ACTRC has been established as a joint research centre between the Assessment Research Centre at the University of Melbourne and the University of the Philippines. The Centre is funded by the Australian Government.

Definitions

- Curriculum – the outline of subjects in terms of content and skills to be taught, together with information about how these subjects will contribute to the higher level goals of education

- Assessment – the gathering of information that shows how students are achieving the objectives of the education system

Goals

- To explain the information we have gathered
- To describe our approach to assessment so that you see how research data can be used at system, school, and teacher level

Overview

- Section 1: Research overview and student assessment results
- Section 2: Language issues in test development
- Section 3: Contextual factors at case study level

Curriculum and assessment

- The curriculum is built according to an understanding of a typical order or sequence in how students learn
- Assessment tools, such as tests, need to reflect the curriculum:
  - Some tools will be built to assess content knowledge
  - Some tools will be built to assess skills
  - Some tools will be built to assess both

LearnARMM Project Team

Research Officer

Test Development, Fieldwork, and Data Analysis Staff

Case study Academic Lead

Project Team Leader
Dr Esther Care

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What are we testing?

• The curriculum is just like stairs
• We need to know what step the student is on in terms of acquiring the skills and the content that is described in the curriculum
• Then we can make sure the student is properly balanced on that step, so that we can help them up to the next step
• A good assessment tool will not just tell you ☐ or ☒
• A good assessment tool will tell you where the student is on their way up the stairs

Assessment approach

• Numeracy: Level descriptions

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers &amp; number sense</td>
<td>Oral language</td>
</tr>
<tr>
<td>Measurement</td>
<td>Phonological skills</td>
</tr>
<tr>
<td>Geometry</td>
<td>Book and print knowledge</td>
</tr>
<tr>
<td>Patterns</td>
<td>Alphabet knowledge</td>
</tr>
<tr>
<td>Data</td>
<td>Word recognition</td>
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<tr>
<td></td>
<td>Fluency</td>
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<td></td>
<td>Spelling</td>
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<td></td>
<td>Handwriting</td>
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<tr>
<td></td>
<td>Composing</td>
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<tr>
<td></td>
<td>Grammar awareness</td>
</tr>
<tr>
<td></td>
<td>Vocabulary and concept development</td>
</tr>
<tr>
<td></td>
<td>Reading comprehension</td>
</tr>
<tr>
<td></td>
<td>Listening comprehension</td>
</tr>
</tbody>
</table>

What does the LearnARMM tool do?

- It tells us what the current skills of the students are
- It reflects the skills in the curriculum
- It helps teachers to know what the student is ready to learn
- It is designed to sample skills on each step along the way in the Kinder and Grade 1 curriculum
- It can provide information about how a student progresses from one test event to the next

- It does not give us a score
- It is not designed for pass or fail

Numeracy: Level descriptions

First we need a way to sample skills to identify what skills the students are on their way up the stairs. It is designed to sample skills on each step along the way in the Kinder and Grade 1 curriculum. It can provide information about how a student progresses from one test event to the next.

- It reflects the skills in the curriculum
- It helps teachers to know what the student is ready to learn
- It is designed to sample skills on each step along the way in the Kinder and Grade 1 curriculum
- It can provide information about how a student progresses from one test event to the next

- It does not give us a score
- It is not designed for pass or fail

Types of reports

1. Student
2. Students within class by skill level
3. Students within class from Time 1 to Time 2

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Students across Time 1 and Time 2 testing

<table>
<thead>
<tr>
<th>Province</th>
<th>Grade 1</th>
<th>Grade 1</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GRADE</td>
<td>GRADE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinder</td>
<td>Grade 1</td>
<td>Grade 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014 Lanao del Sur</td>
<td>480</td>
<td>600</td>
<td>1080</td>
<td>445</td>
</tr>
<tr>
<td>Maguindanao</td>
<td>450</td>
<td>662</td>
<td>1112</td>
<td>447</td>
</tr>
<tr>
<td>2015 Lanao del Sur</td>
<td>405</td>
<td>525</td>
<td>930</td>
<td>406</td>
</tr>
<tr>
<td>Maguindanao</td>
<td>355</td>
<td>475</td>
<td>830</td>
<td>394</td>
</tr>
</tbody>
</table>

725 students or (17% of 2014 students) were not involved in the Time 2 (2015) assessment.

Progress in Kinder Literacy by gender

Progress in Kinder Maths by gender

Factors

ACTRC

Translation Processes in the Development of Achievement Tests Across Three Languages: Meranao, Maguindanaoan and Sama

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The translation process

- The method adopted for translation was of multiple forward translations, rather than a forward, then backward approach.

Key actors

Psychometricians

Criteria - Expert in educational and psychological assessment

Role - Ensures the objective assessment of the learning achievement in Mathematics and Literacy

Factors that influence translation

1. Content/curriculum – based factors
2. Developmental and cultural factors
3. Linguistic factors
   - Orthographic
   - Semantic
   - Syntactic

Questions:

Mathematics Test

- Which terms are being used in the schools/centers? (English or the local terms)
- Given MTB-MLE and the revised K-12 curriculum are students expected to use local terms?
- Is this information found in the teachers’ guides/IRR of MTB-MLE?

