



Development of Animated Videos as A Medium for Learning Mandarin

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Abstract

This study aims to examine the use of animated videos as a medium for learning Chinese, focusing on the main challenges faced by learners, such as mastering the tonal system and Hanzi characters. The literature review was conducted by collecting and analyzing various relevant sources to evaluate the effectiveness of animated videos in improving Chinese comprehension. This research found that animated videos have great potential in facilitating complex language learning. Through clear and interactive visualizations, animated videos can help learners understand the different tones in Chinese, as well as make it easier for them to remember and write Hanzi characters. In addition, they also offer learning flexibility, allowing learners to access materials anytime and anywhere, supporting the concept of self-directed learning. This research also highlights the importance of cultural integration in animated videos, which not only teach the language, but also introduce Chinese cultural contexts related to language use. By analyzing various research studies and reports, this research provides recommendations for the development of more innovative animated videos that meet the needs of Chinese language learning. The results of this study can contribute to the development of more effective and fun learning media for Mandarin learners, especially at the beginner level.

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INTRODUCTION

In today's digital era, education has undergone significant changes with the emergence of innovative learning methods. One of the most popular methods is using animated videos as learning media. Animated videos have the potential to improve understanding of more complex problems, especially in Chinese language learning. Chinese is one of the most widely spoken languages in the world and is often considered a difficult and challenging foreign language (Aftab & Abbasi, 2024). Therefore, effective learning media is essential to support the learning process that enhances learners' ability and engagement.

Animated videos are visual tools that convey more information. Through a visual blend of images, sound, and text, animated videos can illustrate vocabulary, language systems, and cultural backgrounds in a more interesting and understandable way. This is in line with the rapidly growing technological advances that have made access to digital learning software and platforms easier (Sakti, 2023). Therefore, animated videos provide a more flexible way of learning, allowing learners to access content anytime and anywhere, thus supporting the creation of independent learning.

Some previous studies have shown that animated videos are effective in increasing learners' interest in learning, engagement and information retention. Syofyan et al. (2021) mentioned that animation-based learning media can increase learning interaction and thus increase learning interest. Another research conducted by Mahayati et al. (2023) also showed that learners who used animated videos felt happier and more positive during the learning process. This finding shows that animated videos are not only a tool but also important in enriching learners' experience. Animated videos not only attract learners' attention but also convey representations with clear and interactive visuals (Melati et al., 2023). This is especially important in complex language learning such as Chinese, which has its own uniqueness.

Mandarin is known for its distinctive tonal system, where the meaning of a word can change depending on the tone used when pronouncing it (Qadriani & Budianingsih, 2021). There are four main tones in Mandarin, namely tone one (一声) which is a high and flat tone, tone two (二声) which is a rising tone, tone three (三声) which is a falling tone, and tone four (四声) which is a falling-rising tone. Mistakes in identifying the correct pitch intonation can lead to misunderstandings, so the use of animated videos that clearly show the differences in pitch intonation can be very helpful for Chinese learners.

In addition, Chinese characters (汉字), which consist of thousands of characters, are also a challenge for learners. In this case, animated videos can be used to visually explain the shape of the characters, how to write and the proper pronunciation of the characters being studied. With a visual approach,

students can more easily remember and understand Chinese characters, which are often considered complicated. Thus, animated videos are not only a learning tool, but also a link for students to understand the peculiarities of Chinese, and can be an effective solution.

The purpose of this paper is to provide an in-depth understanding of the development of animated video content and its implications for the development of Chinese language learning. In today's digital era, the application of technology in education, especially animated videos, is one of the most important innovations. This paper aims to explore the various animated video content that can be used to learn Chinese, as well as the development process and tools. Therefore, this article is expected to make a positive contribution to teachers, learners, content developers, and all parties involved in Chinese language learning to better understand and use animated videos as an effective and innovative medium.

METHODS

This research uses a literature review method that aims to explore the effectiveness and potential of developing animated videos as a medium for learning Chinese. Literature review was chosen because this approach allows researchers to analyze various relevant secondary sources, such as journal articles, books, research reports, and digital publications. Through the literature review, the researcher can gain an in-depth understanding of theories, concepts and best practices in animation-based learning media development.

