

# Development of Digital Animation Media for Learning Chinese Consonants Pronunciation

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## ABSTRACT

The world of education is currently changing in a massive transformation due to the covid 19 pandemic. This leads to education management which is connected to the internet access. The changes on ITC can be a challenge for educational institutions like the Department of Chinese Education, State University of Malang (UM) and the Department of Chinese Language and Literature, State University of Surabaya (UNESA). The two agencies are also trying to implement learning with the use of ICT. The learning activities during the Covid-19 pandemic have been conducted online through several virtual applications so that the implementation of education and learning also got many obstacles. Therefore, the research aimed to develop animated media on the topic of consonant learning using R & D research model schemes by analyzing the results of material and media validation by experts using qualitative and quantitative methods. The results showed that it deserved to be used as a learning medium for Chinese consonant pronunciation. The medium of consonant animation in terms of materials and media declared valid and was worthy of being used especially in online learning and self-learning.

**Keywords:** Chinese, animation, media, validation

## 1. INTRODUCTION

The world of education in the era of the Covid-19 pandemic is undergoing a huge transformation, almost all the order in education has also changed. This leads to access to education management that must be connected to internet access.[1] The presence of ICT (Information and Communication Technology) or what we often hear as the term TIK (*Teknologi Informatika dan Komunikasi*) has enormous potential to be utilized in the world of education. The use of ICT is not new in the world of education, but in reality and implementation in the field of education that utilizes ICT is still far and not following the 4.0 era. The rampant COVID-19 outbreak is creating online learning in unison. The tsunami of online learning has occurred almost all over the world during the COVID-19 pandemic [2] Lecturers and teachers as an important element in the learning process are required to make a massive migration that has never happened before from face-to-face education to online education or distance education. The Covid 19 pandemic has affected Tridharma Higher Education. In the field of education and teaching, learning activities are currently conducted

online [3] The same is also explained by [4] For most people, one of the things that make Chinese difficult to learn is Chinese Pronunciation which is different from the Indonesian consonant Pronunciation. Such conditions are urgent to innovate and adapt to the use of available technologies to support the learning process (Ahmed et al., 2020)

Making changes that make use of ITC during the pandemic becomes a challenge for lecturers and teachers, for example in the Department of German Literature Chinese Language Education Program of UM (State University of Malang) with the Department of Chinese Language and Literature of UNESA (State University of Surabaya) which seeks to implement learning by maximizing the utilization of ICT. The use of ICT is not only useful to actualize the prevention of Covid-19 transmission, but also as an interactive learning medium to make it easier for students to learn Chinese.

The importance of Chinese according to [5] mentions that the number of native speakers is 1.3 billion, approximately 917 million speak Chinese it proves that Chinese is the most widely spoken language in the world.

Meanwhile, according to [5] in terms of the needs of Chinese-speaking workers are felt increasingly increasing. One of the things that can be done by strengthening the role of universities that organize Chinese literature education that can print graduates who are competent and able to meet the needs of the workforce.

Based on the observations that have been made by researchers in the new students of the class of 2020 Department of German Literature, Chinese Language Education Program of UM and The Department of Chinese Language and Literature, UNESA there are similar problems in learning Chinese language, namely on the basic material of consonants. The Consonant in Chinese consists of 22 sounds. Each sound has different pronunciation techniques and mechanisms. This different way of pronunciation is what often makes Chinese students difficult to learn, for example the pronunciation of consonant letters "b" and "p", the location of the tongue is the same but the way to pronounce it is different. When reciting the letter "b", there is no need to take the wind out of the mouth, but when reciting the letter "p" should take the wind out of the mouth. So the pronunciation of these two-letter consonants is often confused and makes students confused. 15 out of 22 consonants in Chinese have different pronunciations and are difficult to pronounce for students especially in online learning lecturers find it difficult to see the location of the error of pronunciation influenced by the position of the tongue, teeth, wind grooves, and lips. The presentation is the same as that delivered by [6] in Chinese there are vowels and consonants that are difficult to pronounce correctly by Indonesian learners. So it is very likely that there is a mispronunciation during the study of Chinese. It greatly affects the success of lecturers and students in delivering and absorbing materials. The most effective solution to the problem is to implement the use of learning media.

