Development of Multimedia-Based Teaching Materials in Mastering Linguistic Aspects

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Abstract. The use of learning multimedia has numerous advantages, including accommodating variances in student learning styles, allowing students to choose the content to be studied, and allowing students to change their learning speed by selecting particular buttons given in multimedia learning. This study aims to investigate the development of multimedia-based teaching materials in the mastery of linguistic aspects of the understanding of listening to Mandarin. This research method in the form of literature review was conducted based on issues, methodologies, equations and further research proposals. The findings revealed that the understanding of listening to their language after the application of materials that indicate multimedia had an influence on the development of mandarin teaching material materials.So it can be concluded that, multimedia is one of the important tools in teaching understanding listening to mandarin. With the right elements and the right storyboard can help motivate students and improve listening skills.

Key words: linguistic aspects mastery, multimedia, teaching material development

INTRODUCTION

The creation of new tools, techniques, and strategies for teaching and acquiring language skills has been facilitated by technological opportunities (AP & Lai-May, 2012). Technology is increasingly widespread, affecting many aspects of our social and work lives, and many of our recreational activities. Many researchers state that technology can be used as an instructional tool in teaching and learning skills. According to (Gilakjani, 2017), when we talk about teaching, education or training issues, we must consider the important role of technology. With the advent of technology, coupled with the use of multimedia, students' receptive language skills (Alvarez-Marinelli et al., 2016) and productive language skills ((Hwang et al., 2014), (Hwang et al., 2016)) can be increased more effectively. In broad terms, multimedia is the use of several media to convey information (Ivers & Barron, 2002).From a psycholinguistic perspective, multimedia provides students with multisensory exposure (ie, audio and visual). It has been reported that language learners who use multimedia learning materials memorize more words than their counterparts who use paper-based learning materials (Ahmadian et al., 2015). Students can also acquire skills (e.g., learn autonomy and computer literacy) and practice information processing skills (Cerezo et al., 2014).

The use of computers in foreign language teaching is not limited to classroom activities. Various researchers offer options for the use of Internet technologies in the classroom and in students' extracurricular work. For example, the use of ICT in foreign language teaching is considered in the works of scientists (Abdykhalykova et al., 2020); (Elmurodov, 2020).

One type of learning media is multimedia. Multimedia learning is usually operated with a computer and provides feedback for students. In addition, it has been widely used in second and foreign language learning, especially listening, because the use of multimedia can help students improve their abilities.

In schools, multimedia, an innovative tool, has become one of the attractions of teaching today. Widely used in the teaching and learning process, multimedia has conquered the hearts and souls of students so that the interest and attention of students increases and deepens, making them more attentive and participatory. There is much belief that a changing scene requires thinking about the structure and culture of schools and classrooms, as well as what educators are instructed to do and how they show it. Likewise, educators find multimedia more relevant when they use it. The researchers also reveal the impact of using technology in teaching.

Although digital storytelling has been practiced for more than two decades, a limited amount of research has been done on this technology mainly because it has been used in educational settings. (Robin & McNeil, 2012). Therefore, further studies need to be carried out to test the feasibility of using digital storytelling on students to evaluate its efficacy on achieving their listening comprehension. Therefore,

listening skills are absolutely necessary in one's academic success because it has been considered as the most widely used language skill in the classroom (Jimmy, 2013).

On the other hand, there are many findings from previous studies regarding the importance of listening skills for students. Even (Cigerci & Gultekin, 2017) mentioned in their research that listening plays an important role in the individual's daily activities as well as learning activities. Thus, students' skills are acquired and developed naturally in their early years of life. Therefore, children can understand, synthesize, evaluate more efficiently what they are listening to if they are taught effectively with their own spoken language. In addition, listening is the first language skill that children develop and is the most dominant communication in the classroom and everyday life. One way listening skills can be developed is through storytelling (Oduowu & Oluwakemi, 2014). Therefore, language learning must be supported by many visuals or real objects in the classroom.

