Has the Implementation of Bi-/Multilingual Education Improved Student Achievement in the Three Southern Border Provinces of Thailand?

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Background

- The students in the three southern border provinces have had low academic achievement for many years.
- The Research Institute for Language and Cultures of Asia, Mahidol University (RILCA) started the MLE project.
- Yala Rajabhat University was contacted to evaluate the MLE project during the academic years 2010-2015 (the first to sixth grades).
Objectives

1. To compare the learning achievements of the first and second cohorts of students in the experimental (MLE) and comparison schools.

2. To compare the percentages of experimental and comparison students who scored 50% or higher on the evaluations.

3. To compare the scores on the Ministry of Education’s Grade 6 National Test (O-NET) of children in the experimental schools with average scores from the 3 Southernmost provinces, the larger Southern region (14 provinces), and the country level.
Scope of Evaluation

- Target populations were the first cohort of students from the first to the sixth grade and the second cohort of students from the first to the fifth grade of the three experimental and three comparison schools.

- **The experimental schools**
  - Ban Prachan School in Pattani
  - Ban Bueng Num Sai School in Yala
  - Thai Rathwittaya 10 (Ban Mai) School in Narathiwat

- **The Comparison Schools**
  - Chumchon Ban Sano School in Pattani
  - Ban Talohalo School in Yala
  - Ban Khok Sayah School in Narathiwat
Evaluation Instruments

The instruments for evaluation are as follows.

1. The achievement tests of the first to sixth graders in 3 learning areas: science, mathematics, and Thai language
2. Reading test
3. Interview Questionnaire
Instrument Construction Process

1. Analyze the learning standards (MOE Core Indicators 2008).
2. Determine the behavioral objectives
3. Invite experts to construct the tests in each learning area.
4. Verify the quality of the instruments related to the content by the experts.
5. Try out the tests in non-project schools
6. Measure the Difficulty Index, Discrimination, and Reliability of the tools.
7. Test the actual target group of the project (MLE project and comparison schools).
Instrument Construction Process (Contd.)

Interview questionnaire for teachers

1. Analyzed the teaching issues and formulated interview questions related to teaching.

2. Scheduled a time to interview the respondents.
Data Collection Steps

1. Contact target groups to schedule evaluation
2. Prepare a data collection permission letter
3. Assessment team visits schools to collect quantitative and qualitative data at the end of the academic year.
Data Analysis

• The assessment team compared the learning achievements by analyzing the average scores converted into t-score using mean, standard deviation, t-test (t) and z-test (z).
The results

Objective 1: To compare the learning achievements of the first and second cohorts of students in the experimental (MLE) and comparison schools.
Both the first and second cohorts of experimental students had higher achievement at a statistically significant level compared to the comparison school students in all subjects in grades 1-5. The grade 6 results will be discussed later.
The achievements of the first and second cohorts of experimental students in science were higher at a statistically significantly level than those of the comparison schools for all grades.
For math, for the first cohort, we see a statistically significant difference between experimental and comparison in grade 1 only. However, the second cohort of MLE students is higher at a statistically significant level for grades 2-5. This will be explained later.
This is the Thai language score. For the first cohort, we see a statistically significant difference in all grades, except in grades 4 and 6. However, the second cohort is higher in all grades, except grade 5.
The achievement of the first cohort of students in reading was higher at a statistically significant level for all grades except grade 6, the second cohort of students scored higher at a statistically significant level in all grades except grade 3.
Objective 2: To compare the percentages of experimental and comparison students who scored 50% or higher on the evaluations.
When comparing the number of students who scored 50% or higher on all the subject tests, we see that once again the experimental students in both cohort 1 and 2 had statistically significant higher achievement in all grades except grade 6.
When comparing the number of students who scored 50% or higher on the science test, we see that once again the experimental students in both cohort 1 and 2 had statistically significant higher achievement in all grades.
As mentioned earlier, the math results have few stars, so there are few significantly significant differences on the number of students scoring 50% or higher. This is because the math teachers for the first cohort were not familiar with the MLE approach. They had not been trained in MLE. And there was a problem with choosing the right mother tongue vocabulary to explain technical terms. For these reasons, the teachers used the Thai language in the math lessons instead of the mother tongue. However, the second cohort of students performed at statistically significant levels in grades 1, 4 and 5.
For the Thai language, the first cohort of experimental students had significantly higher results for grades 1-3 and 5. The second cohort had higher scores for grades 1-4. For cohort 1, in grade 4, the test contained questions about literature and grammar that the teachers had not had time to teach the students, and the difference between comparison and experimental schools was not statistically significant. Therefore, for all the following years, we invited the teachers to tell us exactly what they had taught so that we could design better tests. The sixth-grade results will be explained later.
For students scoring 50% or higher on reading skills, the experimental students did better in all grades except for the second cohort in grade 3. For them, we had changed the test to be more about reading comprehension and analysis. However, the children had not been exposed to those type of questions, so it was a new thing for them, and students in both the experimental and comparison schools had problems answering.
The Grade 6 Problem

Why was there no statistically significant difference between experimental (MLE) and comparison students in grade 6?

- Teaching to the Test: Teachers in all the schools were preparing the students for the O-Net. MLE schools abandoned MLE techniques, and both comparison and MLE schools abandoned the MOE curriculum. In the 2 months before the O-Net, children from several schools were brought together 3 days/week for test preparation. This was because of a national policy that schools which did not raise their O-Net scores by 5% from the previous year would not receive some benefits. So the low grade 6 performance would appear to be the result of “teaching to the test.”
Objective 3: To compare the scores on the Ministry of Education’s Grade 6 National Test (O-NET) of the experimental schools with average scores from the 3 Southernmost provinces, the larger Southern region (14 provinces), and the country level.
O-NET scores (Total 3 provinces)

- **Science**
  - Experimental: 39.10
  - O-Net Provinces: 35.05
  - O-Net Region: 41.38
  - O-Net Country: 42.59

- **Mathematics**
  - Experimental: 35.51
  - O-Net Provinces: 32.43
  - O-Net Region: 41.96
  - O-Net Country: 43.47

- **Thai language**
  - Experimental: 43.99
  - O-Net Provinces: 40.35
  - O-Net Region: 48.49
  - O-Net Country: 49.33
Summary of Findings

• The MLE approach was of great benefit to the majority of Patani Malay students, especially the low- and mid-level students.

• In grades 4-6, the teachers were not able to fully apply MLE techniques because of interference from national educational policies. This resulted in a decline in student achievement, especially in grade 6.
Suggestions

1. The full MLE approach should be expanded to other primary schools

2. National education policies have had a negative impact on the implementation of full MLE in grades 4-6. Therefore there should be special policies for MLE schools in the Deep South to support full MLE.
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