Digital learning media on the basic material of Chinese consonants is very little other than that for the explanation of consonants has not touched towards the techniques and mechanisms of pronunciation. Therefore, researchers plan to design and develop digital media Chinese consonant pronunciation material with the title "Development of Digital Animation Media for Learning Chinese Consonant Pronunciation". to address the problem. The goal is to visualize the mechanism of the inner oral cavity when reciting consonant letters in Chinese in the form of digital animation and media will be used on the topic of basic consonant learning for students of the Department of German Literature, Chinese Language Education Program UM and the Department of Chinese Language and Literature of UNESA. The learning media used in this learning uses media in the form of moving animation. This media is expected to help students or Chinese learners in learning consonant pronunciation, and understand the mechanism

of the oral cavity when performing pronunciation, as well as improve the capabilities and competencies of students in learning Chinese.

The product specifications resulting from this study are in the form of animated videos that visualize the mechanism of motion of the oral cavity during the pronunciation of each consonant. This animation media will be side lined with a module book for its application. Access from this media is also very easy because it can be used offline so that it does not require a data quota when accessing it. It aims to anticipate if there are students whose internet network is weak, data quota does not exist, and the most important use of this media is that students can study independently anywhere.

## **2. METHOD**

The purpose of this research is to develop digital media Animation Media for Learning Chinese Consonant Pronunciation. Based on this, this research is included in the development research. This research and development use steps and procedures that refer to the theory of Borg and Gall in (Riyanto, 2020) consisting of ten steps, namely Research and Information Collecting, Planning, Develop Preliminary Form of, Preliminary Field Testing, Main Product Revision, Main Field Testing, Operational Products, Operational Field Testing, Final Product Revision, Dissemination, and Implementation. In this study, the development team used supporting instruments in the form of questionnaires. The questionnaire sheet is closed. Questionnaire sheets are used to collect material validation and media validation data. Material validation and media validation results are used to revise products to improve the appearance of materials and media. Data resulting from the development of digital animation media learning Chinese consonant pronunciation in the form of qualitative descriptive data and quantitative data. Qualitative data in this study in the form of comments and suggestions from media experts and material experts, while quantitative data on this development research in the form of percentages obtained from questionnaires that have been filled by media experts and material experts. The development of this media uses validation tests on learning media using the Arikunto's product moment correlation formula. Data analysis of reliability using the KR21 formula.

## **3. FINDINGS AND DISCUSSION**

This consonant pronunciation animation media, explains about 23 consonants in Chinese and 13 Chinese consonant pronunciation animations that are difficult for Indonesian learners to pronounce. The animated illustration is accompanied by a complete pronunciation mechanism of the position of the tongue, teeth, mouth to

make it easier for learners to understand it. This medium not only illustrates the animation of the pronunciation mechanism but also there is an introduction formed in a video containing material related to the pronunciation of the association. It aims to make the video more complete in conveying the material and easy to use independently. After this media is completed designed, then before the digital animation media learning Chinese consonant pronunciation is entered at the trial stage to students, it is necessary to do validation. At this validation stage, there are two validators, namely media expert validators and material expert validators. Information, comments, advice from media experts, and material experts are needed for digital animation media learning Chinese consonant pronunciation into a quality media and worthy to be used, as well as a reference researcher to improve the media before conducting media trials to students or users.

**3.1 Material Expert Validation Data**

Material validation is done to determine the feasibility of the content of digital animation media materials learning the pronunciation of Chinese consonants Students of Chinese Language Education Program UM. Below is the data obtained from the analysis of the expert questionnaire material.