The use of multimedia in learning a second or foreign language offers various benefits. The use of learning multimedia provides several benefits, such as accommodating differences in student learning styles, giving students the freedom to choose the material to be studied, and giving students the freedom to adjust their learning speed by selecting certain buttons provided in multimedia learning. With the various benefits of learning multimedia, teachers and students can use it in listening learning, both inside and outside the classroom (Bewe, 2020). The advantage of utilizing multimedia in education is that it efficiently communicates knowledge to all students and maintains their interest in studying (Zimmer, 2003). The goal of developing a learning model that incorporates multimedia into the teaching and learning process is to enhance efficiency and motivation, to enable active and exploratory learning, to be consistent with student-centered learning, and to better direct learning (Suyanto, 2003). While according to Brett (1995) Multimedia has several advantages over other forms of media, including the following: 1) providing an interactive process and easy feedback, 2) allowing students to choose the subject of the learning process, and 3) facilitating easy and systematic control over the teaching and learning process.

One example of a good multimedia in learning to listen to a second or foreign language is 123LISTEN by Jan de Jong. This multimedia was created to help learners practice listening in English as a second or foreign language (Hulstijn, 2003). Besides (Brett, 1997) also create learning multimedia for listening with various features to assist language learners in listening to audio in English. Next, Brett conducted a comparative test to compare the effectiveness of listening using multimedia and using only recordings (audio or video). Based on the results of Brett's research, it was concluded that students' listening comprehension was higher when they used multimedia compared to using recordings (audio or video).

Currently, much attention is paid to the use of multimedia in foreign language teaching, especially for young learners, according to their age specifications and special abilities to understand educational materials. Pedagogical systems and educational technology, especially multimedia, also attract great attention from teachers to improve the education of young students (Ogay, 2020). However, increased efficiency in "teaching" does not always imply an increase in "learning" efficiency, particularly when instructors make extensive preparation to provide more than enough information (Liu, 2009) and the speed of knowledge input in class is much faster than students' acquisition speed.

Multimedia applications for textbooks are interactive electronic educational and information resources that illuminate subject content according to state educational standards and curricula with the help of information and communication technologies, including video, sound, animation, graphics, text and dictionaries that help learners to learn the material efficiently, and aims to consolidate and control the knowledge acquired and, in addition, include supplementary material, which enriches the main content of the subject. There have been several studies that attempt to forecast a user's degree of acceptance of a multimedia file, such as the one provided in (Mitaim, 2013) using pictures, but these studies do not take into account the user's relevance of the content in the context of his/her job.

One aspect of education that can be developed during the learning process and is expected to have a sizable impact on efforts to implement teaching objectives on fashion design in a digital format is the development of effective and efficient learning media, such that students develop certain competencies in accordance with the purpose to be accomplished (Van der Velde & Ernst, 2009).

The results of a survey of teachers conducted in the context of research (Thamarana, 2017) shows that most English teachers have a positive attitude towards the use of multimedia technology in teaching. Teachers agree that multimedia technology encourages the process of self-understanding. And most of the teachers surveyed believe that multimedia helps teachers develop students' language skills in a more effective way.

METHODS

Strategies in finding journals used in the literature review, questions used to conduct journal reviews that are tailored to the research theme, limitations on taking journals and other things. The journals used in the literature review were obtained through a database of international journal providers and Scientific Indonesia journals through Google Scholar. The author opens the website and www.google scholar.com. The researcher wrote down the keywords according to "development of multimedia-based teaching materials", "mastery of linguistic aspects", and "understanding of listening to mandarin". Based on the search results found 30 journals used for research.

RESULTS AND DISCUSSION

The demand for learning a foreign language is increasing day by day. Knowledge of foreign languages is required in every field, be it business or politics. (Elmurodov, 2020) explained that the role of modern pedagogical technology and information and communication tools in improving the quality and effectiveness of education, the organization of targeted games in the form of games that attract students' interest is very important. In fact, their scope of application is expanding day by day, and technical means are becoming an integral part of the learning process. Teaching and learning foreign languages using modern technology is one of the most effective methods. Also, interactive teaching instructs students in how they are actively involved with their learning process.

In 2000, President Abdurahman Wahid issued Presidential Decree (*Keppres*) No. 6 of 2000 to cancel Presidential Instruction No. 14 of 1967. Since then, Mandarin has been taught openly in various educational institutions (formally, informally). Chinese is no longer taught in families as a first language but as a foreign language.

