learning process. More broadly, the successful implementation of PjBL-based e-modules can provide inspiration and examples for other educational institutions to adopt innovative and technology-based approaches in foreign language teaching. This will open up opportunities for curriculum development that is more responsive to the demands of the times and increase the relevance of education to the needs of students in today's digital era. Thus, the results of this study are expected to provide a strong foundation for the development and implementation of more effective, innovative, and sustainable learning practices in the context of French language education and, more broadly, for the development of technology-assisted project-based learning methods in educational institutions.

4. CONCLUSION

The results showed that the developed E-Module is adequate for beginners in learning French writing. Thus, the developed E-Module is feasible and effective for beginners to use when learning French writing. The use of e-modules assisted by Codular application in learning writing based on Project Based Learning (PjBL) can be an innovative solution to improve students' writing skills. In addition, this study confirms the feasibility and efficacy of the developed E-Module to improve French writing proficiency among beginners. Its structured approach, guided by the Project Based Learning (PjBL) methodology and supported by the Codular application, addresses the various learning needs and challenges faced by students. The interactive features embedded in the E-Module encourage active engagement and practical application of language skills, fostering a conducive learning environment.

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