This approach also supports the identification and analysis of specific problems in Chinese language learning, including challenges in mastering Hanzi characters and tonality. For example, research by Qadriani and Budianingsih (2021) revealed that many beginner learners face difficulties in distinguishing the second and third tones in Mandarin, which often hinders smooth communication. In addition, research by Melati et al. (2023) showed that animation-based learning media can increase learner motivation and engagement due to its interactive and visual nature.

The literature review in this study was also used to integrate findings from previous studies into a broader context. The researcher analyzed and compared the advantages of animated videos in supporting foreign language learning with the specific needs of Chinese language learning, as discussed in the journal Mahayati et al. (2023). This approach enabled us to develop evidence-based recommendations that are relevant and applicable in the modern educational context.

By using the literature review method, this research not only provides deep theoretical insights but also underpins the practical development of animated videos, covering elements such as integration of Chinese culture, visualization of Hanzi character writing sequences, and tonal system training. Findings from the current literature also serve as a foundation for developing guidelines for animated

videos that support interactive and self-directed learning, as proposed by Wu (2024) in a study on the use of multimedia technology to enhance learning satisfaction.

RESULTS AND DISCUSSION

In the use of animated videos, visualization of material is one of the main advantages. Through attractive visual elements, complex concepts or vocabulary can be made simpler, clearer and easier to understand. For example, by depicting real-life situations or objects in animated form, learners can easily understand the meaning of a word or phrase in a broader context. This certainly helps reduce misunderstandings and can improve learners' understanding of the subject being taught.

A major aspect of Chinese is the use of Chinese characters (汉字), which differ from the Latin alphabet used in many languages. By using animated videos to introduce Chinese characters in a more interesting way. For example, the animation can show the step-by-step writing process for each character by illustrating the steps of making each stroke. This can also help improve visual memory learning. In addition, animated videos can be used to describe the meaning and usage of characters in sentences, by providing a clear picture of the Chinese context where characters can have certain meanings based on the context in which they are used.

In addition to Chinese characters, tone is also a factor that needs to be considered. Animated videos can add sound elements to clearly show differences in tone or intonation. For example, creating an animated video showing a speaker saying a word using the same letters but with different tones, and then explaining the meaning of each word visually. This helps learners understand how these tones are used in everyday communication contexts and usage.

In the context of Chinese culture, animated videos can also be developed using unique terms such as festivals, traditions and customs of the Chinese people. By describing these words in the context of the source culture of the language, learners not only learn new words but also gain insight into the cultural significance behind the words.

Overall, visualizing things through animated videos provides an effective and fun approach to learning Chinese. By combining various elements, a complete learning experience is created. Dynamic animated elements and colors create an enjoyable learning experience. When learners engage with interesting content, they tend to pay attention and actively participate in the learning process (Faturrokhman, 2024). This not only increases engagement, but also reduces the boredom often experienced in traditional learning.

Equally important, the increased control of information and knowledge cannot be ignored. The combination of images, sound and narration in video animation helps students remember information better. Research shows that learners tend to retain information better and recall

previously learned information more easily, when engaging content is involved (Vanichvasin, 2021). Therefore, the use of animated videos can improve the memory ability of learning Chinese structures and vocabulary.

Through the accessibility of video content, learners can watch learning materials anytime and anywhere without time and space constraints. This of course gives learners the opportunity to learn at their own pace, allowing them to repeat difficult points without feeling rushed. This flexibility is also important in supporting independent learning, with learners having access to additional resources to deepen their understanding of Chinese.

Overall, the use of animated videos in Chinese language learning not only improves understanding of things, but also creates a fun and flexible learning experience. In the digital age, animated videos are an invaluable medium in Chinese language education with all the benefits it offers.

Types of Animated Video Content for Chinese Learning

Animated videos have become one of the most effective ways to learn Chinese, providing different types of content that can enhance comprehension and learning engagement. Each type of content has its own advantages in aiding a fun and interactive learning process.

