

# Influence that resolution of video image of portable terminal gives evaluator.

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**Abstract:** I researched a influence that Resolution of video image of portable terminal gives evaluate person. The senior of martial arts saw the image of a basic type, and evaluated the movement technology. It was examined whether the evaluation was different when the resolution was paid to attention in that case, and the resolution was changed and the same image was inspected. The senior of martial arts saw the image of a basic type, and evaluated the movement technology. It was examined whether the evaluation was different when the resolution was paid to attention in that case, and the resolution was changed and the same image was inspected. It was subjectively evaluated whether it seemed to be able to use the image to guide athletic skills by five stages. As a result, it has been understood that there are a lot of people who think that it can evaluate athletic skills by the resolution of 320\*240.

**Keywords:** e-learning, psychomotor skill, resolution, mobile terminal, instructional design, martial arts, physics

## 1. Introduction

The upgrade of a mobile terminal is remarkable. However, the guidance of learner's athletic skills in the remote place is executed by positively using the movie filming feature and the report of the example of making to e learning is few. The author settles on the guideline that effectively uses the movie filming feature of a mobile terminal when the guidance of athletic skills is executed, and is executing the project from which the range of the adjustment of e learning requested the chance of spread further. The influence of the resolution when taking a picture of animation necessary to evaluate athletic skills appropriately especially was investigated as one of the investigations of this project in this research. The increase of the size of the file negatively affects various handling though it is expected to come to have good grades by making it to the high-resolution. Therefore, the just appraisal was possible

by a very low resolution was examined. It questioned whether the video image was able to endure the video examination by five stage questionnaire method for that. Thus, it tried to clarify notes when the movie filming feature of a cellular phone on the market was used by the remote learning.

## 2. methods

### (1) Cooperator

Instructor of Shintaido (Japanese Martial arts)

### (2) Testee

18 Instructors of Shintaido (Japanese Martial arts)

### (3) Advance preparation

The cooperator executed standard operation. Movement "Batsu-noto" that is FORM of martial arts. It took a picture of this movement by the movie filming feature of the cellular phone. It took a picture of these demonstrations. The resolution has been changed. It inspected it six continuous times it.

(4) Materials

mobile phone(N01B、P906i)

(5) Experimental overview

It questioned the testee on whether the examination was possible by this animation. The questionnaire was caught by five stages. That of each resolution of laboratory instruments was examined.

Resolution used

SubQCIF 128\*96 pixel, resolution A

QCIF 176\*144 pixel, resolution B

QVGA 320\*240 pixel, resolution C

VGA 640\*480 pixel, resolution C

Frame rate is 15 frame per second.

Fig.1 resolution A



Fig.2 resolution B



Fig.3 resolution C



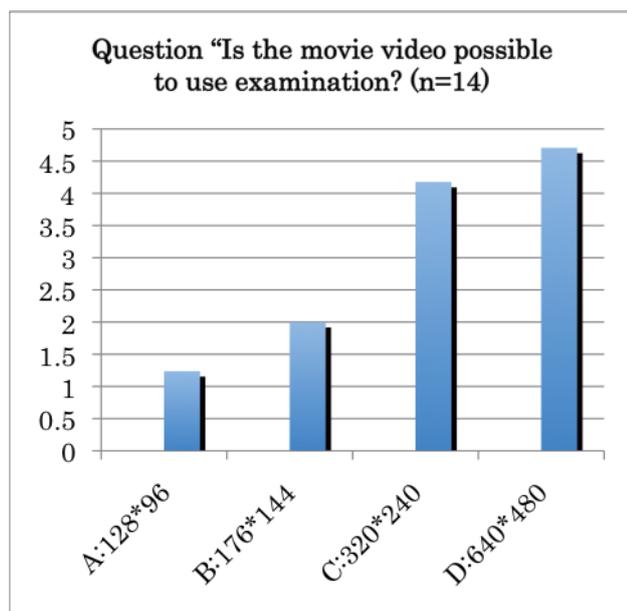
Fig.4 resolution D



### 3. Results

It questioned the testee on whether animation was able to be used for the actual guidance. The animation of four resolutions was evaluated respectively by five stages. The average score is recorded in Table 1.

Fig5. Question "Is the movie video possible to use examination?"



(1:poor,2:semi-poor 3: There is both either. ,4:good,5:Excellent)

It has been understood that the evaluation since C and more is the higher as a result.

### 4. Thinking

The result of Figure 5 understanding is the testee needs the animation of how much resolution.

The resolution C(320\*240 pixel) and resolution D(640\*480 pixel) has good score.

### 5. Summary

The learning culture that starts evaluating athletic skills in

animation is difficult to say to grow up enough. The object of this experiment is an art of drawing real swords that is the traditional culture of Japan. Therefore, there are psychological hang-ups all the more. This was to have understood from the conversation of the experiment with the supervising instructor.

However, it has been understood that it is interesting from the result of the experiment actually.

If the resolution of resolution D(320\*240) or more is used, it has been understood that the possibility that athletic skills of the extent that can be examined can be evaluated is high.

Cellular phones of DoCoMo marketed in Japan are 27 models (As of April, 2010). The cellular phone with the resolution of 320\*240 or more is 28 (96%). Thus, the movie filming feature of a lot of cellular phones fills this standard.

It has been understood that there is a possibility that the animation function of most portable terminals can be used to evaluate athletic skills from the above-mentioned point. Two has been understood from the above-mentioned research.

- 1.It takes a picture of learner's athletic skills with the cellular phone, and it can be transmitted to the leader digitally.
- 2.The possibility that the evaluation of athletic skills is enforceable arises in the remote place in the where abouts leader.

However, the matter that should be examined more has come out, too. The following points are not interpretable of the cellular phone.

1. How do it become it excluding the resolution used?
2. Is the result different according to the difference of the compressibility?
3. When it is more complex movement and big movement, is the result different? These are the examination problems when the future.

### Address of Thanks

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### Reference Literature

NTT DoCoMo (2010) . Catalog of Mobile phone