

The Development of Learning Model in Metaverse Environment With Scaffolding Techniques to Promote Collaborative Problem-Solving for Undergraduate Students

Research Objectives

1

To develop a learning model in metaverse environment with scaffolding techniques to promote collaborative problem-solving for undergraduate students.

2

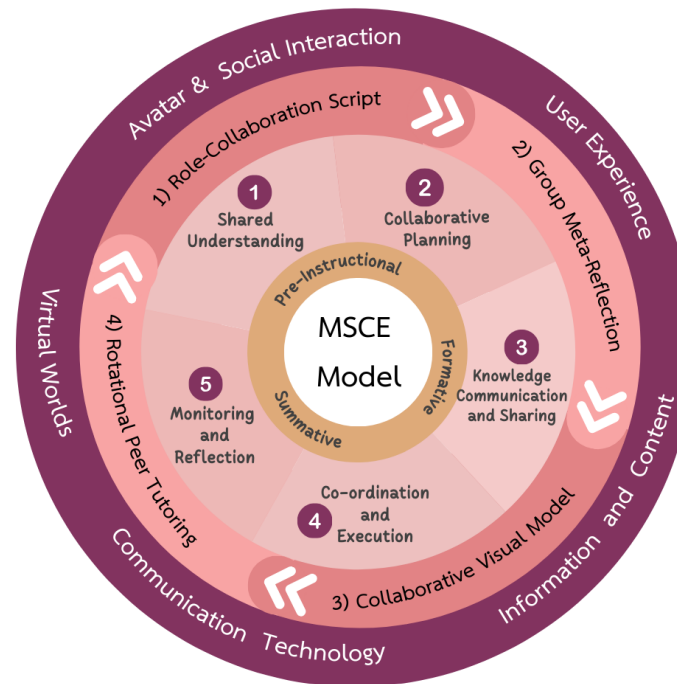
To compare collaborative problem-solving skills between a control group and an experimental group using the developed learning model.

3

To compare learning achievement between a control group and an experimental group using the developed learning model.

Methodology

Learning model in metaverse environment with scaffolding techniques to promote collaborative problem-solving



Key Results & Effectiveness



$M = 4.70$ ($SD = 0.46$)
Appropriateness

Experts rated the appropriateness of the learning model at the “Highest” level.



82.32/80.36
effectiveness scores

The model demonstrated a high efficiency ratio, meeting established academic effectiveness standards.

Metric	t-Value	Significance (p)	Result
CPS Skills	$t = 11.82$	$p < .000$	✓
Learning Achievement	$t = 8.20$	$p < .000$	✓