1. Video Learning

Learning videos are learning media that can be opened and accessed by learners at any time (Khairani, Sutisna, and Suyanto, 2019). Learning videos can display vocabulary, grammar and expressions used in relevant contexts. Through interesting visualizations, learners can see how Mandarin characters are written and spoken, as well as how the language is expressed through a tonal system.

2. Story Videos

Story videos feature narratives involving Chinese characters to help learners gain a deeper understanding of the cultural and linguistic context. In a story video, Chinese characters introduce everyday expressions and idioms that are often used in certain situations. For example, in the New Year's Eve story, students not only learn vocabulary related to the celebration, but also gain insight into Chinese traditions and cultural values.

3. Interactive Video

Interactive videos invite Chinese learners to engage with the content, such as choosing a storyline or answering a quiz. In the context of Chinese, these interactive elements can introduce new vocabulary and expressions through context-relevant choices. For example, choose how to address someone in different situations, such as in a formal or informal setting, and see a Chinese character using the

expression in conversation. Interactive videos contain practical instructions, delivered through audiovisual presentations (pictures and sounds) with clear and easy-to-understand language (Wardani & Syofyan, 2018).

4. Video Tutorials

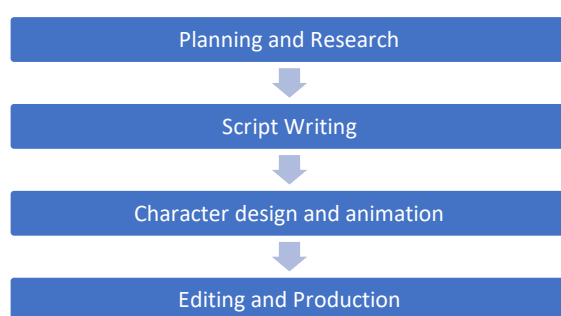
Video tutorials focus on specific techniques or skills in Chinese, such as pronunciation or learning aids. Video tutorials are designed to deliver learning materials that are used to improve retention of learners (Wisasmita & Son, 2018). In these tutorials, it is important to use Chinese characters to show how to write or pronounce certain words. By providing a visual example of a character and explaining how to pronounce it, learners can better understand the uniqueness and complexity of the Chinese language, including the tonal aspects that differentiate word meanings.

With this variety of animated video content, learning Chinese becomes more dynamic and effective. Students not only acquire new knowledge, but also enrich their learning experience and help understand the cultural background inherent in the language. In this way, learners can not only learn Chinese technically, but also gain a deeper understanding of Chinese culture and lifestyle.

Animated Video Content Development Process

The development of animated video content for Chinese language learning involves several important interrelated steps.

Chart 1 : Animated Video Content Development Process



The process starts with planning and research, which is an important stage in identifying suitable topics and understanding the audience to be reached. At this stage, a needs analysis is conducted to ensure that the content to be developed is relevant to the interests and needs of the learners. Research into the existing curriculum and current trends in language learning is also an important part of determining the direction of content development.

After the planning stage, the next step is scripting. Scripting is one of the key steps in animated video content development, especially in the context of Chinese language learning. In this process, it is important to have a deep understanding of the nuances of the Chinese language. Chinese has its own

peculiarities that distinguish it from Indonesian or English. At this stage, content developers write scripts that are not only informative but also engaging. The script should contain natural dialog and clear explanations, and consider visual elements that aid learning comprehension. Scripts should creatively narrate ideas, so that Chinese learners feel involved in the learning.

By considering all these factors in the script writing, the resulting animated video is not only visually effective, but also able to effectively convey the relevant Chinese context and learning. This will help in understanding the underlying language, culture and way of thinking, so that learners can communicate better in diverse contexts.

Next is character design and animation. Here, the characters to be used in the video are developed with visual appeal and consistency with the content in mind. This process involves creating settings, characters and other visual elements that support the narrative. The use of animation tools allows developers to create dynamic and interactive visual content that enhances the appeal of the video.

Finally, the editing and production stage ensures harmonious integration of all production elements. This process involves incorporating sound, music and visual effects to support the narrative in the video. Editing also includes adjusting the pacing and storytelling to fit the allotted time and maintain the quality of the video. By ensuring all elements complement each other, animated videos can provide an effective and entertaining learning experience.

