THE TOKKATSU
(STUDENTS-LED COLLABORATION ONLINE)

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INTRODUCTION

Japan: 特活オンライン (Tokkatsu or student-led collaboration online)

WHAT IS TOKKATSU?

THE TOKKATSU(STUDENTS –LED COLLABORATION ONLINE)
EDUCATIONAL SYSTEM KNOWN IN JAPAN THAT ALLOWS STUDENTS TO PRACTICE TEAM WORK AND COLLABORATE

AIM
BING PERSONALITY, TEAMWORK SKILLS, BELONGING, HYGIENE VALUES, SELF-ESTEEM, RESPONSIBILITY AND THINKING

THE IMPLEMENTATION
PUPILS WILL HAVE A MEETING EVERY MORNING AND ANOTHER ONE AT THE END OF THE DAY TO DISCUSS ABOUT THEIR LEARNING

THE ADAPTATION
APPLIED TO STUDENTS WITHIN A CLASS OF NO MORE THAN 40 STUDENTS IN TEACHING AND LEARNING ADDITIONAL MATHEMATICS

PROBLEM STATEMENT
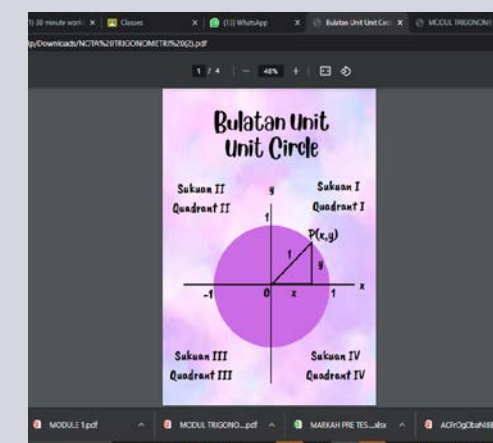
THE TOKKATSU

THE ADAPTATION IN TEACHING AND LEARNING ADDITIONAL MATHEMATICS

ADAPTATION OF THE

Japan: 特活オンライン (Tokkatsu or student-led collaboration online)

STUDENTS LACK OF KNOWLEDGE IN SKETCH TRIGONOMETRIC FUNCTION GRAPH
Student's council helped in the discussion in the Breakout Room

DIFFICULTIES IN SOLVING TRIGONOMETRIC FUNCTIONS
Use GeoGebra app to help the students know the right way of sketching the graphs

NO MOTIVATION IN LEARNING ADDITIONAL MATHEMATICS
Collaboration work and the use of applet make the learning fun and joyful.

LOW ACHIEVEMENT IN THE TOPIC OF TRIGONOMETRIC FUNCTIONS
Student's council guided their friends before and after the intervention

OBJECTIVES

To use The Tokkatsu in the teaching and learning Additional Mathematics.

To determine students' knowledge in sketching trigonometric function before the intervention.

To determine students' knowledge in sketching trigonometric function after the intervention.

