

September 9-12, 2025

The 18th International Symposium on Advances in Technology Education (ISATE)

***Bridging Borders:
Engineering Education
for Global Citizenship***
<https://isate2025.toyota-ct.ac.jp/>

Abstract Submission

Title of Paper		
Name of Author (☒ for Presenter)	Affiliation	Country
☒ 1.		
☐ 2.		
☐ 3.		
☐ 4.		
☐ 5.		

Sub-Theme	Select Most Matching Sub-Theme
Sub-Theme 1: Engineering to Welfare, Health and Safety	☐
Sub-Theme 2: Pedagogical Innovation in Teaching & Learning	☐
Sub-Theme 3: Artificial Intelligence in Teaching & Learning	☐
Sub-Theme 4: Engineering Education for Global Citizenship	☐

Abstract (300-400 words)

Keywords (4 or 5, separated by commas)

Submission Preferences: Please select your preferences regarding the presentation and paper type:

Presentation Format	
I prefer:	
-Oral Presentation	☐
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Paper Submission	
I am planning to submit:	
-Full Paper (Default)	☒
-Short Paper (without peer-review)	☐



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Abstract Submission Template (Example: MUST DELETE this page before submitting abstract)

Title of Paper	Write Title of Paper Here using Keyboard in Scholarly Papers	
Name of Author (☒ for Presenter)	Affiliation	Country
☒ 1. Toyota Taro	Department of Something Engineering, National Institute of Technology, Somewhere College	Japan
☐ 2. Aichi Hanako	Department of Something Engineering, National Institute of Technology, Somewhere College	Japan
☐		
☐		
☐		

Sub-Theme	Select Most Matching Sub-Theme
Section 1: Engineering to Welfare, Health and Safety	☐
Section 2: Pedagogical Innovation in Teaching & Learning	☐
Section 3: Artificial Intelligence in Teaching & Learning	☐
Section 4: Engineering Education for Global Citizenship	☐

Abstract (300-400 words)	
Example: This study evaluates the effectiveness of practical learning methods in enhancing educational outcomes among 50 second-year middle school students in a mathematics course. With a growing emphasis on improving student engagement and learning results, practical approaches such as project-based learning (PBL), collaborative learning, and problem-solving-centered instruction are becoming national settings. Over an eight-week period, the study implemented these innovative teaching methods to determine their impact on the students' ability to engage with mathematical concepts and improve their critical thinking and problem-solving skills. The educational intervention focused on real-world applications of mathematics, encouraging students to work in teams and solve problems collaboratively. Data was gathered using pre-and post-intervention assessments, teacher observations, and student self-assessments to evaluate the efficacy of practical learning methods in a middle school mathematics course. These assessments focused on improvements in mathematical understanding, application of concepts to real-world problems, and overall student engagement. The study found that collaborative learning significantly enhanced students' understanding and application of mathematical concepts. Students showed improved proficiency in tackling complex problems and an increased ability to collaborate effectively. Additionally, project-based learning (PBL) methods increased student engagement and motivation by connecting mathematical concepts to real-world situations, making learning more relevant and engaging. Problem-solving-centered instruction also led to improved critical thinking skills among students. They were better equipped to handle complex questions and demonstrated a deeper understanding of the subject matter, as reflected in their performance in post-intervention assessments. In conclusion, the study highlights the positive effects of integrating practical learning methods into middle school mathematics curricula. It demonstrates that PBL, collaborative learning, and problem-solving-centered instruction are effective strategies to boost student engagement, enhance understanding of mathematical concepts, and foster critical thinking skills, which are increasingly important in education. These findings offer valuable insights for educators looking to create more effective and engaging educational programs.	
 Figure 1	Figures Figure 1. Replace this text with the figure caption. Delete the placeholder image above, and use Insert – Pictures to add your figure image (— .jpg or — .png).

Keywords (4 or 5, separated by commas)
Keyword1, Keyword2, Keyword3, Keyword4

Submission Preferences: Please select your preferences regarding the presentation and paper type:

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-Either is fine	☐	-Short Paper (without peer-review)	☐