Language and Cultural Distinctiveness to Consider

An animated video designed to teach Chinese should include several important elements so that learners can understand and master the language effectively. Firstly, since Chinese is a tonal language, pronunciation and tone are very important aspects. With an emphasis on the four main tones and one neutral tone, the video should clearly teach the difference in tone through audio and visual examples, such as facial expressions or colors that can illustrate the change in tone along with the meaning of the word.

Furthermore, Chinese characters and writing order should also be adhered to. Teach how to write Chinese characters (Hanzi) in the correct stroke order, complete with dynamic animations that show the writing steps from the first stroke to the last stroke. Not only helps learners write but also understand the structure of the characters themselves.

To enrich the learning experience, the videos should include links to Chinese culture. By integrating the cultural context of Bangkok into language learning, teachers give learners the opportunity to understand the essence of the language (Kassim, 2023). Incorporating cultural elements such as festivals, specialty foods and customs can help learners understand the language in a broader context. It provides insight into how language is used in real-life situations relevant to the culture.

In visualizing language concepts, it is important to use visual elements that support understanding. Abstract or difficult-to-understand language concepts, such as tonal differences, synonyms or homophones, can be clarified by using symbols or colors to distinguish similar but different meanings based on tonal usage. Context-based conversations and interactions are also key components. Presenting interactive conversations in various settings, such as a restaurant, market or school, allows learners to practice the language in a real-world setting. This will significantly improve their speaking and listening skills.

The use of subtitles and pinyin is also very helpful especially for beginners. Attach pinyin next to or below the Hanzi characters to help learners identify the pronunciation and meaning. Subtitles will clearly facilitate and ensure better understanding.

Finally, it is important to include repetitive exercises and interactive exercises in the animation video. Repetitive or interactive training sessions, such as quizzes or filling in missing words, will improve comprehension and aid learners' long-term retention.

Tools and Software for Animated Video Development

In the development of animated video content for Chinese language learning, various tools and software can be used to ease the creation process and improve video quality. Here are some popular tools that are often used in the education industry:

1. Adobe Animate

Adobe Animate supports a wide range of formats, allowing integration with online learning platforms. The main advantages of this software are the flexibility to create complex animations and the ability to import images and sounds from various sources.

2. Powtoon

With the many templates and graphic elements available, teachers can easily create animated presentations or video tutorials. Powtoon also supports interactive functions so that students can actively participate in learning.

3. Canva

Canva has a large collection of templates that make it easy for teachers to quickly create engaging designs. Canva's video feature allows users to combine images, text and animation elements in one project, making it ideal for creating interactive learning presentations.

4. CapCut

CapCut allows users to easily create high-quality videos. It provides various tools such as cropping, adding text, visual effects, and background music so that teachers can create engaging learning videos. CapCut also supports video editing directly from mobile devices, giving users the flexibility to edit content on the go.

With the variety of software and tools, developing animated video content for Chinese learning can be more efficient and creative. The right approach in tool selection can significantly improve the quality of student experience, making Chinese learning more interesting and effective. In addition, multimedia technology-based learning systems have been proven to provide teachers and students with a broader learning environment and platform (Wu, 2024).

Learner Involvement in Content Development

Learner involvement in the development of animated video content for Chinese language learning is one of the innovative strategies that can enhance their learning experience. Involving learners in this process will not only give them a sense of ownership of the subject, but will also increase their motivation and engagement in learning activities. One way to involve learners is to receive their input on the topics, presentation style and content format they want. In this way, learners feel more connected to the subject they are learning, thus increasing the relevance of their learning.

Apart from providing feedback, learners can also play an active role in content creation. For example, they can voice the characters in the videos, which will help them practice Chinese pronunciation and intonation. This participation also provides valuable practical experience, making learning more authentic and applicable. In addition, learners can be invited to participate in the selection of visual and narrative elements such as characters, settings and stories. By involving them in the creative process, learners not only learn the language but also enhance their critical thinking and creativity.

