

# Proposal of a System Enhancing Self-affirmation Using LINE Chatbots for Elementary School Students

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## I. Introduction

"Self-affirmation" is "self-assessment that one's attitude is favorable". In recent years, young Japanese people have been found to have a significantly lower sense of self-affirmation than other countries such as the United States [1]. In Japan, many lesson-style educational practices reportedly increase the self-affirmation of elementary school students. Nevertheless, no method other than the lesson format exists. Reportedly, no educational practice can be characterized as an effective method for all children [2]. Therefore, for this research, we developed and proposed a system that enhances the self-affirmation of elementary school students using a method other than the lesson format.

## II. Proposal System

The authors have developed, evaluated, and verified LINE chatbots that enhance self-affirmation by introducing "Three Good Things," which lists three good things every day for university students. [3]. Results demonstrate that self-affirmation was higher after system introduction than before system introduction. In recent years, more than 50% of elementary school students use smartphones [4]. The use of LINE increases as the grade level increases. One in three students use it in the sixth grade [5]. Therefore, we decided to introduce a similar system for elementary school students.

To make it easier for elementary school students to accept the icon, we used an image of a cat and appended "Meow!" to the end of the word. I set it to send a message urging "Three Good Things" every day before going to bed (20:00) . If you reply to this, then you will get a random reply selected from the following three. "Thank you for telling me! Let's do our best tomorrow!" "Great! Can you tell me tomorrow?" "Meow, I heard good things! Tell me tomorrow!" In addition, if one talks to the chatbots, then one can enjoy the conversation from the TALK API provided by Recruit.

## III. Experiment Outline

The evaluation plan is described next. This system will be introduced into the upper grades of elementary school students who have a high LINE usage rate. Self-affirmation is evaluated using the Japanese version of the Rosenberg Self-esteem Scale (RSES-J) by Mimura et al. [6]. Twice before and after the introduction, after 10 items are evaluated on a four-point scale, they are compared. Additionally, we will investigate the good points and improvement points of the system from the questionnaire survey. Furthermore, by analyzing conversation logs, one can expect to

discover factors that increase self-affirmation and characteristics of younger elementary school students.

#### IV. Conclusion

This study presents a system for elementary school students to increase self-affirmation using LINE chatbots. In the future, based on the evaluation plan, we will evaluate the upper grades of elementary school students.

#### V. References

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