Literacy Test

- Which competencies must be present at the end of the year/ must the test cover?
- In what ways do the instructional sequence of skills differ across languages?
Questions:
• In what ways will the tool need to differ in order for it to be "localized/contextualized"?
• Which events are within the child’s range of experience?
• What practices are acceptable given their way of life?

2. Development and cultural factors

• Contextualization
  (e.g. Environment and way of life)
  Word problems and stories involved daily experiences
  ✓ Use of local names
    (e.g. Miss = Aling = Babo/Peter vs. Juan)
  ✓ Gathering toys, fruits
    (e.g. bikes, bananas)
  ✓ Buying something from the store
    (e.g. Kind of store)
  ✓ Preparing a meal
    (e.g. gender roles, kind of viand)

3. Linguistic factors

• Orthography
  - Transparent
  - Consistent correspondence

Alphabet Knowledge:
- 5 vowels
- 23 consonants

Phonological Knowledge:
- Word level
- Syllable-level
- Phoneme-level

• Phonological Knowledge
  • Word/syllable/phoneme levels

• Word Structure

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Local Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-syllable words</td>
<td>Two-syllable words may consist of two vowels (e.g. vv = oo, aa, ee) May also have the VCV or the CVCV patterns</td>
<td></td>
</tr>
<tr>
<td>Simple words</td>
<td>Simple words often have the CVC pattern</td>
<td></td>
</tr>
</tbody>
</table>

Challenges:
✓ Rules on stress
✓ Presence of Homographs

• Rhyme
  • Difference in accentuation /stress (e.g. baso = ‘laso y pa’so / paso’)

• Avoidance of Homographs - words that are spelled in the same way but can be pronounced in 2 or more ways (e.g. pa’so VS. paso’)
  - burn
  - flower pot
Conclusion

Given that the influences on test construction include:
- Content/Curriculum-Based Factors
- Developmental and Cultural Factors
- Linguistic Factors
- Translation
  - Forward translation
  - Harmonisation
  - Involvement of key participants

Recommendations

Considering the major orthographic differences between English and the local languages:
- Development of a Filipino Core Version (due to similarity in orthography)
- Translations are made from the Filipino Core Version rather than from the English Core Version

Backdrop

- Objective of the Study
  - To identify factors that might explain differential student learning outcomes.
- Research Methods
  - In-depth field interviews and observations, guided by the case study protocols
  - Photo-documentation
- Participants
  - Kindergarten students
  - Teachers
  - School Administrators
  - Parents

Framework

- Facilities and resources
- Organization of teaching and learning
- Classroom environment
- Community / Neighborhood (Social, Economic, Political, Linguistic, Ethnic, and Spiritual Orientations) and Physical Environment

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Conditions of the Classroom 1

- Colorful decorations
- Sufficient number of books and teaching devices
- No tables and chairs for learners
- Poor ventilation
- No electricity
- Inadequate water supply
- Foul smell from the nearby canal
- Noise due to footsteps from the second floor

Conditions of the Actors in the Classroom 1

- Females are more attentive than males.
- Noisy students are difficult to control.
- Older students tend to bully younger classmates.
- Many students do not eat breakfast before going to school.
- Many students incur absences due to illness.
- Teacher imposes discipline by threatening students that they will have to pay one peso for every observed misdemeanor.

Conditions of the Classroom 2

- Colorful decoration
- Poor ventilation
- Poor lighting
- Inadequate water supply
- Cramped space
- Writing exercises made difficult because there are no tables and chairs for learners
- Sari-sari stores near the classroom

Conditions of the Actors in the Classroom 2

- Noisy students are difficult to control.
- Some male students use abusive language.
- Many students go to class without breakfast.
- Most students have short attention span.
- Some sneak out to buy snacks from the nearby sari-sari store.

Classroom Condition 3

- Colorful decorations
- Adequate shelves
- Good ventilation
- Poor lighting
- Noise heard from outside
- Foul smell from the comfort room
- No potable water supply

Condition of the Actors in the Classroom 3

- Students are noisy and talkative.
- Students switch seats often.
- Males are more into math.
- Females are more into reading.
- Students are observed to be sickly.
- Many students do not eat breakfast before going to school.
- Administrator disciplines absentees and bullies by requiring them to clean the classroom, comfort room, and playground.
- Administrator punishes students who fight each other either by locking them inside a room or by letting them clean the toilet.
Classroom Condition 4

- Colorful decorations
- Good ventilation
- No foul smell
- No power supply
- Noise coming an ongoing constrution of the school gym
- Inadequate water supply

Condition of the Actors in the Classroom 4

- Females are more attentive than males.
- Some males run around the classroom while some females play with dolls.
- Some do not participate in activities.
- Many students do not eat breakfast before going to school.
- Teacher punishes noisy students by pinching their ears.

Conclusions

- Differential Learning Achievements
- not amenable to unitary explanations
- Constellation of Conditions and Paradoxes
- Home Context
  - Family background
  - Parental involvement
  - Level of education
  - Parental education
  - Child’s health status
- CDS, disability
- SES, academic performance and numeracy
- Classroom demeanor
- Classroom settings
- Classroom organization of teaching and learning
- Home literacy environment
- Home education
- Assistance in doing homework
- School Context
  - Proximity of school and home
  - School facilities
  - Classroom condition
    - Organization of teaching and learning
    - Classroom management and behavior modification
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