Utilizing learner feedback is an important step in improving the quality of animation video content development. Once the content is finalized, learners can be invited to evaluate the video. Surveys or group discussions can be conducted to gather opinions on favorable aspects, such as visualization or clarity of information, as well as areas that require improvement. This feedback is invaluable for improving future content, ensuring the material remains relevant and meets the needs of the learners.

Therefore, learners are involved in the development of animated video content not only to produce learning materials but also to create an inclusive and responsive learning environment. This can have a significant positive impact on Chinese language learning, encouraging learners to be more active and enthusiastic in the learning process.

Evaluation and Feedback on Video Animations

Evaluation of video animation for Chinese language learning is important to ensure the validity and relevance of the content provided. There are several assessment methods that can be used to analyze the impact of animated videos on learning.

1. Surveys and Questionnaires

One of the most commonly used assessment methods is surveys or cohorts that learners fill out after watching an animated video. Surveys can include questions about comprehension issues, interest in the content and the overall learning experience. For example, learners can be asked to evaluate their understanding of the new vocabulary introduced in the video and how engaging and interactive the content was.

2. Assessment of Student Engagement

Measuring learner engagement is also an important aspect of animation video assessment. Engagement can be measured by participation in class discussions after watching the video or through interactive activities related to the content. For example, after watching a story video, learners can be asked to discuss the characters and themes presented, or do activities related to the new knowledge that has been learned. Direct observation of learners engaging in these activities will help to understand how the animation video captures their interest and engagement.

3. Group Discussion

Group discussion is an effective way to explore learners' opinions on the use of animated videos. In this discussion, learners can share their Chinese language experience after watching the video. For example, learners may feel more confident using certain vocabulary because the video provides strong contextual examples. This feedback can be used to improve future content, such as adding more cultural context or explaining more complex vocabulary.

4. Qualitative Feedback Analysis

Besides surveys, qualitative learner feedback analysis is also very valuable. Class discussions or online forums can be used to collect learners' feedback on what they liked and disliked in the animation video. The feedback analysis should also include linguistic elements such as mastery of philosophy and understanding of Chinese sentence structure. Learners may say that the video animation helps them remember and apply the correct words, especially with Chinese tones. By understanding this, content developers can focus on the most impactful aspects and improve the quality of future video animations. This feedback can also provide more detailed information on specific aspects of the video that draw learners' attention or need improvement. It can also include suggestions for future changes to the video theme or presentation style.

5. Assessment of Learning Outcomes

Finally, the effectiveness of animated videos can also be assessed by assessing learning outcomes, such as tests or quizzes that measure their understanding of the subjects taught. By comparing learners' results in the learning process before and after watching the video, teachers can analyze how much impact the animated video has on improving understanding and mastery of grammar and vocabulary.

Through this combination of assessment methods, teachers can gain a comprehensive understanding of the contribution of animated videos to the Chinese learning process and identify areas for improvement and future content development. Learner feedback, both quantitative and qualitative, is crucial to improving the quality of the animated videos and ensuring that the content presented remains relevant and effective.

Challenges in Animation Video Development

The development of Chinese language learning animation videos faces many challenges that need to be overcome in order for the resulting content to be effective and engaging for learners. The three main challenges are resources and time, technical skills, and maintaining content quality.

1.Resources and Time

One of the biggest challenges in developing animated videos is limited resources, both financial and time. The production of high-quality video animation requires a budget that includes software, animation tools, and sometimes the cost of hiring experts or animators. Also, the video development process can take a long time, from planning, scripting, character design, to editing.

2.Technology Skills

The second challenge often faced is technical skills. While animation software is now more accessible, not all teachers or content developers have the technical skills to use it effectively. Controlling animation software, video editing and understanding visual design principles require training and experience, which are not always readily available. Limited technical skills may result in unsatisfactory video outcomes for the intended learning objectives.

3.Maintaining Content Quality

Maintaining the quality of animation content is another important challenge. As the demand for engaging video content increases, a focus on aesthetics and entertainment can misdirect educational goals. Content should always be relevant to the learning objectives and provide accurate and useful information. If the animation content is not well thought out, learners may get misinformation or

poor understanding. In addition, it is important to ensure that the animated video is not only entertaining but also supports effective teaching methods.

