Learning Media Design of Introduction à la Civilisation Française Using Augmented Reality Technology Through Instagram Platform

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Article History:
Received: Aug 12, 2024
Revised: Jan 09, 2025
Accepted: Jan 10, 2025
Online First: Jan 30, 2025

Keywords:
Augmented Reality,
Civilisation Française,
Instagram,
Learning Media.

Kata Kunci:
Augmented Reality,
Civilisation Française,
Instagram,
Media Pembelajaran.

Abstract: This study aims to describe the design of microblog learning media supported by augmented reality-based interactive quiz filters through the Instagram platform for humanities courses, especially Civilisation Française. The research methods used are descriptive qualitative with a Design and Development (D&D) approach. Designing learning media products involves planning, production, and evaluation. The research findings show that (1) based on the material aspect, the learning media product through the Instagram platform is very feasible to use, with a product feasibility percentage result of 94%, and (2) based on the media aspect, the learning media product through the Instagram platform is very feasible to use with a product feasibility percentage result of 100%. These results indicate that the material and media aspects of the designed product have quality content, appropriate learning objectives, attractive appearance design, ease of use and accessibility. This research produces a product that is very feasible to use in learning Civilisation Française. The microblog and augmented reality-based interactive quiz filter can be accessed via mobile phone on the Instagram account @apprendrecf.

Abstrak: Penelitian ini memiliki tujuan untuk mendeskripsikan perancangan media pembelajaran *microblog* didukung dengan filter kuis interaktif berbasis *augmented reality* melalui *platform Instagram* untuk mata kuliah humaniora khususnya *Civilisation Française*. Metode yang digunakan pada penelitian ini adalah deskriptif kualitatif dengan pendekatan *Design and Development* (*D&D*). Proses perancangan produk media pembelajaran melalui tiga tahap, yaitu perencanaan, produksi, dan evaluasi. Hasil penelitian ini menyatakan bahwa (1) berdasar pada aspek materi, hasil persentase kelayakan media pembelajaran *Civilisation Française* melalui *platform Instagram* mencapai 94% sehingga dinyatakan sangat layak untuk digunakan dan (2) berdasar pada aspek media, hasil persentase kelayakan media pembelajaran *Civilisation Française* melalui *platform Instagram* mencapai 100% sehingga dinyatakan sangat layak digunakan. Hasil tersebut menyatakan bahwa aspek materi dan media pada produk media yang telah dirancang memiliki kualitas pada konten, tujuan pembelajaran yang sesuai, serta desain tampilan yang menarik, kemudahan penggunaan dan aksesibilitas. Produk dari hasil penelitian ini sangat layak digunakan untuk pembelajaran *Civilisation Française*. *Microblog* dan filter kuis interaktif berbasis *augmented reality* dapat diakses melalui *mobile phone* pada akun *Instagram @apprendrecf*.

How to cite:
Prasetyo, A. J., Hardini, T. I., & Gumilar, D. (2025). Learning Media Design of Introduction à la Civilisation Française Using Augmented Reality Technology Through Instagram Platform. *Edunesia : Jurnal Ilmiah Pendidikan, 6*(1), 570-584.

https://doi.org/10.51276/edu.v6i1.1016

A. Introduction

Technological advances are developing well, including in the field of education. Technology can help the learning process become efficient and effective and achieve its goals (Suwandi et al., 2023). The technological developments that are now present are a product of advances in education. Learning media is needed to support the needs of learning activities. Learning media is a communication tool used in the learning process (Rahayu et al., 2022). Learning technology is very varied, such as online-based technology through applications on the internet or pseudo-reality technology (Arisandi et al., 2022).

Learning media used at a State University in West Java rely on various printed books to support learning. In line with technological developments, it is hoped that it can support the learning process in delivering material by using various diverse media to make the teaching and learning process more enjoyable. Learning media that can be used in addition to printed books can be audio, visual, audio-visual, or interactive (Arisandi et al., 2022; Febriaanto et al., 2020). According to Thorn, interactive multimedia has six assessment criteria (Suwandi et al., 2023). These include ease of access, quality of material content, presentation of content information, language skills and aesthetics of the display included in the media, and the overall benefit in delivering learning per learner expectations and objectives.

