Exploring Mindset Development in English Education Through Goal-Setting: A Pilot Study with Japanese Elementary Students

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Abstract

Recently, the importance of a growth mindset has gained attention in psychology, emphasizing the belief that abilities and intelligence can be developed through effort and learning. While mindset theory primarily focuses on general human psychology, it also relates to language learning because language learning involves trial and error, which is essential for becoming a successful learner. This pilot study aims to explore how to foster a growth mindset among English learners in a school setting.

The study was conducted over nine English lessons, during which teachers set unit goals and encouraged students to think about (1) what is necessary to achieve these goals and (2) what will happen next in upcoming lessons. The results showed that many learners shifted to a growth mindset after participating in this goal-setting project. This shift can be attributed to the frequent review of goals at the beginning of each class and the focus on reflecting on the vocabulary and expressions needed to reach the goals. This approach helped learners clearly see the path of upcoming lessons and visualize potential failures, fostering a resilient attitude towards learning. The effect was particularly noticeable among students with a fixed mindset, highlighting goal-setting as an effective method for cultivating a growth mindset in young language learners.

This pilot study demonstrates the effectiveness of goal-setting in educational settings, offering a concrete method to transform students' learning attitudes. Future research should aim for statistical significance testing, and further academic studies based on these findings are needed.

Key Words: Growth Mindset, Fixed Mindset, Goal-Setting, Japanese Elementary School, English Education

1. Introduction

Studies about language learning motivation have long been conducted, and it is commonly known that internal and integrative motivation are the key to becoming a successful language learner (Dörnyei, 2001; Gardner & Lambert, 1959; Ryan & Deci, 2000). These motivational studies are closely related to learners' characteristics because learners with high motivation tend to have a positive attitude towards their own mistakes.

More recently, the importance of human personality traits has become popular in the field of psychology. Dweck (2006) has pointed out that people with a growth mindset—the belief that abilities and intelligence can be developed through effort and learning—tend to view failures as opportunities for growth and engage more actively in tasks. In contrast, students with a fixed mindset believe that their abilities and intelligence are static traits that cannot be significantly changed, often avoiding challenges to prevent failure.

Also, the existence of mindset has been revealed in the field of neuroscience. Moser et al. (2011) conducted a flanker task (e.g., > > < > >) to examine how the error-related components differ between individuals with a growth mindset and those with a fixed mindset. In their research, the error-related negativity (ERN) was elicited shortly after participants made an erroneous response. This indicates that in both psychology and neuroscience, Dweck's concept of mindset has been empirically supported.

The concept of mindset focused on general human psychology, but it is possible to apply the mindset concept to language learners because language learning involves facing challenges, making mistakes, and persisting in the face of difficulties—key elements that align with growth mindset principles.

Thus, this pilot study aims to identify simple yet effective strategies to help fixed mindset learners develop a growth mindset within the context of language learning classrooms, providing insights into practical approaches that can be implemented in similar educational environments.

2. The study

2.1 Participants

39 fifth-grade students from a Japanese elementary school participated in this study. All participants had passed *Eiken* Level 5, indicating a basic understanding of English. The participants varied in home environment and learning styles, making them a suitable group for exploring the broader applicability of the results. This research is a pilot study, aimed at collecting preliminary data for future, more comprehensive studies.

2.2 Method

The goal-setting project consisted of nine sessions. At the start of each session, the unit goal was presented to raise students' awareness of the target. The goal was set as, "The goal of this unit is to present about your favorite dinosaur." To achieve this goal, students considered the necessary expressions and vocabulary, which were then noted on the classroom whiteboard by the teacher (Figure 1).
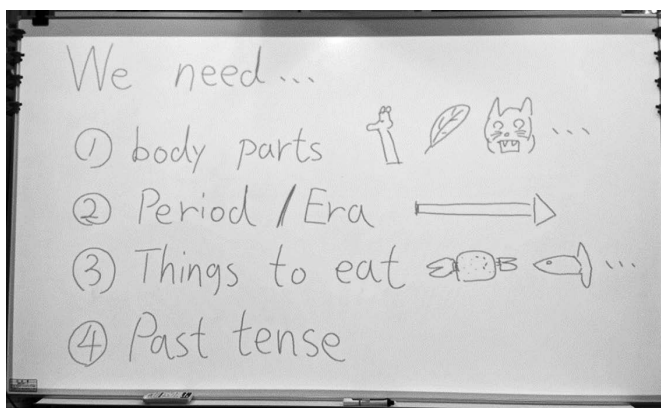