Faced with this challenge, a collaborative strategy between teachers, designers and technologists is needed to create animated video content that is not only innovative but also helps to enhance Chinese language learning. Solutions may include content development training, careful planning of time and resource management, and skills assessment to maintain and improve the quality of the content produced.

CONCLUSION

There are many significant benefits of developing animated video content for Chinese language learning, which includes not only learning the language itself, but also understanding cultural distinctiveness. By using animated video media, learners gain a clear and relevant visual representation of Chinese vocabulary, grammar and unique expressions. This not only helps in understanding complex concepts but also increases engagement and motivation during the learning process. In addition, animated videos can illustrate the distinctive features of Chinese such as tone and character usage, which are often considered as challenges for learners of Chinese as a foreign language.

Overall, the integration of animated videos into Chinese language learning is an innovation that is in line with the continuous development of educational technology. It allows for a more dynamic learning environment and experience, as well as a deeper understanding of the context, which can help learners master the Chinese language thoroughly and understand the richness of the culture.

REFERENCES

- Aftab, M., & Abbasi, M. (2024). Beliefs about difficulties in learning Chinese as a foreign language in a public sector university. *Sindh Journal of Linguistics*, 3, 82–96. <https://doi.org/10.58921/sjl.v3i1.61>
- Faturrokhman, R. (2024). Media pembelajaran interaktif meningkatkan keterlibatan dan pemahaman siswa di Sekolah SMK Pembangunan. *Jurnal Ilmu Pendidikan (JIP)*, 2(4), 713-721.
- Kassim, H., et al. (Eds.). (2023). *Proceedings of the 2023 8th International Conference on Modern Management and Education Technology (MMET 2023)*. Advances in Social Science, Education and Humanities Research, 798. https://doi.org/10.2991/978-2-38476-146-3_47
- Khairani, M., Sutisna, & Suyanto, S. (2019). Studi meta-analisis pengaruh video pembelajaran terhadap hasil belajar peserta didik. *Jurnal Biologus*, 2(1), 158.

- Mahayati, E., Atok, K.K., Firmansyah, F. A., Ariyanto, S. R., & Rozi, F. (2023). Efektivitas video animasi sebagai media pembelajaran berbasis teknologi informasi. *Jurnal Inovasi dan Pembelajaran Fisika*, 10(1), 102-108. <https://doi.org/10.36706/jipf.v10i1.20170>
- Melati, E., Fayola, A. D., Dharma Hita, I. P. A., Saputra, A. M. A., Zamzami, & Ninasari, A. (2023). Pemanfaatan animasi sebagai media pembelajaran berbasis teknologi untuk meningkatkan motivasi belajar. *Journal on Education*, 6(1), 732-741. <http://jonedu.org/index.php/joe>
- Sakti, A. (2023). Meningkatkan pembelajaran melalui teknologi digital. *Jurnal Penelitian Rumpun Ilmu Teknik (JUPRIT)*, 2(2), 212-219. <https://doi.org/10.55606/juprit.v2i2.2025>
- Syofyan, R., Friyatmi, R., Sofya, R., & Hakim, L. (2021). Perancangan media video belajar beranimasi untuk meningkatkan higher order thinking siswa. *Jurnal Pendidikan Ekonomi*, 4(4), 602-613.
- Qadriani, N. L., & Budianingsih, T. (2021). Persepsi mahasiswa tingkat dasar dalam membedakan nada kedua dan ketiga bahasa Mandarin. *Jurnal Al-Azhar Indonesia Seri Humaniora*, 6(1), 1-10. <https://doi.org/10.36722/sh.v6i1.487>
- Vanichvasin, P. (2021). Effects of visual communication on memory enhancement of Thai undergraduate students, Kasetsart University. *Higher Education Studies*, 11(1), 34. <https://doi.org/10.5539/hes.v11n1p34>
- Wardani, R. K., & Syofyan, H. (2018). Pengembangan video interaktif pada pembelajaran IPA tematik integratif materi peredaran darah manusia. *Jurnal Ilmiah Sekolah Dasar*, 2(4), 371-381.