The situation mentioned above causes some problems. One of them is the shortage of Chinese textbooks (Sutami, 2016). Chinese learners are accustomed to learning Chinese by using imported books. Only a few teachers dared to compile their books. Sutami stated that many Chinese Indonesian textbooks were unable to meet the standards of both Chinese and Indonesian, and that there were still many errors in the *Hanyu Pinyin* writing system and Chinese/Indonesian grammar (Sutami, 2016).

There are many schools, from Kindergarten to High School to universities and also language courses open classes to finance learning Mandarin (Prasetyaningtyas et al., 2020). Teachers come from various walks of life. Some of them are graduates of the University of Indonesia and DarmaPersada University,

some of them come from families with Chinese backgrounds. None of these teachers have the educational background to teach Mandarin.

To support teaching and learning activities, several teachers and institutions have started compiling their teaching materials (Prasetyaningtyas et al., 2020). The first textbook published was Basic Chinese Language Mandarin (初级汉语课本) which was published by DarmaPersada University in 1999. After that, many published books appeared in bookstores as teaching materials for Mandarin. Many of them try to provide the lost generation of Chinese knowledge with materials with which to teach how to communicate in Chinese.

According to the data collected from 1999 to 2018, Prasetyaningtyas (2018) shows that there are 33 publishing companies that publish 109 titles of Chinese teaching materials. This number is an achievement, because in previous years there was no teaching of Mandarin in Indonesia. Several generations, at least two generations do not have the knowledge or skills to communicate in Chinese.

Some publishing companies mainly publish Chinese learning books, some others publish not only Chinese learning books but also interesting for Chinese language teaching and learning. These companies are not only in Jakarta but also in other cities.
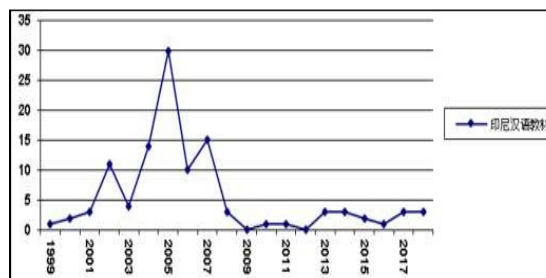
Source: (Prasetyaningtyas et al., 2020)
Figure 1. Chinese Language

The data shows us that Chinese teaching materials found in bookstores or online bookstores have very good book covers. Authors and publishers seem to realize that the performance of physics including color, image or layout has a lot of influence to attract and motivate learners to learn Chinese. Especially for children, the colors and illustrations or pictures are so eye-catching.

Based on student competence, it can be seen that teaching materials are also divided into several levels of competence. There are three levels to it. First, zero level, second, intermediate level and third, advanced level. Books found in bookstores and online bookstores try to meet this need. The data shows that of the 109 existing titles, 107 books provide teaching and learning materials for students at the zero level,

and only 2 books provide teaching and learning materials for the intermediate level. Unfortunately, no material was found that was able to meet the needs of the advanced level. This is understandable because most Chinese learners are just starting to learn Mandarin.

Based on the language skills revealed in the teaching materials, from the research result (Prasetyaningtyas et al., 2020) it can be seen that the speaking skill training material book is the most numerous. The second place is the practice of writing a skill book. The third place is to practice reading skills of books and reading materials. The fourth place is the integrated skill material book. Integrated skills material books are usually used in activity classes. But the number is still small. Listening skills material could not be found. According to the publisher, the recording process faced several obstacles. The obstacles are the lack of listening skill materials, people who can speak Mandarin in standard pronunciation, and also the production costs which can be high.

Source: (Prasetyaningtyas et al., 2020)
Figure 2. Teaching Materials Based on Chinese Language Skills

The data collected above show us that while there are positive gains regarding the numbers, there are disproportionate amounts of language skill or competency levels. There are a number of children's books, but very few for adult learners. There are a number of teaching materials for speaking skills, but no teaching materials for listening skills.

Listening is understanding, and speaking is expressing. Both are important communication skills. It is difficult to separate in training and use. Training can be carried out flexibly in different stages and by different methods. Learning Mandarin requires students to learn students' comprehensive English application skills, especially listening and speaking skills. According to the conditions of colleges and the level of Mandarin students, colleges and universities should explore and define modes of teaching multimedia-assisted listening and speaking. Listening and speaking training can be done via LAN or campus network.

