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Student English Achievement, and Behaviour in Bilingual and Monolingual Middle Schools in Aceh, Indonesia

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Background/Rationale for the Study

- Tsunami in 2004
  - Reconstruction and rehabilitation in Aceh.
  - State schools run bilingual programs.

- Assumption:
  Bilingual students are better than monolingual students.

- Aceh: unique province
  - 1/33 provinces having 3 privileges: education, religion, and culture.
  - No evidence/research on Bilinguals outperforming Monolingual, in Aceh context.
  - Results to be offered to in order to be implemented.

Literature Review

- Bilingualism, intelligence, cognitive and academic achievement
  - Bilingual children performed better than monolingual children on meta-linguistic tasks requiring high levels of control of processing (Bialystok, 1988).
  - Bilingual individual gains certain cognitive benefits that the monolingual individual might lack (Veii & Everatt, 2005).

- Bilingualism and efficient language learning
  - Bilingual students gained efficient language learning in acquiring an EFL (both general language proficiency) (Cenoz & Valencia, 1994; Swain et al., 1990)

- Bilingualism, and reading and writing
  - Students' reading strategies were increased following metacognitive intervention (Swicegood, 1994)
  - Bilinguals had better metalinguistics awareness in reading and working memory (Ransdell et al., 2006)

- Bilingualism, and children's perceptions, attitudes and behaviours
  - Students expressed their bilingualism, literacy and identity positively (Martin & Stuart Smith, 1998).
  - Early immersion students outperformed late immersion students regarding academic outcomes, anxiety and attitudes (Muircheartaigh & Hickey, 2008).

Statement of purpose

Three aims:

1. to investigate the achievements of first year middle school students (12-13 years old), in Banda Aceh (Indonesia), in English paragraph writing, English reading comprehension, and attitude and behaviour towards learning English, as dependent variables, in the context of differences in gender and school types (bilingual/monolingual).

2. to investigate the attitude and behaviour of the teaching staff and students regarding bilingual and monolingual schools on the students' ability in English.

3. to investigate the nature of bilingual/monolingual teaching in some of the secondary schools in Aceh, Indonesia.

Research Design

Mixed-Method design, with 3 parts:

- **Quasi-experiment**
  - 2 groups (total N=780)
    - control: monolingual (N=386)
    - 'experimental' : bilingual (N=394)
  - Pre-test and post-test
    - English Reading Comprehension
    - English Writing
    - Behaviour Questionnaire
- **Qualitative Student & Teacher Interviews**
  - Bilingual: Students (N=5); Teachers (N=5)
  - Monolingual: Students (N=5); Teachers (N=5)
- **Observation on the nature of bilingual/monolingual teachings**
  - involves the same teachers who participated in the interviews.
  - 2 groups: Bilingual teachers (N=5) and Monolingual teachers (N=5)

Research Design (continued)

- The RUMM2030 computer program creates linear scales:
  - Pre-test and post-test:
    - English Reading Comprehension
    - English Writing
    - Behaviour Questionnaire
  - Items designed to be conceptualised from easy-to-hard: easy, relatively easy, and difficult

- Repeated Measures ANOVA
  - Experimental result of pre-test and post-test

- Miles and Huberman analytic induction method (1994)
  - Attitudes and Behaviour Interview Data for students
  - Attitudes and Behaviour Interview Data for teaching staff (teachers)

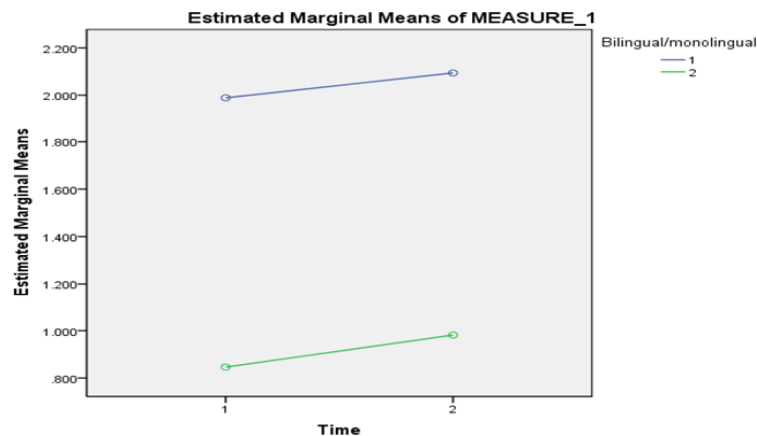# Preliminary Results on Reading Comprehension