Introduction à la Civilisation Française is one of the core skills courses that must be followed by all French Language Education Study Program FPBS UPI students in the first semester. This course discusses French culture, which includes a general profile of French culture and society. Based on the Semester Learning Plan of the *Introduction à la Civilisation Française* course, this learning is delivered through various cultural themes, such as geography, demography, family, education, politics, work, art, food, and others. This central theme becomes the subject of study in learning by discussing the changes and differences that exist along with the development of French culture. Débyser and Costanzo (inside Mulyadi, 2018) state that there are three approaches to learning Civilisation Française: sociological, anthropological, and semiotic. One of the materials used in the *Introduction à la Civilisation* Française course refers to the textbook *Civilisation Progressive du Français: niveau débutant avec 400 exercices 1^er edition* published by CLE International in 2005. Several themes in the teaching materials support the learning process of *Civilisation Française*.

In connection with technological advances, learning media innovation is needed to support the teaching and learning process, especially in the *Introduction à la Civilisation Française*. Learning media in the form of microblogs with augmented reality-based interactive quiz filters through the Instagram platform has technological innovations that can be applied at various levels of education, one of which is at the Higher Education level. Augmented reality co, commonly called AR, is a technology that can unite multimedia with the real world using electronic devices (Adrian et al., 2020). The advantages of AR technology are that it does not require significant costs in the process of being used (Ismayani, 2020). One application that can support augmented reality technology is the Spark AR application. Since August 2019, the app has given users access to create various

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filters with AR technology for free. It can be used online through social media platforms such as Instagram (Karundeng, 2020). This is an opportunity for researchers to efficiently facilitate the process of designing learning media for *Civilisation Française* through the Instagram platform.

The Instagram social media platform is one of the popular digital applications that is very simple to operate and is widely used by various groups and backgrounds (Fajrin et al., 2022). In addition, Instagram users can interact with each other by leaving comments or likes on shared posts, as well as sending messages between users. (Rokhmawati & Mastuti, 2018). It is accompanied by various interesting features, such as augmented reality-based filter features that can be accessed through the Instagram platform (Rohman et al., 2022).

Auly et al (2021) research in "The Effectiveness of Instagram Filters to Improve Student's Vocabulary" states that the use of Instagram filters as learning media is effective in helping improve students' ability to learn English vocabulary and such an attractive and accessible media. The research of Arisandi et al (2022) in "Perancangan Media Pembelajaran Topologi Jaringan dengan *Augmented Reality* di Program Studi Teknik Informatika" shows that the results of AR-based learning media design can help students to understand network topology simulation material so that it becomes more effective. The research of Zahra et al (2021) in "A Development of Instagram Filter as Japanese Language Learning Medium" shows that interactive quizzes using augmented reality-based Instagram filters are effective learning media for Japanese language learning.

The explanation of several previous studies shows that augmented reality technology-based learning media can be applied to various fields, including education. This research was conducted to design learning media products as an alternative in the *Introduction à la Civilisation Française* course in the form of microblogs with interactive quiz filters based on augmented reality technology through the Instagram platform and to determine the feasibility of learning media products Introduction à la Civilisation Française. This research is expected to produce an alternative learning media to support the learning process, especially in the *Introduction à la Civilisation Française* course.

B. Method

The research method used in designing learning media products Introduction à la Civilisation Française with augmented reality technology through the Instagram platform is descriptive qualitative with a Design and Development (D&D) approach model. Design and development, according to Richey & Klein (in Waruwu, 2024) states that the research and development method is a study that has a systematic arrangement in the process of design, development, and assessment, which has the aim of building an empirical basis for creating an instructional and non-instructional product or model and non-model that already exists or is newly developed in learning and non-learning. Richey & Klein (in Suwandi et al., 2023) stated that the D&D method is suitable for conducting development research on a device or learning media in the form of software or applications. According to (Agung et al., 2021), there are two categories in the D&D model: Product and Tool Research

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and Model Research. Each of these development research models is divided into three types. The *Product and Tool Research* model is divided into *Comprehensive Design and development*, *Tool Development and use*, while the *research model* is divided into *Model Development*, *Model Validation*, and *Model Use*.

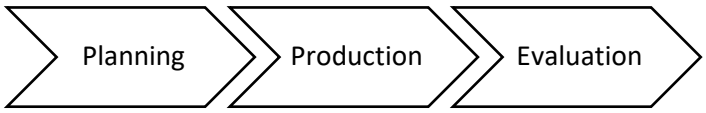

Figure 1. PPE Model (Richey & Klein in Sugiyono, 2016)

In line with development research methods, the research design is a basic framework for designing learning media products. *Introduction à la Civilisation Française* based on augmented reality technology through the Instagram platform is planning, production or production, and evaluation or evaluation proposed by Richey and Klein (in Suwandi et al., 2023). Concentrate on the research design used as a design that implements product design and development and a means to conduct validation (Richey & Klein, 2014).