**Table 1. Material Expert Validation Data**

Aspects of the assessment	Percentage	Assessment criteria
Aspects of material clarity	95%	Very good
Aspects of pronunciation clarity	94%	Very good
Language Aspects	92%	Very good
Completeness of instructions	95%	Very good
Aspects of ease of use of media independently	98%	Very good

**Improvement And Conclusion Advice:**

The improvement advice given by material experts is that the consonant pronunciations "z" and "c" are less noticeable differences in airflow. The sound on the consonant pronunciation "n" is too small, making it less clear. In the direction of the airflow arrow on the consonant pronunciation animation "ch" is less visible. The word " Initials (Shengmu) " can be changed to "Fujiang"

Based on the results of the questionnaire from material experts, digital animation media learning Chinese consonant pronunciation can be concluded that digital animation media learning Chinese consonant pronunciation is worth using in learning Chinese consonants proven based on Arikunto's assessment criteria from the results obtained on the above 5 criteria consisting of aspects of material clarity, aspects of clarity of pronunciation, aspects of language, aspects of completeness of instructions, and aspects of the ease of use of media independently are all appropriate and declared very good, it's just that it needs improvement on Chinese writing that is not appropriate.

**3.2 Media Expert Validation Data**

The media validation stage aims to obtain data in the form of input on shortcomings related to digital animation media learning Chinese consonant pronunciation consisting of several indicators. The input is then analyzed and used to revise the learning media. Validation is to improve the quality of learning media used in research. The hope for the future of the medium of animation of consonant pronunciation can be used to learn Chinese consonants. The data of media expert evaluation based on questionnaire data is presented as follows:

**Table 2. Media Expert Validation Data**

Aspects of the assessment	Percentage	Assessment criteria
Display aspect	95%	Very good
Completeness of instructions	97%	Very good
Completeness of identity	96%	Very good
Content aspect	98%	Very good
Language aspect	92%	Very good

The overall media display has been good, the animation is also very interesting, in addition, the explanation of the material is also appropriate and complete. Improvements are more towards the nuances of the theme of the discussion that may be more emphasized.

The analysis of the media experts' questionnaire data based on Arikunto's assessment criteria shows that this media is very good and worth using in learning Chinese consonants. The statement is evidenced by the results obtained based on the five criteria above all the appropriate criteria and expressed very well.

#### 4. CONCLUSIONS

Based on the findings and discussions above, it can be concluded that the consonant animation media produced in this study deserves to be used as a learning medium for Chinese consonant pronunciation. The medium of consonant animation in terms of materials and media declared valid and worthy to be used especially in online learning and self-learning.

#### REFERENCES

- [1] R. Setyorini (2015). Pemanfaatan internet sebagai implementasi ICT dan sarana memotivasi belajar sastra di sekolah. Seminar Nasional Teknologi Pendidikan 2015. *Seminar Nasional Teknologi Pendidikan 2015*.  
<https://www.neliti.com/publications/171819/>
- [2] K, Goldschmidt, (2020). The COVID-19 pandemic: Technology used to support the wellbeing of children. *Journal of Pediatric Nursing*, 53, 88–90.  
<https://doi.org/10.1016/j.pedn.2020.04.013>
- [3] Budi, Indrawati, (2020). Tantangan dan peluang pendidikan tinggi dalam masa dan pasca pandemi Covid-19.” *Jurnal Kajian Ilmiah* 1(1):39–48. doi: 10.31599/jki.v1i1.261.
- [4] Budi, Hermawan, and Ong Peter Leonardo. (2017). *Keefektifitasan penggunaan media mobile learning dalam meningkatkan pelafalan hanyu pinyin bahasa Mandarin*. In B. Huang & X, Liao (2012). *Xiandai Hanyu*. Beijing: Higher Education Press.
- [5] Y, Ying., M. N., Suprayogi, & E. A. Hurriyati, (2013). Motivasi belajar bahasa Mandarin sebagai Bahasa Kedua. *Humaniora*, 4(2), 1345.  
<https://doi.org/10.21512/humaniora.v4i2.3579>
- [6] A.C., Kinanti, & W., Galih (2019). Analisis kesalahan pelafalan “Yuanyin” dan “Fuyin” pada mahasiswa program studi pendidikan bahasa Mandarin angkatan 2018 Universitas Negeri Surabaya.” *Mandarin Unesa* 2(1).
- [7] S. Arikunto. (2006). *Prosedur penelitian suatu pendekatan praktik*, Jakarta: Rineka Cipta.
- [8] L James. (2021). The 10 most spoken languages in the world. *Babbel Magazine*.  
<https://www.babbel.com/en/magazine/the-10-most-spoken-languages-in-the-world>