

# Development of Microlearning-Based Motion Graphics: “Shànliáng de Māmā” for Learning Mandarin Writing Skills

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**Abstract:** This research aims to develop a learning product in the form of motion graphics based on microlearning material "Shànliáng de Māmā" for the writing skills course II of the Mandarin Language Education Study Program, State University of Malang. This research uses Research and Development (R&D). The development model applied is the Plomp development model, which has three stages: Preliminary Research, Prototyping Phase, and Assessment. The research team used research instruments in the form of media validation questionnaires and material validation. The average results obtained from the validation questionnaire sheet were 93%. This shows that the product produced in the form of motion graphics based on microlearning material "Shànliáng de Māmā" is very valid. Hence, it is suitable for learning intermediate-level Mandarin writing skills. However, several notes from material and media experts were used as a basis for the team to revise the product.

**Keywords:** Motion Graphics, Microlearning, Mandarin Language, Writing Skill

## INTRODUCTION

The most significant change in the era of society 5.0 occurs in the use of technology today. (Amalia & Munif, 2023) Stated that the Society 5.0 era prioritizes human collaboration as the center with technology as the basis. This is the opinion (Lintang & Handayani, 2022) that the Society 5.0 era emphasizes balance. However, on the one hand, these significant changes have brought society into a disruptive era. This massive use of technology and the internet is called the era of technological disruption (Ramadhani, 2022). This technological advancement should be addressed to overcome the problems that occur which are aligned with life-based learning.

Budiman (2017:41) argues that technology in education is needed to assist the learning process. With the disorganization or disruption that occurs today, technology benefits learning. Based on the UM PSPBM Curriculum, the courses most widely presented in terms of groups and credits are scientific and expertise courses or Field of Study courses consisting of Chinese language skills courses and introductory educational and research courses.

To find out the conditions in the field, the research team distributed questionnaires during pre-research to UM PSPBM students as a needs analysis. The questionnaire contains questions about learning language skills and the difficulties faced. Based on the needs analysis that has been carried out, information is obtained that writing skills are the most

difficult skills to learn among other language skills. From the 178 questionnaires filled in, information is obtained that according to PSPBM UM students, writing is the most challenging course, among other language skills. This is the opinion of Deliani (2017), who states that writing skills are the most challenging and complex skills compared to the other three skills because, in writing skills, writers need to master language and elements outside the skill itself and demand several knowledge and skills. As many as 53% of students answered that Writing II was the most challenging writing course.

To provide solutions to the above problems, the research team wants to develop multi-learning-based learning content packaged in motion graphics. Nugraha et al. (2021) stated that Microlearning is a form of innovation in the learning process that lecturers can utilize. Microlearning is a strategy for designing learning content that divides the primary material into small-scale focus and smaller segmentation (Tritore, 2022). Furthermore (Noriska et al., 2021) state that the content or learning material will be converted into small parts of Microlearning so that it can simplify complex and voluminous material.

Motion graphics are visual communication tools that move (Setyawan et al., 2019). Meanwhile, Motion Graphic is a branch of graphic design art that combines typography, illustration, and videography using animation techniques that attract attention and convey (2023). (Baeti et al., 2021) the advantages of motion graphics are that they can make it easier for teachers to explain complicated information to students, combine audio and visuals into one medium, and increase students' focus and attention. Motion Graphics are digital recordings that produce the illusion of motion, usually combined with audio used in multimedia projects (Fadli et al., 2022).

## **METHOD**

In accordance with the objectives described in the previous section, this type of research is developmental and research. The researcher developed a micro learning-based motion graphic video that will support the learning process of intermediate level Writing skills or equivalent to HSK 4-5. The model used in this research is Plomp's development model with three stages. The first stage is the preliminary research stage, the second stage is the prototyping phase, the stage ends with the assessment stage. Each stage has its own phase. The preliminary research phase has one phase, namely the initial investigation phase. The prototyping phase has two phases, namely the design phase and the realization phase. Meanwhile, the assessment phase consists of two phases, namely the test, evaluation, and revision phase, and the implementation phase (Plomp, T., and Nieveen, 2010). The subjects of this study were undergraduate students of Chinese Language Education Class of 2022 totaling 58 students. Researchers used supporting instruments in the form of media expert validation questionnaires and material expert validation. The data collected consisted of quantitative data and qualitative data. Quantitative data is obtained when collecting the level of feasibility that has been filled in by the validator, while qualitative data is suggestions, responses or comments given by the validator which will be used as the basis for product revision.