Highlights the disconnection between the need for active listening skills and teaching them in business management programs. Since active listening is such a valuable skill, there is a paradox where so much time is spent honing speaking skills without considering listening skills. (Spataro & Bloch, 2018) based in theory, the multi-method approach encourages the development of interactive skills. The evidence from the article shows that students accepted the process with confidence and enthusiasm and an intention to continue the process.

Multimedia content is widely considered as a significant and effective technique in the field of second language learning (Lai & Lin, 2020). He studied the effectiveness of multimedia materials from several aspects including listening, speaking, reading and writing skills (Williams, 2013).

In fact, the efficiency of teaching listening to Mandarin is relatively low. The teacher plays the recorded material, the students do listening exercises, and the teacher checks the answers (Hung, 2015). (Lai & Lin, 2020) the use of multimedia technology can increase the effect of learning Chinese vocabulary.The inherent listening teaching model lacks interaction between students and teachers, which leads to students' listening skills. Teaching listening presents several characteristics. The first is the student's independent listening practice, the second is the full integration of listening and speaking skills, and the integration of listening strategy training into classroom training (Wang, 2019); (Yang, 2020). Finding of (Ene & Chikelu, 2019) shows that the level of proficiency of foreign language teachers in the use of multimedia aids to teach listening and speaking skills is very demanding. Therefore, improvements are still needed in program delivery to meet the demands for the quality of teaching the four language skills with multimedia assistance in secondary education.

There are several theories about language learning. Stephen Krashen promotes comprehensive input, which refers to input that slightly exceeds the current level of language learners. If "i" is the current level of foreign language proficiency of the language learner, then "i+1" is the next step in the development process. Therefore, if the goal is to help language learners complete their assignments, a comprehensive "i+1" should be given to them (Krashen, 1985).

Constructivism argues that students' knowledge is obtained through the construction of meaning and obtaining the necessary information in certain situations, with the help of others, such as cooperation and communication between students. The ideal learning environment should include four parts: situation, cooperation, communication, and meaning construction (Tobias & Duffy, 2009). Today, the development and application of multimedia and network technolo-

gies provide the necessary technical support for the application of constructivist theory. Multimedia-assisted instruction can be effectively integrated into constructivism in the listening and speaking teaching process to provide an ideal teaching environment for independent learning. Vivid language material, demonstrated through sound, images, words, animation and video, creates a real or near-real language learning environment (Sarkar, 2016); (Ningsih et al., 2018).

When using social media to demonstrate active listening; searching library databases in the use of digital storytelling; improve digital pronunciation dictionary software; use the internet to download teaching materials; use virtual classrooms to teach students listening skills in documentaries; use the mobile Application to meet the needs of students outside the classroom; use online oral tutorials while highlighting points; use computer software to engage students; use a smartphone to develop instructional materials using presentation software or creation tools (eg., Authorware, Toolbook) and; use online audio and video conferencing to teach listening skills (Ene & Chikelu, 2019); (Elfona & Zaim, 2019).

Multimedia and network technologies create favorable conditions for collaborative learning and communication beyond the boundaries of space and time. It helps students to build knowledge and skills of the mandarin language, and generates new ways of learning to meet the requirements of students' self-exploration, situation creation, multiple interactions, cooperative learning and resource sharing (Sarkar, 2016);(Ningsih et al., 2018); (Ogay, 2020). Based on the relevant basic theory, (Yang, 2020) put forward preventive measures such as correcting teacher and student misunderstandings, strengthening teacher and student information literacy, improving teaching design skills of teachers, attaching importance to resource construction and strengthening teaching management.