Data collection is used by techniques such as literature studies, documentation, and questionnaires. The research instrument used to collect data is a validation questionnaire for the suitability of material and media to assess the feasibility of the product by expert judgment. The data generated will be quantitative in the form of scores from the validation questionnaire and qualitative data in descriptive data from feedback on the product. The product feasibility assessment is based on a development evaluation using the Learning Object Review Instrument (LORI) version 2.0 designed by Nesbit et al (2009). The LORI assessment instrument includes eight aspects, namely (1) content quality, (2) learning goal alignment, (3) feedback and adaptation, (4) motivation, (5) presentation design, (6) interaction usability, (7) accessibility, (8) standards compliance.

The data analysis technique used for data processing is the quantitative descriptive analysis technique, which determines the feasibility value of the product that has been designed. The assessment results were measured using a product validation questionnaire rating scale with scale categories in Table 1.

Table 1. Product Validation Questionnaire Rating Scale

Criteria	Score
Very good	5
Good	4
Fair	3
Deficient	2
Very Poor	1

Source: Armayanti & Nasution, 2024

The results of the product assessment will be analyzed using the following formula (adapted from Suwandi et al., 2023).

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$$Feasibility\ (\%) = \frac{Earned\ Score}{Maximum\ Score} \times 100\%$$

Then, the percentage of feasibility results will be converted to measure the value of the media feasibility level using the score categories in Table 2.

Table 2. Category Data Validation Percentage

Persentase	Category
80% - 100%	Very Feasible
60% - 79%	Feasible
40% - 59%	Fair
20% - 39%	Not Feasible
0% - 19%	Very unfeasible

Source: Adapted from Ravilla et al., 2022

In assessing the validity of learning media, validation results are significant in determining its quality. The range of validation results can guide how well a learning media meets the set standards. The range is divided into five categories based on the percentage of validation results. If the validation results reach an interpretation of <80%, the learning media is considered "very feasible" and indicates that the media meets the validity standards optimally. Therefore, understanding the validation results is very important in evaluating the quality of a learning media

C. Result and Discussion

Result

There are three basic stages in the design of learning media: Introduction à la Civilisation Française based on augmented reality technology in the design and development of a product.

Planning

The first step is the research planning stage, which focuses on product planning by starting with analyzing the needs as support in designing the media products to be produced, including analysis for material needs, media needs, and users, as well as on designing microblogs and AR filters. In the first step, researchers conducted a material needs analysis, which indicated that digital learning media based on augmented reality technology with Introduction à la Civilisation Française material could be developed. The learning material will cover French culture. The second step is to analyze media needs using the Instagram digital media platform with the help of augmented reality-based technology that is attractive and easily accessible. The third step is a user analysis, in which the product to be designed is targeted explicitly at university students and Instagram users who want to learn Civilisation Française in a new way that is easy and can be accessed flexibly through digital devices. The fourth step is planning a microblog design containing supporting

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materials and an interactive quiz design based on augmented reality filters that will be uploaded to a special account on the Instagram platform.

Production

The second stage is the production stage. In the production of learning media, researchers began designing products based on the planning in the previous stage. The first stage is carried out with the material design process, which includes organizing the material structure as a basic framework in microblogging material on Instagram and content curation based on several literature studies as sources, such as journals, printed books, and other learning media. At this stage, six learning materials were produced and divided into several sub-materials presented through text and images.

Next is the media design stage. Researchers carry out design in making products that have been harmonized with the content of learning materials. In the first step, researchers created an account on Instagram with the username or user account name @apprendrecf.

Figure 2. The Instagram Account of @apprendrecf

After creating the Instagram account, the researcher created the design for the materials on the microblog and the design assets for the interactive quiz filter that had been generated in the content curation process during the planning stage. The design was then created using the Canva application, as follows.

Figure 3. Microblog Design Making

Figure 4. Interactive Quiz Filter Assets Making

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After completing the design of the microblog and interactive quiz filter assets, the design results were uploaded to the @apprendrecf Instagram account, and the final appearance after uploading is as follows.

