Verification of the Educational Effects of Introducing ICT Equipment for Self-portraits for Third-year Junior High School Students

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Abstract

Many Japanese students have awareness that they are not good at art class. A reason of the awareness is considered to be a difficulty in expressing what they imagine. Drawing self-portrait is a common task for 9th-year student. This is especially challenging for students.

Japanese government almost accomplished the policy objective to distribute one tablet computer to one student in 2021 school year. A tablet usually has a front camera. It is expected that the "selfy" function help students have clear image of their own faces. In addition, there are quality drawing applications for tablet to simplify original photos and make trial-and-error easier.

The purpose of the study was to reveal the effectiveness of using tablet in self- portrait class. The change of the awareness and achievement was evaluated during the classes. Although there was no significance in the change of the awareness, a lot of the students got better results than the estimation from previous assessment. Questionnaire survey to the students was also conducted. The result showed that using tablet can be a useful tool for them to realize the expression of their image in mind.

Keywords: Art Class, Awareness, ICT equipment, Idea Sketch, Self-portrait

Introduction

In his book "Education Through Art," Herbert Read stated that art should be the foundation of education and discussed the importance of art education. The importance of art education was mentioned in the Art section of the Courses of Study for Junior High Schools, which was revised on March 31, 2017. However, it found that many Japanese students in compulsory education have the awareness that they are not good at art class (Furihata, 2015). In particular, many college students have this awareness. In addition, since high school art class are elective, fewer students will take art class. The only way to provide art classes to all students is in middle school, which is a period of compulsory education. Therefore, it is necessary to eliminate the awareness that "I am not good at art class" during junior high school, when everyone has to take art class.

A reason for the awareness is considered to be due to difficulty in expressing what they imagine and a lack of confidence in one's work, the author would like to introduce ICT equipment as a means to improve this point. With the realization of the giga school concept in August 2021, the introduction of ICT equipment into art education has become a reality. This study examined the effectiveness of using tablet in self-portrait class.

Research Design & Methods

The project was implemented for 103 students in three third-grade classes at T Junior High School in Hyogo Prefecture, Japan, from April 16 to November 5, 2021 (16 lessons for each class).

In this study, ICT equipment was introduced using illustration software, that is MediBang Paint. After

loading their own photo into the illustration software students edited it to a monotone color, traced the outlines of the facial parts using the pen function of line drawing software (Figure 1). The class then proceeds to have the students drew their self-portraits in pencil on drawing paper. Thereafter, self-portrait works created using illustration software was to be idea sketches, and self-portrait works on drawing paper was to be a completed self-portrait. A 5-point scale questionnaire administered before and after the class to assess changed in student's attitudes awareness art and self-portraiture throughout the class. In addition, the art teachers were asked to evaluate the students on three grades (ABC) in three phases: base grade, grade point of idea sketch, and grade point of self-portrait completed.
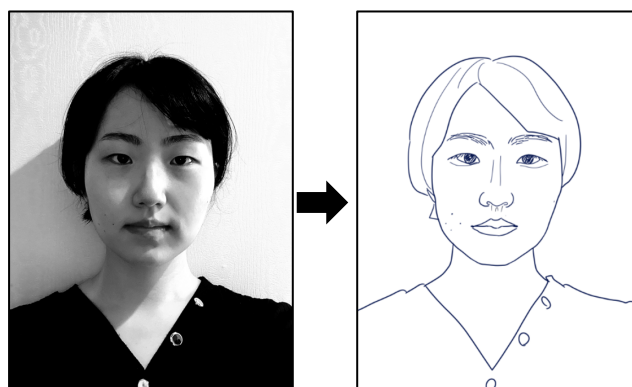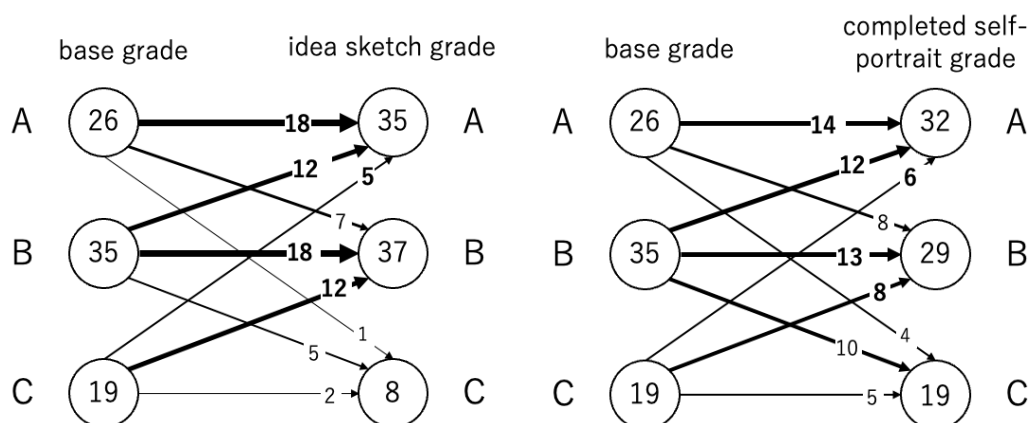