The application of metacognitive strategies in multimedia learning helps students to have self-knowledge, task knowledge, and listening strategy knowledge (Bewe, 2020). Multimedia design, type of material, presentation format, and individual differences became the focus of the most chosen research. Research breakthroughs are interpreted and a number of gaps in cognitive load research related to multimedia learning (Mutlu-Bayraktar et al., 2019) which one in this case Learners can also plan, monitor, and evaluate their listening processes and outcomes using learning multimedia (Bewe, 2020), yet speaking and listening interventions, as well as the use of smartphones, tablets, and other non-computer devices, are being massively ignored (Rafiqa et al., 2020). The method of using technology in foreign language

teaching, three classroom models are applied: (Abdykhalykova et al., 2020) namely, *in demo mode* (one computer on the teacher's Desk + projector); *in individual mode* (work in computer classes without access to the Internet); *in individual remote mode* (class in computer room with Internet access).

The use of technology, especially mobile-based learning in the teaching and learning process; improve teacher creativity in designing teaching materials and media, increase student motivation in learning, mobility, accessibility, and superior potential to equip students with learning materials anytime and anywhere (Elfiona & Zaim, 2019).

Web-Based Cooperative Learning is cooperative learning that is supported by multimedia network technology. It has attracted greater attention by many instructors and scholars. Using the Internet for college students is almost universal, and especially for Mandarin language majors. The information resource network for cooperative studies offers adequate facilities and resources. Students and teachers are no longer limited by time and geographical boundaries. They can communicate and learn at any time and have abundant resources (Xue & Lingling, 2018);(Wei, 2018);(Wang, 2019);(Ying Zhang, 2020). Students can understand different types of knowledge. With different learning environment conditions, such as video, audio and other information to relieve the boring cooperative learning. This is in line with the opinion (Liu, 2020) Single teaching environments, limited teaching conditions, and backward teaching equipment hinder the development of auditory teaching tools.

In study of Multimedia-assisted self-study materials, (Li & Tong, 2019) discovered that students who used flash-E cards outperformed those who used paper flashcards in the direct post-test to read and listen to Chinese words, as well as having more positive learning attitudes. on learning Mandarin. Meanwhile an in-depth examination of the VLS type (*vocabulary learning strategies*) (Rahimi & Allahyari, 2019) revealed that VLS multimedia instruction had a positive effect on increasing learners' vocabulary size. This suggests that multimedia-assisted VLS instruction equips learners with the competencies to extend what they learn during the course into other language tasks; in the case of the current study, a language test.

This finding is in fact in line with other studies that have emphasized the integration of affordability of technology and environment into vocabulary teaching and the positive effects of such learning situations on vocabulary learning (e.g., (Huang, 2018); (Gao, 2019); (Astuti & Nurhadi, 2019); (Lai & Lin, 2020); (He, 2021)). According to (Gao, 2019) To be able to develop pronunciation and listening skills,

teachers often use PowerPoint and pictures and animations in developing vocabulary, grammar.

According to Astar et al., (2021), typographical features of emoticons, letter omission, boiled writing, and phonetic spelling are used, as well as morphological features of initialism, abbreviations, reduplications, cuts, and casual styles of spoken diction — linguistic features create special registers called textese, which are recognized by non-standard forms or textisms. The language mechanism is characterized by a lack of adherence to the conventional use of periods, commas and capitals; even less than ten percent of the space that is considered to be used is not used conventionally. The dominant use of one-clause sentences displays the syntax of the language.

Various technical instruments and computer software applications are available for the purpose of teaching and learning language, in Lai & Lin (2020) uses LCD software and power point. While other research using existing computer software and tools includes research (Nomass, 2013) who have used online learning websites, computer-aided language learning programs, electronic dictionaries, email messaging programs, CD players, and video clips. There are also studies using high-tech tools and built-in computer software, (Kennedy et al., 2014) which uses Universal Design for Learning (UDL) to build a multimedia-based teaching tool called Podcast Content Acquisition (CAP) to deliver vocabulary instruction and training.

Based on analysis (Xue & Lingling, 2018), the network devices equipped at the university are universal, so students and teachers have access to computers for learning and teaching. University teachers acquire some computer skills, and students also have broader computer knowledge. Second, the teacher uses cooperative learning under a multimedia network to help students learn the language. Students are also better adapted to utilize multimedia resources for collaborative learning.

