



# An Education Effect of Cooperative Learning with The Visual Text in Nursing Technique Acquisition



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## Introduction

Japan's basic nursing education is designed to give nursing students nursing skills in an overcrowded curriculum during a limited time. Improving teaching methods is necessary, just as motivating students is indispensable. This study used cooperative learning with questioning and visual text (pictures and video images) to motivate students. Then it verified the effects of the co-learning on nursing skill acquisition status.

## Research purposes

To verify the effects of cooperative learning with visual text and questioning on acquisition of nursing skills.

Research subjects: After we explained the purpose of this study to second-year students (who learned skills by conventional methods) and first-year students (who learned skills by conventional methods plus co-learning) of A university, we affirmed that anonymity would be preserved. Thereafter, we obtained consent from all research subjects: 96 first-year students and 97 second-year students.

## Methods

Figure #1 shows a list of questions that we presented to the first-year students. After the instructors confirmed the questions in front of them, the students described their own individual opinion on their worksheet. Then, they shared and talked about their opinions in a group. They described the results of the discussion on their worksheet. If necessary, they shared them with the whole class. The evaluation of skill acquisition was scored on five items: how to hold sterilized forceps; the direction in which to remove them from outer packing; how long to turn over the outer packing; closing the tips of the sterilized forceps; and keeping the tips of the forceps taken out of the packing horizontally.

Analytical methods: The acquisition status of the nursing skill to remove sterilized forceps under sterile conditions and self-learning by watching videos were compared between the first-year students who experienced cooperative learning with visual text and questioning in the unit of sterilization operation and the second-year students who did not. They were evaluated with scores in the five items: how to hold sterilized forceps; in which direction to take out them from outer packing; how long to turn over the outer packing; to close the tips of the sterilized forceps; keeping the tips of the forceps taken out the packing horizontally. An unpaired *t* test was applied to assess differences in scores and average video watching time by e-learning between the first-year students and second-year students.

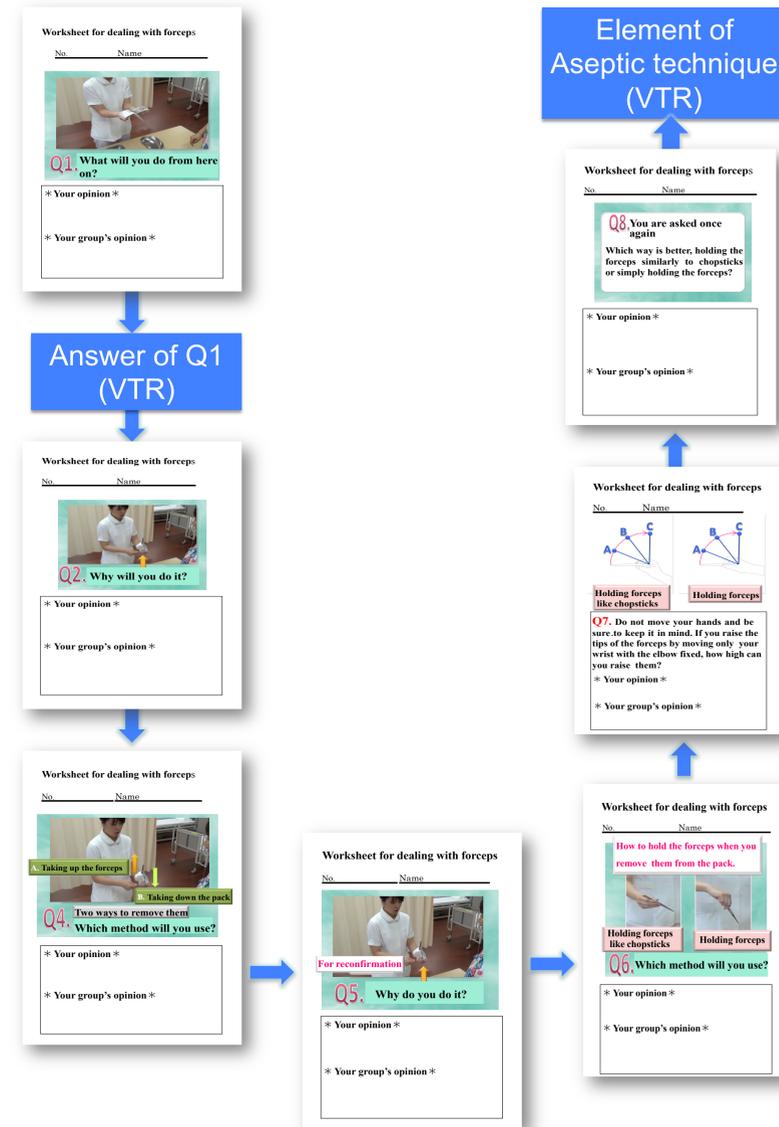


Figure #1 Visual text (pictures and VTR)

## Results

The evaluation scores were  $t(126) = 9.79, p < 0.001$ . Scores of the first-year students ( $M = 4.75, SD = 0.503$ ) were significantly higher than those of the second-year students ( $M = 3.41, SD = 1.248$ ). Additionally, the video watching time for self-learning was  $t(190) = 2.69, p < 0.01$ . The watching duration of the first-year students was significantly longer than that of the second-year students.

## Conclusions

Discussion: The increase of self-learning demonstrates the promotion of learning motivation. Furthermore, the improvement of scores represents that of the skills.

Conclusion: cooperative learning with visual text and questioning affects learners' motivation and promotion of nursing skill acquisition.

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### Bibliography

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