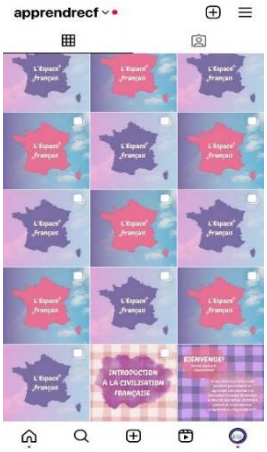

Figure 5. Microblog Material Display

After designing the material on the microblog, the researcher designed six kinds of filters in the form of augmented reality-based interactive quizzes that had adjusted to the central theme of the learning material. The six materials were then divided into 29 submaterials.

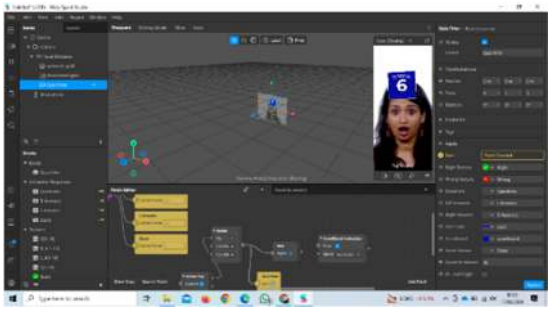

Figure 6. Augmented Reality-based Interactive Quiz Filter Creation

Making interactive quiz filters based on augmented reality using the Spark AR Studio application, researchers go through several stages in the process of making filters, namely (1) download Spark AR Studio, (2) log in to Spark AR Studio, (3) create new blank project, (4) import AR block, (4) setting animation sequence, (5) add texture, (6) customize patch editor, (7) test on device, (8) export filter.

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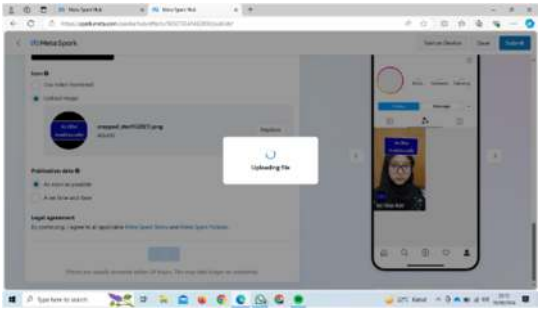

Figure 7. Publishing Filter Process View

After creating the filter, enter the publishing stage to upload the filter via the Meta Spark Hub web. Before submitting, some information is needed, such as filter names, platforms to be used, categories, keywords, icons, and uploading demo videos and files that have been exported previously. Then, after submitting the publish effect and passing the review process by Meta Spark, the filter will be automatically uploaded and used through the @apprendrecf Instagram account, and the final filter design will appear.

Figure 8. Display of Filter Options on @apprendrecf Instagram Account

Evaluation

The third stage is the evaluation stage. Validation of the feasibility of microblog media products and Instagram filters that have been successfully designed and assessed by expert judgment as material and media experts at the evaluation stage. The product feasibility assessment was adapted using the Learning Object Review Instrument (LORI) version 2.0 assessment and development theory of Nesbit et al (2009). This instrument covers eight aspects of material and media assessment. Quantitative data that has been successfully obtained will then be processed to obtain the results of product assessment until data analysis can finally be carried out. Furthermore, the product will be refined, referring

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to the qualitative data obtained from the feedback received in the form of descriptive data. The results of the validation test of the augmented reality-based Introduction à la Civilisation Française learning media product material through the Instagram platform by material experts can be seen in Table 3.

Table 3. Material Expert Validation Results

Assessment Aspect		Score	Max Score	Feasibility (%)	Feasibility Category
Content Quality					
1.	The material presented is accurate and factual.	4	5	80	Very Feasible
2.	The material presented is appropriate to the learning needs and appropriate in terms of the level of detail.	5	5	100	Very Feasible
3.	The material presented can be reintegrated into other learning contexts.	5	5	100	Very Feasible
Learning Goal Alignment					
4.	The material presented is in line with the learning objectives.	5	5	100	Very Feasible
5.	The material presented is suitable for a wide range of users.	5	5	100	Very Feasible
6.	The material presented helps users achieve learning objectives.	5	5	100	Very Feasible
Feedback and Adaptation					
7.	The media presented provides valuable feedback to the user after using the filter.	4	5	80	Very Feasible
8.	Feedback content can be used and accessed easily.	4	5	80	Very Feasible
Motivation					
9.	The material presented can motivate and interest users.	5	5	100	Very Feasible
10.	The material presented is relevant to the user's goals and interests.	5	5	100	Very Feasible
Total		47	50	94%	Very Feasible

