

# Statistical analysis on the effectiveness of short-term programs during Covid-19 pandemic: In the case of Program Bijak Sifir 2020

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# CONTENTS

- 1 INTRODUCTION
- 2 OBJECTIVES
- 3 LITERATURE REVIEW
- 4 DATA AND METHODS
- 5 RESULTS AND DISCUSSIONS
- 6 CONCLUSIONS





# Objectives

To measure the primary school students' performance during MCO for the short-term Mathematics program by applying the Naimo method in improving students' understanding of the basics of multiplication.

# Literature Review

**Average impact on academic outcomes during the covid-19 are mostly negative (Aucejo et al., 2020; Klein et al., 2020)**

**Online learning shows a significant difference compared to traditional learning (Adnan & Anwar, 2020; Baker, 2013; Johnson, 2011)**

**Short-term program conducted face-to-face will improve academic performance (Ramli et al., 2019; Aziz et al., 2006; Halim et al., 2015)**



# Data and Methods

## Quantitative study

Sample consisted of 38 students from primary school aged between 8 to 12 years.

This program was held for three days.

Instruments: pre-test and post-test consists of 30 objective questions (one hour).

Students are taught to master the sifir two until sifir ten by applying the Naimo method (using fingers).

# Results and Discussions

**Table 1: Descriptive statistics 1**

Test	Gender	n	Mean	Median	Std. Deviation
PRE	F	19	23.1053	27	8.4189
	M	19	26.2105	29	4.4294
POST	F	19	28.2105	29	2.8400
	M	19	28.5263	30	3.6873

**Table 2: Descriptive statistics 2**

Test		Mean	Median	N	Std. Deviation
Pair 1	Pre	24.6579	28	38	6.8192
	Post	28.3684	29	38	3.2501

# Results and Discussions

**Table 3: Normality test**

Mathematic test	Gender	S-W statistic	Sig.
Pre	F	0.746	0.000
	M	0.819	0.002
Post	F	0.636	0.000
	M	0.440	0.000



# Results and Discussions

**Table 4: Mann-Whitney (independent samples) test**

Test	W-value	Sig. (2-tailed)
Pre (F-M)	337.50	0.337
Post (F-M)	330.00	0.210

**Table 5: Wilcoxon signed-rank test**

Test		W-value	Sig.
Pair	Pre-post	1167.0	0.002