Figure.1 Expressions and Vocabulary Identified by Learners During the Goal-Setting Project

These notes were shown at the beginning of each class along with the unit goal, providing students with an opportunity to review and recall the language they had previously identified as important. Through this process, students were

expected to develop an understanding of the key expressions required to meet their goal and cultivate the ability to anticipate what would come next. This approach is expected to be particularly effective for students with a fixed mindset. By clearly understanding the language and concepts needed for success, students would be able to anticipate where mistakes might occur in the learning process, which could help reduce their fear of making errors. By clarifying the steps needed to reach the goal, students are likely to predict what will happen next and prepare themselves for potential challenges. In doing so, they could develop resilience by learning to anticipate and address mistakes, allowing them to engage with their learning without the fear of failure.

The final outcome was for students to make a final presentation about their favorite dinosaur, which was captured as a video recording. Based on recommendations that suggest the effectiveness of using ICT tools in learning (Herrero & Vanderschelden, 2013), students used tablets to record each other's presentations in pairs (Figure 2).
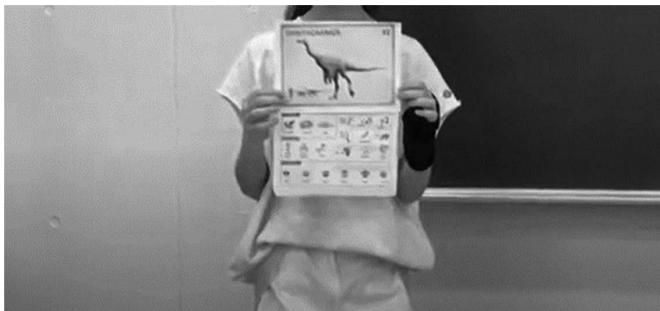

Figure 2: The Final Outcome (Video-based Presentation)

3. Data Acquisition

Data were collected through questionnaires administered before and after the project. The questionnaires assessed tendencies toward fixed and growth mindsets using a 4-point scale (+2 to -2). Pre-tests were conducted before the goal-setting project began, and post-tests were conducted after the project concluded.

Data were collected using Google Forms and analyzed using standard statistical methods.

4. Result

The comparison of average growth mindset scores before and after the project showed an increase, indicating a positive shift in students' mindsets following the goal-setting project. As shown in Figure 3, the continuous presentation of goals and reflecting on what was necessary to achieve them appeared to positively impact students' approach to learning. This effect was particularly noticeable among students who initially had a fixed mindset, suggesting that the repeated goal-setting helped them adjust their attitudes toward challenges and mistakes.
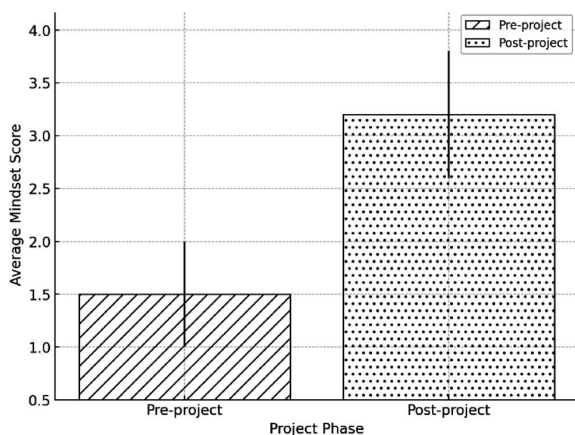
Figure 3: Average Growth Mindset Scores Before and After the Project

Note: The pre-project scores are represented with diagonal hatching, while post-project scores use dot hatching. The error bars indicate the standard deviation of the scores, showing the variability within each group. This visualization helps highlight the changes in mindset scores and the range of variation, suggesting that the goal-setting project not only increased average scores but also affected the consistency of the results.

