

# DEVELOPMENT OF A SCIENCE SHOW INCORPORATING DANCE EXPRESSION

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## BACKGROUND & AIM

In Japan, it has been noted that interest in science declines as the schooling progresses. According to the 2019 TIMSS (Trends in International Mathematics and Science Study) results, the percentage of elementary and middle school students who said "studying science is fun" declined as they reached middle school, falling below the international average for middle school students, even though they ranked fourth and third internationally in science scores for elementary and middle school students (International Association for the Evaluation of Educational Achievement [IEA], 2019). Among the measures taken to counter this trend away from science, Ebizaki (2007) reports that science shows have been spreading nationwide like a boom since around 1998 and are always held somewhere on weekends. However, it has been pointed out that in Japan, scientific events are attended by a segment of the children with a high interest in science (Kano, 2019). Therefore, in this study, we will report on a practical example of a science show held in a public place such as a commercial facility that incorporates dance expression as a way to attract people who are not interested in science to participate in the show.

## DEVELOPMENT OF SCIENCE SHOW INCORPORATING DANCE EXPRESSION

We developed contents for a science show that incorporates dance as described below:

### Shaking cream

When the cream is shaken, it begins to separate and the fat parts stick together to form butter. But the children didn't stop and see just a shake in the science show, so we shook it up with a hip-hop dance.

### Melting balloon

When the limonene touches the balloon, some of the latex from the balloon immediately begins to dissolve and balloon pops. Limonene and latex rubber are the hydrocarbons which will dissolve if in contact with each other. The giant balloons were made of thick rubber and took a long time to melt, so we applied limonene to our gloves and to the giant balloons while we did a zombie dance.

### Electromagnetic induction

We made a big device that moved magnets in coils. When we danced, the magnet moved inside the coil to generate electricity by electromagnetic induction.

## RESULTS & CONCLUSION

As soon as we did the dance, people filled even the second floor of the commercial building to stop and join the science show. People stopped and participated more than when we simply showed scientific experiments. Also, the movie showing the shaking of the cream with dance was viewed more than 2.5 million times on Twitter. We thought it might have potential as a way to create an opportunity to communicate science to people who are not interested in science.

## REFERENCES

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