- **Rasch**:
  - Overall fit: not ideal.
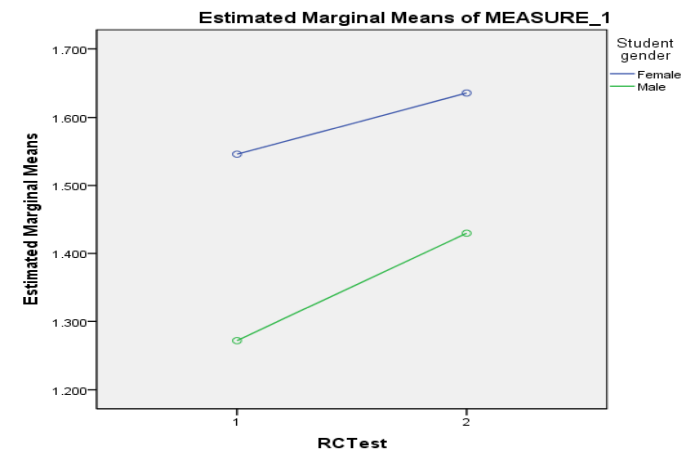 - Meaning: no good agreement about item difficulties along the scale but good agreement about students measure.

Person-Item Threshold Distribution
(Grouping Set to Interval Length of 0.20 making 30 Groups)
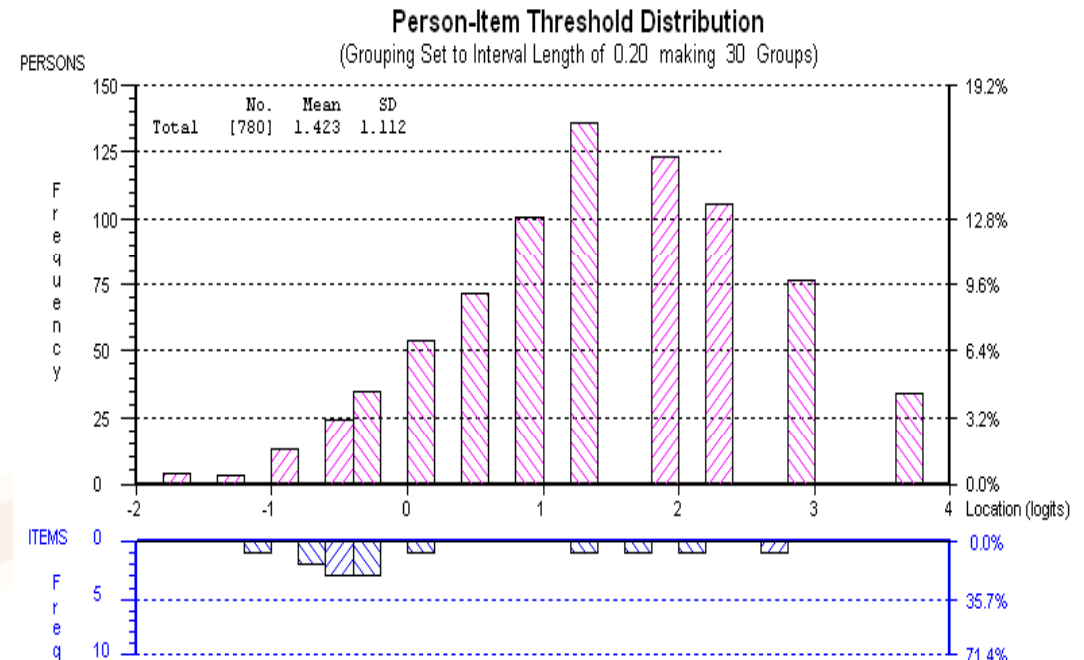
Preliminary Results on Reading Comprehension