The percentage changes before and after the intervention are detailed in Table 1. Specifically, the number of students with a fixed mindset decreased by 50%, while those with a growth mindset increased by 25%. These changes

highlight the potential of goal-setting as a practical strategy to foster resilience and proactive learning attitudes among young learners. By consistently reviewing goals at the start of each lesson, students were able to anticipate what would happen next, recognize the necessary vocabulary and expressions, and visualize possible obstacles. This approach may have provided a clearer roadmap for upcoming lessons, making students more resilient and less afraid of making mistakes.

Table.1 Percentage of Fixed and Growth Mindset Before and After the Goal-Setting Project

Mindset Type	Pre-Project (%)	Post-Project(%)	Change (%)
Fixed Mindset	33.3	16.7	-50.0
Growth Mindset	66.7	83.3	+24.7

Note: The table shows the percentage of students categorized by mindset type before and after the project, with the change percentage indicating the growth or reduction rate. The fixed mindset decreased by 50%, while the growth mindset increased by 24.7%, demonstrating the potential effect of goal-setting on students' mindset transformation.

5. Discussion

The findings of this study suggest that clearly stated and continuously presented goals, along with encouraging students to think about the expressions and vocabulary needed to achieve these goals, are effective in promoting a growth mindset. Through goal-setting, students were able to grasp the path of their learning and develop the ability to anticipate what would happen next. For students with a fixed mindset, visualizing what is needed to achieve their goals allowed them to foresee upcoming challenges, helping them build a more resilient approach toward failure. This highlights the positive impact of goal-setting on students' learning attitudes.

The results indicate that it is possible to foster a growth mindset among language learners within the school context. What matters most is to prevent students from fearing failure by clearly presenting goals and necessary language materials in advance. By implementing this approach in the classroom, students can feel more secure and keep up with their English lessons without anxiety.

However, in Japanese English education, grammar-translation methods remain dominant, which presents challenges to adopting goal-setting approaches. These traditional methods tend to focus heavily on finding the correct answers, which may limit students' opportunities to embrace their mistakes and learn from them. Goal-setting as an educational practice can offer a way to shift these traditional learning perspectives, encouraging students to take more ownership of their learning journey.

As an alternative approach to the grammar-translation method, Project-Based Learning (PBL) offers a promising option. PBL is considered an effective strategy for enhancing engagement among language learners (Blumenfeld et al., 1991; Stoller, 2006). Studies on PBL outside of language learning suggest that it not only boosts students' motivation but also improves problem-solving skills and supports a deeper understanding of content (Thomas, 2000). Additionally, PBL fosters critical thinking, creativity, and collaborative learning, making it a key component in providing meaningful learning experiences (Barron & Darling-Hammond, 2008). By engaging students in meaningful tasks, PBL encourages a more active and self-directed approach to learning, making it a valuable alternative to traditional teaching methods (Krajcik & Blumenfeld, 2006).

However, it often lacks the emphasis on continuously presenting goals and discussing missing language materials, which may lead younger students to lose sight of the purpose behind their learning. Integrating the elements of goal-setting from this study into PBL could enhance students' understanding of their learning objectives and further support their autonomous engagement.

This study is a pilot and has some limitations, including a small sample size and the lack of statistical verification, which restrict the reliability of the findings. Future research should involve larger-scale studies and experimental designs with control groups. Additionally, exploring different grades and educational settings will help generalize the effects of goal-setting. Continued research is necessary to validate the educational value of goal-setting and establish it as a concrete instructional strategy.

6. Conclusion

This pilot study examined the impact of goal-setting on growth mindset in elementary school students. The continuous presentation of goals helped students better understand their learning processes and promoted the formation of a growth mindset. Educators can enhance students' attitudes and learning outcomes by incorporating this approach into their teaching practices. Future research should test the effects of goal-setting across different age groups and educational settings and include statistical significance testing to ensure broader applicability.

Based on the results of this study, future research should focus on conducting more detailed data analysis and further academic validation. This pilot study serves as an initial step in emphasizing the importance of goal-setting in education, paving the way for more comprehensive studies that could contribute to the broader educational landscape.

In conclusion, this study highlights the importance of continuously presenting clear goals and engaging in discussions about how to achieve them as a transformative approach in language education. It suggests that such practices can guide future educational methods toward more student-centered and resilient learning environments.

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