(Source: Adapted from Leacock and Nesbit (in Suwandi et al., 2023)

Based on the results of material validation by material experts, microblog learning media products and interactive quiz filters based on augmented reality filters get a score of 47 out of a maximum score of 50 with an average value of the overall percentage of product feasibility of 94% and refers to the "Very Feasible" category. The material expert states that the material presented in the product has met the minimum standards for learning in the Introduction à la Civilisation Française course with feedback. Namely, the product is innovatively designed, the material is sufficient and has been by learning, as well as input to include source information on each material used in microblog uploads. The results of the material validation test of augmented reality-based Introduction à la Civilisation Française learning media products through the Instagram platform by media experts can be seen in Table 4.

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Table 4. Media Expert Validation Results

Assessment Aspect		Score	Max Score	Feasibility (%)	Feasibility Category
Presentation Design					
1.	The media presented has a visual design that supports learning.	5	5	100	Very Feasible
2.	The media presented has a quality, efficient, and attractive appearance.	5	5	100	Very Feasible
3.	The media presented is complemented by learning media other than text.	5	5	100	Very Feasible
4.	The media presented has aesthetically appealing features that do not interfere with the learning objectives.	5	5	100	Very Feasible
Interaction Usability					
5.	The media presented is easy to operate, efficient, and attractive.	5	5	100	Very Feasible
6.	The media presented has navigation buttons that make it easy for users to use.	5	5	100	Very Feasible
7.	The media presented has a consistent function.	5	5	100	Very Feasible
Accessibility					
8.	The media presented has a presentation design that can accommodate various user needs and conditions.	5	5	100	Very Feasible
9.	The media presented has features that are easily accessible.	5	5	100	Very Feasible
Standards Compliance					
10.	The media presented meets the operating standards on the Instagram platform and commonly used devices.	5	5	100	Very Feasible
Total		50	50	100%	Very Feasible

(Source: Adapted from Leacock and Nesbit (in Suwandi et al., 2023)

Based on the results of media validation by media experts, microblog learning media and interactive quiz filters based on augmented reality filters obtained 50 out of a maximum score of 50 with an overall average value of product feasibility reaching 100% and referring to the "Very Feasible" category. Media experts stated that this media is very feasible to be used as augmented reality-based Introduction à la Civilisation Française learning media through the Instagram platform with feedback, namely media on the Instagram platform has been very well designed supported by an attractive design, and it is recommended to add variations of media presented in the form of learning videos.

Based on the findings above, the learning media product Introduction à la Civilisation Française, based on augmented reality through the Instagram platform, can be concluded to have met the validity criteria of material aspects and media aspects and is very feasible to use in learning. Introduction à la Civilisation Française learning media can be

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accessed through the Instagram account @apprendrecf or at the link https://www.instagram.com/apprendrecf.

Discussion

This research aims to describe the design of learning media Introduction à la Civilisation Française based on augmented reality (AR) technology through the Instagram platform. The resulting learning media is a microblog containing Civilisation Française material supported by an augmented reality-based interactive quiz filter. The design of this learning media through the PPE model includes planning, production, and evaluation, as designed by Richey and Klein (in Suwandi et al., 2023).

In the planning stage, a needs analysis is carried out, which includes material, media, and users. The learning materials cover various aspects, such as geography, history, culture, tradition and historical places. The media used in this learning media design is the Instagram platform with AR technology to ensure accessibility and visual appeal. The user analysis of this research product is for French language students and Instagram users interested in French culture. In the next stage, the design of microblog and AR-based interactive quiz filters was planned to be uploaded on the @apprendrecf Instagram account.

