



# Development of Muscle Strength Training Media Through Fitness Training Videos in Porprov Karate Athletes in 2022

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**Abstract.** This study aims to develop muscle strength training media through fitness training videos so that athletes can perform good and correct movements to achieve maximum results. This research method uses research and development research with the following steps: identification of potential and problems, information gathering, product design, product manufacture, expert validation, product revision, testing, final production. The validity test was carried out by multimedia experts and karate experts using an assessment questionnaire instrument. The trial phase aims to determine the benefits, shortcomings and advantages of the media carried out by 25 karate athletes as viewers or spectators. The test results show that the display aspect gets a percentage value of 65% “Very Good” and 30% “Good”, this is similar to the material aspect gets a percentage value of 64% “Strongly Agree” and 36% “Agree”, in the interpretation including the appropriate category. and very well worth it.

**Keywords:** media · exercise · karate · fitness training

## 1 Introduction

Karate is a branch of martial arts in Indonesia that has its own charm to learn. Karate is not only to make someone achieve but also to create someone with his ideas and innovations to be implemented in this martial art. In addition, karate is a martial art that is able to maintain and improve physical and spiritual fitness for karate athletes who have strong principles on the karate oath. The ideas and innovations made by the coach/sensei to the athletes are trying to increase the athlete’s muscle strength so that they are able to make good and correct movements. In addition to making these efforts, a coach’s awareness is also honed by continuously creating creative ideas and innovations that can be utilized and applied by his athletes.

Athletes can take advantage of and apply the ideas and innovations of coaches to improve the muscle strength capabilities of porprov athletes and to support skills and achieve maximum performance. Karate muscle strength training is one of the efforts

routinely given by coaches and routinely carried out by karate athletes to achieve the desired goals. In karate athletes' muscle strength training, there are several arm muscles that play a role in doing exercises such as kata and kumite. In the Kata category, according to (Yulfadinata, 2017: 25), "is a move that combines several official techniques, namely punches, parries, stances and kicks into a series of moves that become the main movement". Kata has an element of practice that is important for every kata athlete to pay attention to and has a difference with the kumite category of course.

In the word fast to slow and slow to fast movements are very important things to note because every move or word has different characteristics. Another element is maintaining the balance of the stance, coordination of strokes, parry, with stances and movements that vary according to the rhythm of each technique. According to (Yulfadinata, 2017: 25), "in the kumite category every punch or kick leads to the target point area, namely the stomach, chest, head in a controlled manner". Because in the kumite category, athletes are required to get points from attacks aimed at the point target area with good technique criteria, perfect form, and clear point target directions. To achieve all of that to the maximum, it is necessary to exercise the arm muscles through fitness training.

The development of digital technology is currently so fast and has even entered the 4.0 era, which has an impact on many people turning to the digital field, so that interactions between humans are slowly turning into virtual ones. In modern times, according to (Efendi, A., Sumarni, 2015) social media and the internet are powerful ways to find information related to human needs and desires. In addition, making fitness training videos for porprov athletes in 2022 to be used to train the muscle strength of karate athletes and can be repeated to make it easier for athletes to understand (Sulaeiman, A., 2003). This is also in line with the many video media about karate muscle training which aims to facilitate athletes in accessing and reviewing knowledge in the field of karate related to muscle strength training.

Media audio-visual (video) fitness training at this time as a tool to access insight and knowledge, especially muscle strength that plays a role in the field of karate. According to (Sanjaya, 2009), many audio-visual (video) media methods are the main attraction in it, besides that it is also easy to apply by the public compared to reading books. And in addition to the reasons above, the wide spread of this video makes everything easier, coupled with social media sites at this time, almost all people have it. In order to accommodate a knowledge of muscle strength that plays a role in karate martial arts for poprov athletes, this research makes a media product in the form of muscle strength training videos through fitness training for porprov karate athletes in 2022. Porprov karate athletes in general can access via video or youtube application using the keyword or title "Media for muscle strength training for Karate athletes in the Kata and Kumite Categories". This video is a product that can be developed to become a video medium for karate muscle strength training for porprov karate athletes in 2022.

## 2 Method

This research is a research and development research. With steps: identification of potentials and problems, information gathering, product design, product manufacture, expert validation, product revision, testing, final production. The validity test was carried out

by multimedia experts and karate experts using an assessment questionnaire instrument. Furthermore, data were collected through closed questionnaires and responses by athletes to video products. The data collection used is product assessment in the aspect of display and video material and filling out written responses from 25 athletes. To assess the feasibility of the video media that has been made, the measurement scale uses a Likert scale. The data collected were analyzed by descriptive statistics.

### 3 Research Results and Discussion

#### 3.1 Research Result

The research in this first stage is to collect data as information for compiling a draft of a video design product in the form of references and literature and videos with the same title or theme. After collecting the data then enter into the preparation of product design. The product in this study is muscle strength training media through fitness training videos for karate athletes. The following display of the fitness training video that was developed is presented in Fig. 1.

In addition to its purpose as a reference for porprov karate athletes in increasing arm muscle strength, it is also used to introduce muscle strength training for karate beginner athletes in Buleleng so that it can increase the motivation of karate athletes to train more intensively so that it leads to increased performance of Buleleng karate athletes.