In a special listening lesson, students either listen to a recorded script from a reading text book or, after hearing some information, they respond to multiple choice questions about the substance of the listening material (Krivosheyeva et al., 2020). In such lessons, correct answers are emphasized, but the listening process necessary to decode information is neglected and the types of skills and strategies for effective listening are not practiced. The attitude of using multimedia has a statistically significant effect in explaining changes in students' listening skills (Soleimani & Mirsayafi, 2019). This is in line with the results (Wei, 2018); (Ying Zhang, 2020) to improve the way of speaking using the active listening and speaking foreign language modes under the multimedia device.

Listening skills are defined as multidimensional language skills that begin with awareness of sounds and images, and focus on sounds and images (Latifi et al., 2011); followed by recognizing and remembering audio-visual stimuli and ending with interpretation of meaning (Ergin & Birol, 2005). It is often emphasized that listening skills, which have been neglected for many years in foreign language teaching, have an important function in the development of all other language skills, especially speaking skills. Through the development of listening skills in foreign languages, it aims to help students distinguish sounds in the original context and real situations in the language concerned; to recognize semantic changes caused by emphasis, stress and intonation in a context and become skilled at understanding speech content completely and correctly (Kim, 2015); (Polat & Eristi, 2019).

According to Imhof and Janusik (2006) in (Polat & Eristi, 2019), who proposes individual and environmental variables that contribute to the development of foreign language listening abilities, individual factors contain mental and affective components. They described mental components with these sub-concepts: linguistic knowledge, discourse knowledge, pragmatic knowledge, metacognitive knowledge, prior knowledge, listening skills in mother tongue, ability to distinguish sounds and working memory capacity. On the other hand, the affective component is expressed as anxiety, attitude, interest, motivation, and self-efficacy. Finally, contextual factors include the purpose and type of speech, the nature of the environment in which the learning takes place, environmental variables, interaction status, and speaker quality (Polat & Eristi, 2019).

The conditions of significant learning require appropriate learning strategies, where students need to elaborate, or produce activities, such as asking themselves, semantic mapping, and writing summaries (Murtadho, 2021), monitor learning, and construct meaning from listening texts. This strategy can be considered effective in listening comprehension. Instructional multimedia, therefore, is an effective model for teaching listening, and such instruction influences the development of higher functions and skills beyond the learner's boundaries. Thus, no doubt, it can further develop students' cognitive and metacognitive skills (Soleimani & Mirsayafi, 2019). The use of metacognitive processes and critical thinking in instructional treatment allows students to improve their argumentative writing skills (Murtadho, 2021). (Soleimani & Mirsayafi, 2019) The results can encourage language teachers to take a more systematic approach to teaching listening and to plan their programs in the classroom. In practice, teachers can use new methodologies to teach teaching materials

related to listening, and try to improve students' listening skills through multimedia materials. It should be mentioned that the findings of this study can also enrich the literature in the field of development of second/foreign language.

By continuously upgrading the network teaching platform and improving the network teaching technology, teaching workers should strengthen their learning, improve their information literacy and network teaching ability, and combine the traditional college mandarin class with the multimedia network teaching platform to complement each other. Looking for a balanced teaching model that is more scientific and effective between the two (Wang, 2019).

For foreign language listening teaching mode based on computer multimedia platform, the first thing to do is to train teachers so that they can better understand the advantages of this teaching mode and quickly master the teaching method, so that they can become more proficient in teaching tasks. Only when teachers master how to use these teaching modes can they be more quickly integrated into learning and teaching, and integrate new teaching modes with traditional teaching methods to produce teaching methods that are more conducive to student acceptance. (see Figure 3)
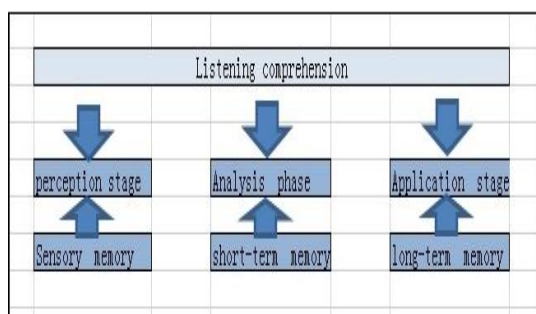
Source: (Liu, 2020)
Figure 3. Listening Comprehension

In a multimedia network environment of Chinese listening classrooms, teachers must change their roles, from lecturers of traditional classroom teaching knowledge to organizers and compilers of information, to student learning guides, assistants and promoters. The teacher will control the frequency and proportion of multimedia, distribute class time fairly and play the main role. In teaching, teachers should be skilled in using various multimedia facilities to assist teaching, so as to avoid the phenomenon of using high-quality equipment at a low level, such as the use of sophisticated equipment with dozens of functions as recorders (Guiling & Zheng, 2008).