In the production stage, the material structure is compiled as the basic framework of the material, content curation, microblog designs and assets, and AR filters using Canva and Spark AR Studio. The microblog product includes six primary learning materials, which are (1) France and its Regions (*L'Espace Français*) referring to prior knowledge such as geography including regions, climate, and natural environment in France, (2) France in the Eyes of the World (*La France dans Le Monde*) discusses the exploration of France's role and influence in the global context, such as politics, economy, culture, diplomacy, and international relations, (3) Daily Life (*La Vie au Quotidien*) reviews the daily routines and habits of the French people, covering aspects such as food, education, work, and lifestyle, (4) Leisure (*Le Temps Libre*) discusses activities such as recreation and entertainment, such as sports, arts, festivals, and other activities that are popular in France, (5) Social Life (*L'Organisation Sociale*) explores the social structure in France, including the government system, public services, family relationships, and social issues such as education and health, (6) Recent Evolution (*Les Évolutions Récentes*) discusses recent changes and developments in France in areas such as technology, politics, economy, culture, and society. The materials are then subdivided into 29 sub-materials. The material is presented through text and images and supported with AR-based interactive quiz filters. These steps ensure that the material presented is informative, visually engaging, and interactive. The creation of augmented reality-based interactive quiz filter products goes through several stages until it can finally be used through the @apprendrecf Instagram account.

The last stage is the evaluation stage. Product evaluation is carried out to interpret, measure, and assess the product's success so that the product's results can be known. An analysis is carried out from a perspective to assess the process's results and fulfil needs (Nurhayani et al., 2022). This stage involves the validation of product feasibility by material

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experts and media experts. Product feasibility assessment based on the development assessment developed by Nesbit et al (2009), there are eight assessment criteria in the LORI instrument, in terms of material including content quality, suitability of learning objectives, feedback, and motivation; and in terms of media including appearance design, ease of use, accessibility, and meeting standards. Quantitative data in product assessment scores and qualitative data in the form of feedback obtained through media and material experts were collected and analyzed to assess product feasibility and improvement.

The results of the assessment are based on the material aspect; the Civilisation Française learning media product is very feasible to use, with a feasibility percentage of 94%. These results show that the material aspects designed in this product are of high quality, aligned with learning objectives, have feedback content, and can motivate users. Based on the media aspect, the Civilisation Française learning media product is very feasible, with the feasibility percentage reaching 100%. These results show that the media aspects designed in this product have a design with an excellent appearance, ease of use and accessibility and meet the standards.

Based on this discussion, augmented reality-based learning media through the Instagram platform is feasible in education. This is supported by previous research conducted by Erza et al. (2021) in the research development "*Instagram* filter sebagai media pembelajaran bahasa Jepang pada tingkat N4" and also the research by Auly et al (2021) in the "Efektifitas filter *Instagram* untuk meningkatkan kemampuan kosakata bahasa Inggris". The findings generated in this study show that the potential use of AR technology, especially in education, can make the quality of learning innovative and interactive. This research makes a theoretical contribution by proposing an AR-based learning model that combines visual and interactive elements with educational content. This design model can be applied to other fields to present learning materials supported by AR-based technology for educational purposes.

D. Conclusion

Based on the discussion above, this study aims to design products and determine the feasibility of learning media Introduction à la Civilisation Française using augmented reality technology through the Instagram platform. The process of designing learning media Introduction à la Civilisation Française through several stages that adapt the PPE research design model, namely planning, production, and evaluation through a design and development approach. Based on expert validation, it states that the material presented has met the minimum standards for learning Civilisation Française, and the media presented is very good and has an attractive design. The percentage result of the product feasibility value is 94% for material validation and 100% for media validation. This learning media provides an interactive and engaging learning experience and is by the learning objectives.

This research can contribute to the development of education. Innovative learning media so that it can keep up with developments in increasingly modern technology. This research shows that Instagram can be used effectively and engagingly to deliver learning

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materials by combining visual and interactive elements. In addition, this research makes a theoretical contribution by introducing an AR-based learning model that can be applied in various other contexts or fields. This research design has produced a learning media product that is very feasible based on material and media aspects to be used by Civilisation Française learners, which can be accessed through the @apprendrecf Instagram account or at the link https://www.instagram.com/apprendrecf

Technology in learning media design has great potential to encourage the learning process using technology to be more interesting with the help of innovative and interactive media. This media can provide a new learning experience. However, it is essential to consider challenges such as the accessibility of technology for learners and the need for compatible devices and stable internet access. It is hoped that the results of this research can be the basis for further development in other educational fields on the variety of media presented to enrich the learning experience through other applications and increase the accessibility of technology-based education.

Acknowledgement

After writing this scientific article, the author would like to thank all those who have supported and contributed during the research period. My deepest gratitude to my beloved family and friends for their unlimited love and support in helping me complete this research. With the presence of this research, it is hoped that it can benefit all parties.

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