In this study using the Research and Development method (research and development) which requires a validator as an assessor of muscle strength training media design through fitness training videos of karate athletes before being tested on research subjects, namely porprov karate athletes in 2022. The results of the validation of the assessment provided by media experts for the design (display and communication aspects) of muscle strength training media through fitness training videos in the good category. While the assessment from karate experts assessed the material aspects in the design of muscle strength training media through fitness training videos, the category agreed. After going through the validation stage by multimedia experts and karate martial arts experts, then to the trial stage by 20 karate athletes as spectators to provide assessments and responses to the design product for muscle strength training media through the fitness training video.



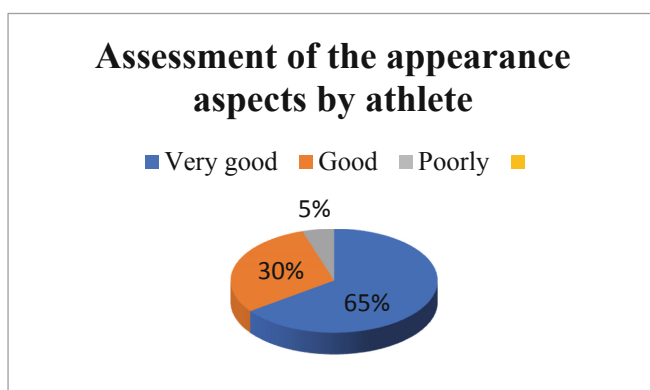
**Fig. 1.** Muscle strength training through fitness

The athletes judged in two aspects, namely the display aspect and the material that had previously watched the video through WA. The results of the assessment given by the athletes are in the very good category. The results of the assessment of the appearance and material aspects by porprov karate athletes are presented as shown in Fig. 2 and Fig. 3.

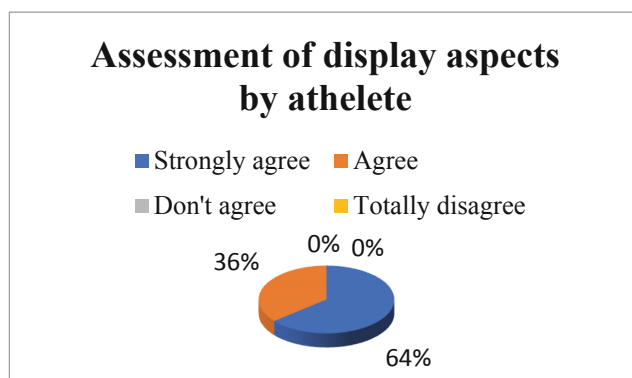
Based on Fig. 1 shows that the assessment of the appearance aspect by qualified athletes is very good 65%, good 30%, and not good 5%. Meanwhile, for the assessment of material aspects by athletes in the category of strongly agree 64%, agree 36% and disagree, strongly disagree each 0%.

### 3.2 Discussion

Based on the results of the research described above, the purpose of this study is to develop muscle strength training media through fitness training videos so that athletes can perform good and correct movements to achieve maximum results. From the results



**Fig. 2.** Assessment of the appearance aspects by the athlete



**Fig. 3.** Assessment of display aspects by the athlete

of the validation by media experts the display aspect and the communication aspect. Multimedia experts give a “Good” indicator value on all aspects in the display aspect, namely: image quality, sound clarity quality, lighting quality, model appearance, language and material clarity. This is in line with the results of the validation (Selvani, et al. 2018) which shows the value of “Very Good”. Meanwhile, in the aspect of communication, multimedia experts give a value of “Strongly Agree”. The results of the validation of this communication aspect are also in line with the results of the validation (Selvani, et al. 2018), which get a “Very Good” score. From the two aspects assessed by media experts, the media for muscle strength training through fitness training videos developed for Porprov athletes in 2022 in terms of appearance and communication aspects are suitable for use by athletes to train their arm muscle strength.

Then the assessment of the appearance and material aspects by the athletes is shown in Figs. 1 and 2 with very good qualifications and strongly agree. The results of the assessment above show the same thing as (Selvani, et al. 2018), both the appearance and material aspects are qualified “Very Good and Good” and strongly agree and agree. Based on the results obtained from the assessment by karate athletes related to muscle strength training media through fitness training videos, it is hoped that the coach of karate athletes from the province of Buleleng in 2022 can use the media when doing exercises so that the blows produced for an athlete will be more leverage.

## 4 Conclusions

### 4.1 Conclusions

The product of muscle strength training media through fitness training videos has gone through the product design stages, namely the preparation of material drafts, video capture, and video editing. Before producing media in the form of this video, it is to analyze the muscle strength training media through a fitness training video with the same theme, it is hoped that you will get references and references in the production stage of the media design that will be made for porprov karate athletes in 2022. The important indicators are aspects of appearance and aspects karate material itself. Then the media product went through a research stage, namely validation by experts, namely from multimedia experts and karate martial arts experts with the aim of knowing the feasibility of media design products. The results of validation by experts can be concluded that in the aspect of display and communication aspects of multimedia experts indicate that the value of “Good” gets the highest score, similarly on the aspect of communication the value of “Strongly Agree” and “Agree” gets a high score. In the results of the validation of the material aspect of the karate martial arts expert, the value of “Strongly Agree” got the highest score.

### 4.2 Suggestion

Suggestions in this study through the development of muscle strength training media through fitness training videos will be an evaluation material in the production process of muscle strength training media designs through fitness training videos. At the product validation stage, it is recommended that there are karate experts, namely a coach and referee/jury, so that at that stage it is really detailed in the validation test.

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