

The Development of Cooperative Learning Activities With Group Investigation Technique and Generative AI to Enhance Ninth-Grade Students' Ability to Analyze Historical Causes and Consequences



Research Background

History education remains largely **teacher-centered** and focused on **rote memorization**, which **limits students' capacity for critical thinking and inquiry**. Moreover, **traditional pedagogical methods** and the **lack of engaging media and technological resources** further reduce student interest and **hinder the development of essential analytical skills**.



Objectives



- To develop cooperative learning activities with group investigation technique and **Generative AI**, to ensure appropriate quality and achieve effectiveness based on the 80/80 criterion.
 - To compare students' historical causes and consequences analysis abilities before and after the learning activities.
 - To compare students' learning achievement before and after the learning activities.
 - To examine students' satisfaction with the learning activities.



Methodology

Participants: 36 ninth-grade students



selected through simple random sampling.

Research Instruments:



Lesson Plan



Achievement Test



Satisfaction Questionnaire

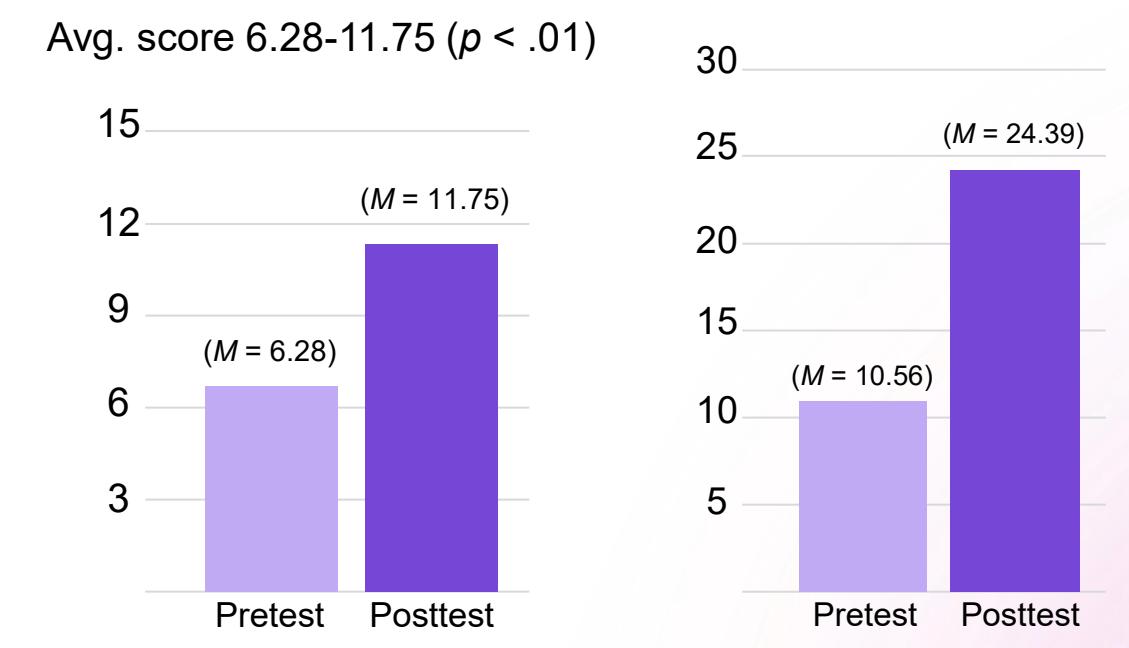


Test of Analyze Historical Causes and Consequences

• **Learning activities: highest appropriate ($M = 4.56, SD = 0.60$) effectiveness scores of 80.97/81.30**

Students' historical causes and consequences analysis abilities improved:
Avg. score 6.28-11.75 ($p < .01$)

Students' learning achievement improved: Avg. score 10.56-24.39 ($p < .01$)



• **Students' satisfaction towards learning activities:** highest level ($M = 4.62, SD = 0.53$)