METHODOLOGY APPROACH

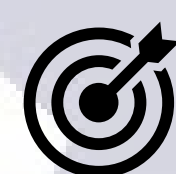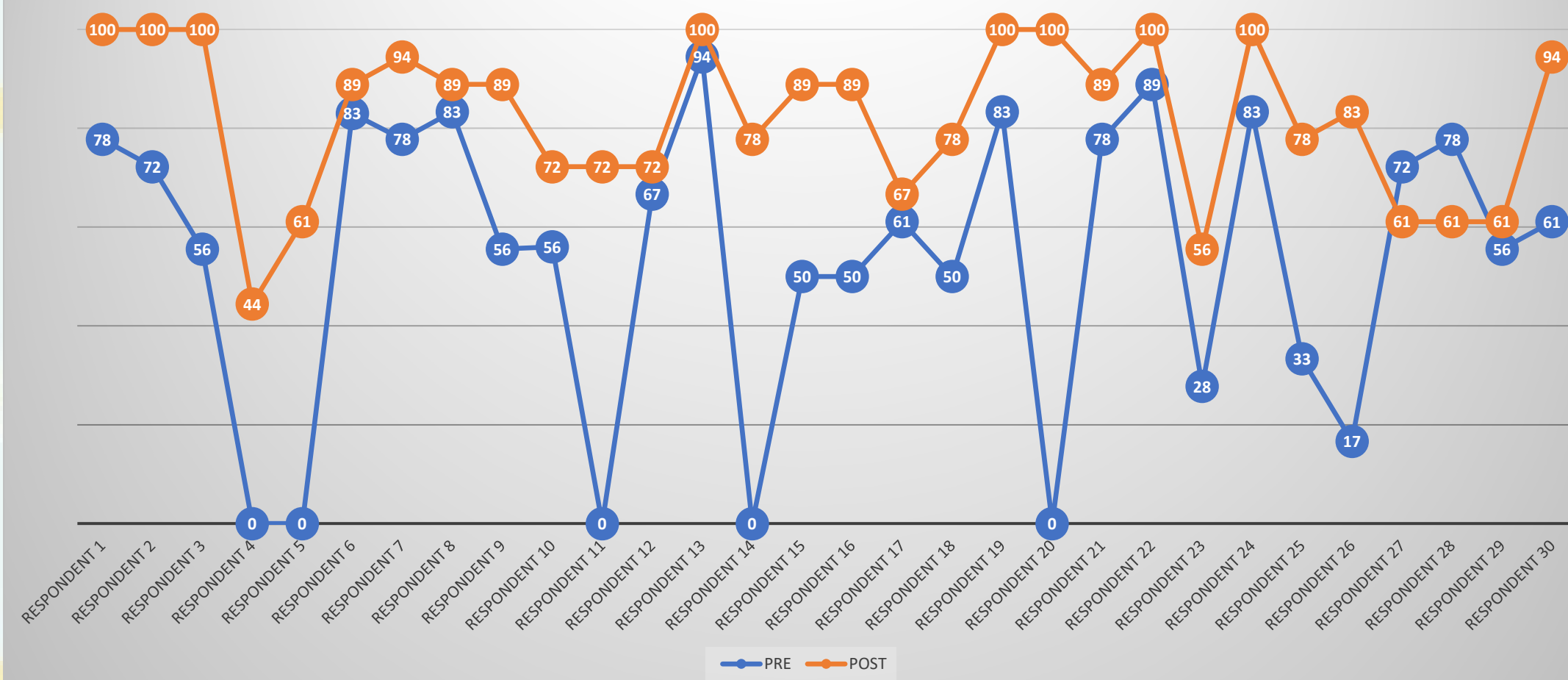| STEP 1	STEP 2	STEP 3	STEP 4
ATTITUDE TEST & PRE-TEST	MODULE	TEACHING & LEARNING	GEOGEBRA APPLICATION & CONDUCT POST-TEST
CONDUCT ATTITUDE TEST & PRE-TEST	CREATE A MODULE AND DISCUSSION	TEACH OUR FRIENDS THE TOPIC IN ADDITIONAL MATHEMATICS	Get the feedbacks based on the marks
Analyze the result	Teamwork and collaboration	Self-esteem &responsible	Analyze the result
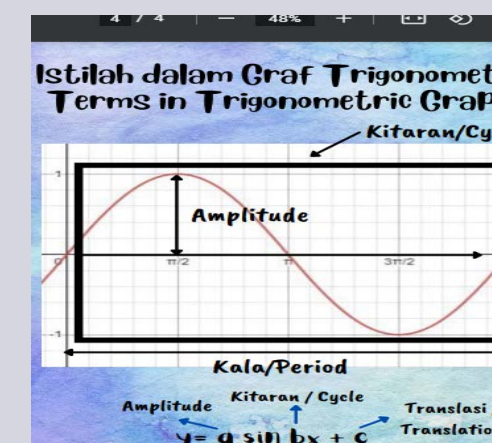
FINDINGS

PRE-TEST AND POST-TEST

RESPONDENT	PRE	POST
RESPONDENT 1	78	100
RESPONDENT 2	72	100
RESPONDENT 3	56	100
RESPONDENT 4	0	44
RESPONDENT 5	0	61
RESPONDENT 6	83	89
RESPONDENT 7	78	94
RESPONDENT 8	83	89
RESPONDENT 9	56	89
RESPONDENT 10	56	72
RESPONDENT 11	0	72
RESPONDENT 12	67	72
RESPONDENT 13	94	100
RESPONDENT 14	0	78
RESPONDENT 15	50	89
RESPONDENT 16	50	89
RESPONDENT 17	61	67
RESPONDENT 18	50	78
RESPONDENT 19	83	100
RESPONDENT 20	0	100
RESPONDENT 21	78	89
RESPONDENT 22	89	100
RESPONDENT 23	28	56
RESPONDENT 24	83	100
RESPONDENT 25	33	78
RESPONDENT 26	17	83
RESPONDENT 27	72	61
RESPONDENT 28	78	61
RESPONDENT 29	56	61
RESPONDENT 30	61	94
MEAN	54	82

IMPORTANT INFORMATION

100 % collaborative works came from student's council efforts in the teaching and learning of Additional Mathematics. **100%**

Indicates increments in marks. **97%**

Incorporate critical thinking skills and problem solving. **HOTS**

This approach is the FIRST in Malaysia to promote the Tokkatsu in the learning of Additional Mathematics. **1st**

TEAM MEMBERS:
NADA NAWWARAH BINTI ABDUL JALIL
NUR ALIAH SAFIYYAH BINTI BADLISHAH
PRATHEAB A/L KUMAR
SHARVESWARY A/P KRISHNAN
YOGANISANTINI A/P GOPINATHAN
ELEANUR AQILA BINTI MOHAMAD HASHIM
MUGILAN A/L RAVENDRAN
SHAKTISWRY A/P MURUGIAH
ANUSHA A/P NILAKANDAN

SUPERVISORS:
NUR AZIAH BINTI NASIR
SAKINAH SAHLUDIN
GURU MATEMATIK TAMBAHAN