## **FINDINGS AND DISCUSSION**

Based on the previous explanation in the last section, this research aims to develop a micro learning-based motion graphic video that will support the learning process of intermediate level Writing skills or equivalent to HSK 4-5 with the material "Shànliáng de Māmā." This video is prepared by adjusting the needs of students based on the applicable Chinese Language Education Study Program curriculum and considering the characteristics

of students. The material of “Shànliáng de Māmā” is divided into small parts to make it easier for students to learn the material. This aligns with the previous explanation, which developed a motion graphic video based on microlearning.

The materials that the researcher had designed were shown to the material experts to gather information about the level of validation of the materials against the curriculum used, namely “Shànliáng de Māmā.” After looking at the draft material, the material expert filled out the questionnaire that the committee had prepared and filled in the value of the statement table prepared by the researcher. Not only filling in the value, the material expert also provided suggestions and comments, which were then used to revise so that the product obtained more optimal results. After being analyzed, the material validation obtained a presentation of 91%. Furthermore, the results of the material experts are presented in more detail in the following table.

**Table 3.1 Material Expert Questionnaire Results**

No	准则(Statement)	评价级别(scor)				x	X <sub>i</sub>	(%)
		STB	TB	B	SB			
		1	2	3	4			
教育的方面 Learning Aspects								
1	The material explanation in the motion graphic video is presented clearly.			√		3	4	100%
2	The motion graphic video developed provides opportunities for students to learn independently.				√	4	4	100%
3	There is a reflection at the end of the video				√	4	4	100%
资料的方面 Material Aspects								
1	The material presented is in accordance with the applicable curriculum				√	4	4	100%
2	The material presented is in accordance with the characteristics and needs of students				√	4	4	100%
3	The concept of the material presented is in accordance with the concept of microlearning				√	4	4	75%
4	Selection of illustrations in accordance with the meaning of the material to be conveyed				√	4	4	100%
5	The choice of language for explaining the material is easy to understand			√		3		
Overall								
1	The stimulus provided is in accordance with the concept of microlearning and is sufficient to achieve the material objectives.			√		3	4	75%
	$\sum x$					33		
	$\sum xi$						36	
	P							91%

Description:

1 = very bad

2 = not good

x = value obtained

xi = highest score

3 = good  
4 = very good

% = percentage result of score validation

Material validation activities were carried out on Friday, May 3, 2024. According to the explanation in the method section, the supporting instrument used in this research is a questionnaire sheet containing questions to measure the feasibility level of the material presented in the micro learning-based motion graphic video. There are nine statements on the questionnaire sheet consisting of learning aspects (three statements), material aspects (five statements), and overall aspects (one statement). In the learning aspect, two statements get a score of 4, namely, the motion graphic video developed provides opportunities for students to learn independently, and there is a reflection at the end of the video. It aims to help students learn independently. Students can play back the video and stop for a moment on the part of the material that is difficult to understand. Al Shehri (2021) states that microlearning can be a solution to solve learning problems that are considered difficult to explain so that they are easy to understand. In line with Al Shehri (Baeti et al., 2021), one of the advantages of motion graphics is that it can make it easier for teachers to describe information about complex material. Meanwhile, the statement that the material explanation in the motion graphic video is presented received a score of 3. This is because some language needs to be changed so students can more readily accept the motion graphic video explanation.

The second aspect of this questionnaire sheet is the material aspect, which contains five statements. Four of the five statements received a score of 4, namely the material presented by the applicable curriculum, the material presented by the characteristics and needs of students, the concept of the material presented by the idea of microlearning, and the selection of illustrations by the meaning of the material to be conveyed. Based on the value that the material validator has given for the four statements, it states that the concept of the material is based on the needs and characteristics of students. This is because microlearning is a method used to compile learning media into short, concise, explicit content based on student needs (Rafli& Adri, 2022). A similar opinion was also conveyed by (Baeti et al., 2021) that motion graphics are a medium that combines audio and visual. Thus, researchers can compile illustrations using the information they want to present more fully because they are in audio and visual form. However, in the statement of language selection, the explanation of the material is easy to understand, getting a score of 3. This relates to the learning aspect, which requires changing some language to make it easier to understand.

Compiling motion graphic video material with easy-to-understand language is essential to make it easier for students to learn material that is considered complicated. Teaching media, in addition to functioning as an introduction to learning messages to students, can also facilitate the process of students understanding the material being taught (Setyawan et al., 2019). Meanwhile, Yudhana&Gunawan (2023) stated that Motion graphics can enrich the visual content of animation and clarify the message to be conveyed. Thus, language that is easy to understand is essential in compiling motion graphic videos. In the overall aspect, namely, the stimulus statement provided by the concept of microlearning that was sufficient to achieve the material objectives obtained a score of 3. This shows that it is necessary to add a stimulus in the form of animation to the motion graphic so that students can capture the message to be conveyed quickly. It aims to fulfill one of the advantages of microlearning, according to (Adnas, 2022)Adnas (2022), which is that it does not require much effort from individuals to learn, which ultimately helps students understand and increases the effectiveness of the learning process. This is by the results of

research (Sinaga et al., 2022)Sinaga (2022) that microlearning-based learning videos effectively assist the learning process. Meanwhile, (Susilana et al., 2022)Susilana (2022) added that microlearning can stimulate students' cognitive productivity.