Figure 1

Working Image

Results

The actual number of data collected was 80 students. The results of the survey showed that the number of students who likes self-portrait increased by three from the pre-survey, and 23 more students were motivated to work on self-portraits. In addition, more than half of the students who were able to understand the structure of the face after the class felt that ICT helped them understand the structure of the face. Furthermore, more than half of the students who understood facial structure were able to sketch their thoughts and self-portraits as they imaged.

Next, a correlation analysis was conducted to examine the relationship between creating artwork as desired and the use of ICT equipment. A moderate correlation was found between "I could drew the idea sketch as I imaged" and "found MediBang Paint helpful in drawing the idea sketch as desired", a strong correlation was found between "I could drew the idea sketch as I wanted" and "I am confident in the finished idea sketch". A moderate correlation was also observed between those who "I could draw a self-portrait as I imaged" and those who "found ICT helpful in drawing a self-portrait as desired", a strong correlation was found between "I could drew a self-portrait as I imaged" and those who were "I am confident in the finished self-portrait".

Finally, they were able to examine the change in results from "base grade" to "grade point of idea sketch " and "grade point of self-portrait completed" based on the three-level evaluation by the teacher in charge (Figure 2). The variation between base grade and grade point of idea sketch showed that a total of 29 students increased their grades from the base grade. There was also an increase of 9 students who received an A on their grade point of idea sketch and a decrease of 11 students who received a C on their grade point of idea sketch. On the other hand, it was found that 8 students have received an A on the base grade but have declined on the grade point of idea sketch. In addition, it was found that 5 students have received an B on the base grade but have declined on the grade point of idea sketch. In the grade point of self-portrait completed, 26 students' grades increased, especially 14 of the 19 students who had received a C grade increased. However, it was found that some students performed lower than base grade on

the completed grade point of self-portrait completed.

Figure 2

Grade fluctuations

Discussion

The results showed that some students' awareness changed as a result of this practice. In addition, it was recognized that understanding the structure of the face may make it easier to create works of art as desired. Furthermore, the possibility that ICT equipment is effective in understanding the structure of the face was revealed. From the results of the correlation analysis, ICT equipment can help to create artworks as they wished. It can also be said that if one can produce a work of art as one wishes, one can have confidence in one's work. The results of the correlational analysis revealed that ICT equipment could be useful for making artworks "as you wish", which is related to self-confidence. The tendency that the grade of the idea sketch seems to be improved after the class shows that the ICT equipment had a positive impact on the students' work. However, it should not be overlooked that there was a decline in the grade of students who had previously performed well in both idea sketch and completed self-portrait.

There were four possible reasons for the overall lack of a significant decrease in students' awareness of their difficulty in art class, and for the fact that some students' grades of their artwork declined. First, it could be the lack of familiarity with the ICT equipment. Second, it could be the fact that the coronavirus prevented the students from completing all of the planned work steps. Third, adolescents may be resistant to the idea of continuously facing their faces. Finally, the length of time that the students worked on the self-portrait was too long.

Conclusion

This study shows how the ICT equipment affected the self-portrait unit. The overall improvement of the grade shows a hope for the integration of ICT equipment into art classes. On the other hand, it was found that the complication in the introduction of ICT equipment and the necessity for the art teacher shall fully utilize the ICT equipment are outstanding issues. In this study, the author was able to discover issues such as the difficulty of operating ICT equipment when introducing it and students' ability to use it. Based on this study, the author intends to design classes in which ICT equipment can be more easily manipulated, and to conduct further study on the multifaceted introduction of ICT equipment into art classes.

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