With the systematic use of multimedia applications in foreign language classes, results can be achieved (Ogay, 2020) including increasing young students' interest in learning English; improving the

quality of learning and the overall educational process; increasing young students' cognitive activity; developing young students' creativity; diversifying young students' knowledge assessment systems; activating young students' critical thinking; developing communication skills, training team work. with young students. Students develop language skills that make them interactive and active learners ((Loniza et al., 2018);(Gao, 2019); (Liu, 2020)).

Students' listening abilities may be easily enhanced by viewing digital stories (Cigerci & Gultekin, 2017). Therefore, because listening activities accompanied by watching can be more influential, listening texts in language arts textbooks can be supported by multimedia. The results showed that digital storytelling is an effective way to prove instructions, especially in giving storytelling. It develops learning rather than using traditional means. Students who use digitalized storytelling show progress in language learning through listening comprehension. Language can be developed through the use of digital storytelling. Therefore, listening is one way to increase capacity in language learning (Loniza et al., 2018).

Loniza's results are in line with (Astar et al., 2021) which revealed that the integrative model of online listening strategy learning had no effect on students' listening skills, indicated by the absence of significant differences between the results of the listening skills test of the group using online listening strategy learning, the integrative model and the group using the Oxford online listening strategy learning strategy. Online listening strategy learning and vocabulary knowledge have no interaction with students' foreign language listening skills. This can be seen from online listening strategy learning, the integrative model in both the high vocabulary group and the low vocabulary knowledge group is less effective so that the increase in students' listening skills is not significant. online listening strategy learning, the integrative model is not strong enough to improve students' foreign language listening skills. The effectiveness of the method can be influenced by the length of time the treatment is given, the characteristics of the students, and the online learning design used.

Research (Gong et al., 2020) have made use of research on second/foreign language education (eg English) and have also shown how the findings have implications for language education researchers. The practice of memorization (in Chinese:) has been criticized by scholars in the field of second/foreign language education because it is always associated cognitively with 'short-term memory' and pedagogically with 'meaningless parts learned'. As Brown (2000) notes: 'In significant processes such as second language learning, mindless repetition, imitation, and other rote practices in language classes have no place'

(Gong et al., 2020). However, the 'read-imitate-create' teaching mode has been found to be an effective approach to promote listening, speaking, reading, writing and translating skills of non-Chinese learners (Y Zhang & Peng, 2014). According to research (Zhang&Yin, 2012), when the complexity of information relevance increases, learners' selective attention may shift correspondingly and significantly, consuming a considerable amount of attention resources and reducing working memory efficiency.Furthermore, Mayer (2005) demonstrates the cognitive process of multimedia learning by presenting his cognitive theory of multimedia learning.

A range of theoretical viewpoints and methodological techniques, such as those associated with sociocultural theory, are used by (Gong et al., 2020), (Group, 2016) to explain language learning and teaching. For example, while sociocultural approaches to learning have become more influential over the last decade, human learning is now seen as 'a dynamic social activity situated within a physical and social context' ((Johnson, 2006, p. 237);(Gong et al., 2020)).

For student effectiveness, teachers must use creative ways to attract students, who consider good digital design, always apply technological advances in facilitating the language teaching and learning process because it will arouse students' interest. In addition, teachers are advised to focus on language learning through listening comprehension in teaching students as it is a big factor for young learners to improve their language listening skills (Loniza et al., 2018).