**Table 3.2 Media Expert Questionnaire Results**

No	Statement	Scor				X	Xi	(%)
		STB	TB	B	SB			
		1	2	3	4			
1	The attractiveness of the motion graphic display				√	4	4	100%
2	The attractiveness of the animation used in motion graphics				√	4	4	100%
3	Clarity of writing and text in the video			√		3	4	75%
4	The animation resolution used is clear and not broken (blur)			√		3	4	100%
5	The attractiveness of the composition andcolor combination				√	4	4	75%
6	The quality of the audio used				√	4	4	100%
7	The suitability of the microlearning-based motion graphic concept displayed				√	4	4	100%
8	Appropriateness of microlearning-based learning video design				√	4	4	100%
9	The attractiveness of the video as a whole				√	4	4	75%
10	Video duration is not too short or too long				√	4	4	75%
	$\sum x$					38		
	$\sum xi$						40	
	P							95%

Description:

1 = very bad

2 = not good

3 = good

4 = very good

x = value obtained

xi = highest score

% = percentage result of score validation

After validating the material, the researchers also validated the media. This media validation was conducted on Wednesday, May 8, 2024. Media validators assessed the products that had been prepared by filling out a questionnaire provided by the researcher. Based on the results of the questionnaire that the media validator has filled in, it is known that the average percentage value obtained is relatively high, which is 95%. This indicates that the motion graphic video developed is very feasible to be applied in the learning process. Ten indicators need to be assessed by media validators. Eight of them received a score of four. The seven indicators are related to the attractiveness of the motion graphic display and animation, image suitability, color composition, audio quality, video quality, and video suitability with the micro-learning concept. Adnas (2022) believes that one of the advantages of microlearning-based teaching media is that it has an attractive appearance and is constantly updated. In addition, in terms of motion graphics, Seruni (2023) argues

that motion graphics attract the audience's attention quickly so that the packaged content's movement, color, and interesting visual elements can attract the audience.

The developed video has a duration of 3 minutes 45 seconds. At this duration point, the media expert gave four points. This is because the duration of 3 minutes and 45 seconds is considered not too short and not too long by the character of today's students. Nurfadhillah (2021) states that the duration of a learning video should not be too long; 3 to 5 minutes is enough. Today's students tend to prefer short videos, but as conceptualizers, they must still pay attention to the depth and completeness of the material presented. By applying micro-learning-based motion graphic videos to the learning process, students can better understand the information obtained meaningfully. One of the reasons learning videos are highly recommended for use in supporting the learning process is because learning videos can explain material clearly (Agustini&Ngarti, 2020).

The other indicators assessed, namely the clarity of the writing and text in the video and the animation resolution used, are clear and not broken (blur) and get a score of 3. This is because some parts of the writing could be more precise or more transparent, as well as the fonts used; it is recommended that the Kaiti font or the like. The video developed is a microlearning-based motion graphic video, so the sharpness of animation, clarity, and readability of writing is critical in presenting the material. This is because microlearning videos have the characteristic of having a high display resolution. Khairani (2019) explains that learning videos must be high-resolution to support running on various devices. Motion graphics have advantages in conveying information that is easier to absorb. In its use, motion graphics can help simplify the information being taught (Wulansari&Siahaan, 2022).

## CONCLUSIONS AND SUGGESTIONS

After carrying out each stage by the research method that has been described, the conclusion that can be drawn based on the data that has been obtained and then analyzed is that the motion graphic product developed based on microlearning with the material "Shànliáng de Māmā" is feasible and valid to be used to support the learning process in Writing II courses. The average score obtained from material and media experts' validators is 93%. Material experts suggest improving some language or simplifying the language used in some parts of the video. Media experts gave two suggestions: to increase the resolution of the animation used so that it does not blur when the motion graphic is displayed, and the writing and text are replaced with clearer fonts. Meanwhile, researchers advise users to download motion graphics before using them independently, in groups, or class so that the resolution displayed is intact and clear. Suggestions for future developers are expected to develop various other learning products based on microlearning for other Chinese language skills materials considering the characteristics of Gen Z students who prioritize concise, clear, and concise packaging.

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