- **ANOVA**: Pretest-Posttest on **Bilingual** and **Monolingual**
  - Bilingually-taught students performed statistically significantly better than the monolingually-taught students on BOTH pretest and posttest.
  - Main Effect with Lambda for time=0.986 and p=0.001
  - No Interaction Effect with Lambda for groups=1.000 and p=0.678
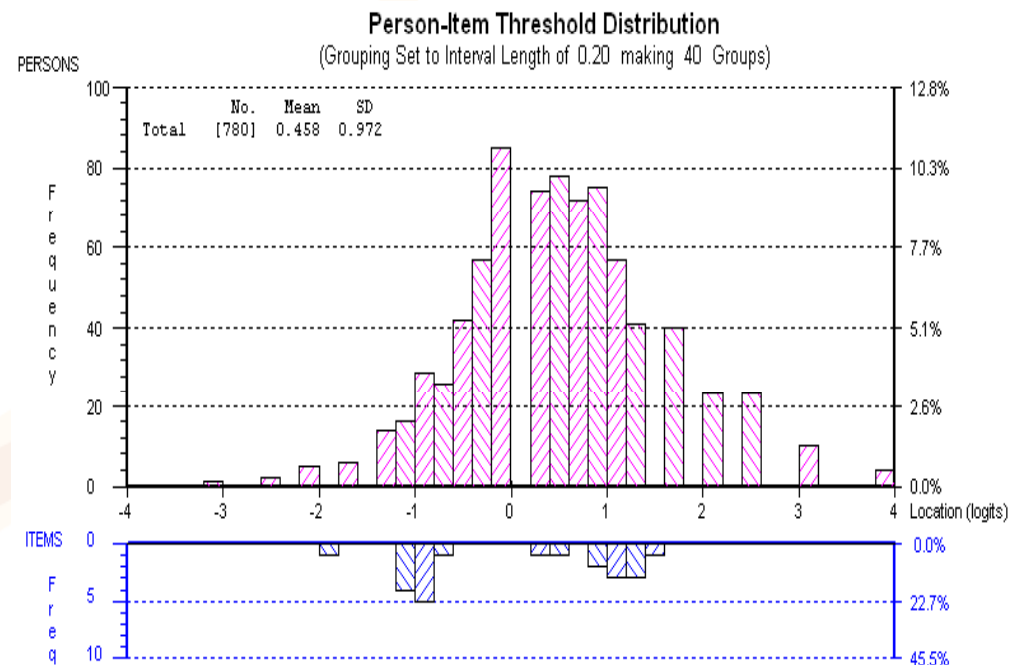
- **ANOVA**: Pretest-Posttest on **Gender**
  - Female students performed statistically significantly better than the male students on BOTH pretest and posttest.
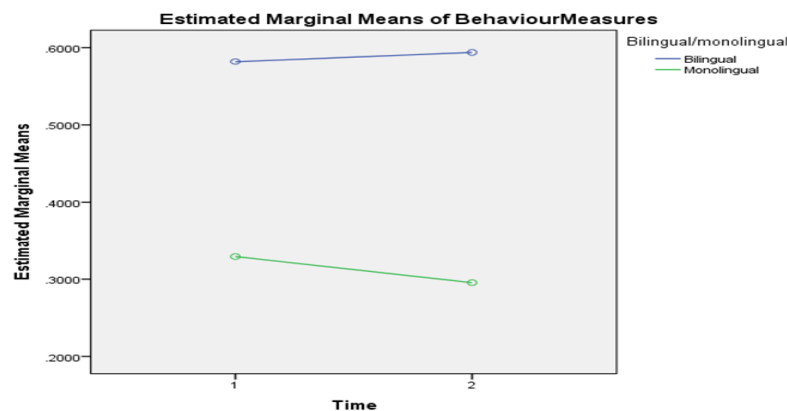

Estimated Marginal Means of MEASURE_1

Estimated Marginal Means of MEASURE_1

Preliminary Results on Behaviour Questionnaire

- **Rasch**:
  - Overall fit: good.
  - Meaning: good agreement about item difficulties along the scale as well as good agreement about students measure.

Person-Item Threshold Distribution
(Grouping Set to Interval Length of 0.20 making 40 Groups)

Preliminary Results on Behaviour Questionnaire

- **ANOVA**: Pretest-Posttest on **Bilingual** and **Monolingual**
  - Bilingually-taught students performed statistically significantly better than the monolingually-taught students on BOTH pretest and posttest.
  - No Main Effect with Lambda for time=1.000 and p=0.597.
  - No significant Interaction Effect with Wilks' Lambda for groups=1.000 and p=0.642.

- **ANOVA**: Pretest-Posttest on **Gender**
  - Female students performed statistically significantly better than the male students on BOTH pretest and posttest.

Estimated Marginal Means of BehaviourMeasures (Bilingual/monolingual: Bilingual, Monolingual)

Estimated Marginal Means of BehaviourMeasures (Student Gender: Female, Male)