Many different factors influence the development of listening skills in a foreign language, according to Lili (2015), Xu (2011), and Otair and Aziz (2017), who emphasize that many different factors play a role in the development of listening skills in a foreign language. They also emphasize that anxiety, which is an affective variable, is accepted as an issue that is becoming increasingly important when compared to other factors. In the related literature, apart from language learning anxiety, the existence of various types of anxiety related to language skills is also mentioned. One such type of anxiety is foreign language listening anxiety, which is important for this study. Research findings reveal that there is a strong negative relationship between listening anxiety and level of academic achievement with respect to listening skills (Dalman, 2016; Elkhafaifi, 2005; Kim, 2000; Sadighi, Sahragard& Jafari, 2009; Zhang, 2013; Zhou, 2003) is an effective reason to consider listening anxiety as an important variable in the development of foreign language listening skills (Horwitz, 2001). It has been proven by a large number of scientific studies that anxiety is an important affective

variable that has a good effect on the foreign language learning process and especially on the development of foreign language listening skills.

Applications in multimedia provide more opportunities for students to practice listening. Listening skills can be developed by practice, the more students practice their listening skills, the more their listening skills develop, teachers can create new listening applications designed according to students' needs and curriculum to help students achieve their foreign language course goals. (Elfiona & Zaim, 2019) states that positive for students as well as teachers. Lin et al., (2017) demonstrates that the Multimedia Technology for Teaching and Learning System Design is beneficial for students while they study the course.So that innovations such as mobile-based media are recommended to be developed and applied by teachers in teaching English, especially in teaching listening.

Teaching materials will be developed in the form of a textbook using a deductive approach, which contains: 1) the rules at the beginning, 2) followed by relevant examples, and 3) adequate training (Ningsih et al., 2018). Another name for the deductive approach is the traditional approach in which teaching is still teacher-centered. The selection of the form of teaching materials in the form of textbooks is in accordance with this concept. In relation to the use of materials developed for students, it must also contain interesting illustrations. For children, the most effective learning process is by imitating so that the presentation of concept-enriched teaching materials, examples before practice activities for students, and interesting illustrations will help students. Since Chinese is now widely taught in formal and informal educational institutions, one of the elements that needs to be considered is textbooks.

Quality textbooks have a good influence on teaching outcomes. Creating a textbook must meet several principles to produce a quality one. The principles that need to be considered are that textbooks must comply with systematic principles, scientific principles, practical principles, targeted principles and interesting principles (Liu, 2000: 314-318).

According to the findings of (Prasetyaningtyas et al., 2020), Chinese Indonesian textbooks place a strong emphasis on oral communication and writing abilities.. Writing skill here means writing Chinese characters. Some teachers say that reading Chinese characters is also an emphasized part, so, textbooks are a kind of balance of language skills, for most schools that implement the 2013 Curriculum, teachers need to have textbooks consisting of the basic competencies listed in the Curriculum. They cannot be taught at one time but must be distributed to all classes according to the gradation of difficulty, some errors are found in explanation, translation, or writ-

ing. For example, phonetic explanations, character strokes, grammatical use, and explanations. According to Chen and Liu (2008), who conducted research on the design of a Web-based synchronized multimedia lecture system for teaching/learning Chinese as a second language, the system enables students to self-learn Chinese comprehension via the Web and is easily customizable for different foreign language learning.

The outcome of the research (Hamidah et al., 2020), based on the data collected, it can be determined that throughout 2017, on the Australian Embassy's social media channels, 55 politeness indicators were discovered, consisting of 15 different types, as previously mentioned. From the fifteen forms of markers, nine of them are used in imperative texts or imperative constructions, either directly or indirectly expressed in non-imperative sentence forms. This shows that the Embassy is very careful when it comes to giving orders or orders to readers. The forms of commands that are stated indirectly, using the form of advice, invitations, and so on are evidence that in social media texts emphasize politeness.

Therefore, it is necessary to combine classroom teaching with self-study after school to overcome the difficulties of short teaching time in classes and fewer school hours. The campus network plays a strong role in students' independent listening learning. Students can use teaching course tools, instant news, listening materials, self-contained original films and other content uploaded by teachers on campus. In guiding students to learn to listen independently after class, teacher guidance, encouragement and the necessary inspection and evaluation systems are indispensable.

CONCLUSION

The designed high-level Mandarin listening learning system is useful for improving intelligence tests, strengthening listening training and feedback mechanisms, and helping to improve listening levels step by step. To get a good application, mobile learning resources must pay attention to providing a happy learning experience for learners, building the learner as the center, taking learning needs as guidance, and promoting it with technology.

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