Orientation on the East Asia-Pacific Early Child Development Scales (EAP-ECDS)

ARNEC Conference 2017
Siem Reap, Cambodia

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March 2, 2017
Overview

1. Brief history of the EAP-ECDS phases

2. Demonstration of EAP-ECDS items

3. Introduction of more items

4. Summary of EAP-ECSD Sort Form Advantages

5. Q & A
Rationale for developing the EAP-ECDS

• Early Childhood is a very important period of development
  ➤ Arguments from Neuroscience
  ➤ The Economic Argument
  ➤ The Rights-based Argument

• In LAMIC, children face threats to development
  • Health, nutrition, psychosocial and protection risks
Rationale for developing the EAP-ECDS

- Participation in early childhood programmes has positive effects on children’s
  - cognitive development,
  - school achievement
  - health and well-being

...but millions of children in the East-Asia-Pacific region still do not benefit from early childhood services.
Rationale for developing the EAP-ECDS

• Measurement is assumed to be the first step that leads to eventual improvement

• International development community has recognised the need for valid and reliable data on child development and on the quality of early learning environments.
Rationale for developing the EAP-ECDS

• There were no culturally and contextually appropriate assessment of ECD to:
  
  ➢ monitor child development in the context of poor school readiness and learning outcomes
  
  ➢ track the development of vulnerable and at-risk children
  
  ➢ analyse the impact of early childhood policies and programmes on children
Process of development
Phase I

Select items based on the Early Learning and Development Standards (ELDS) of countries in the region.
Early Learning and Development Standards (ELDS)

- Physical, Hygiene & Safety
- Language
- Cognitive & Basic Concept
- Emotional
- Social

- Physical Health, Well-Being & Motor
- Language, Pre-Reading and Pre-Math
- Cognitive
- Social and Emotional
- Character and Values

- Physical, Motor, Health and Well-Being
- Living and Learning Together
- Spiritual and Character
- Language
- Cognitive

Cambodia
- Physical and Health
- Moral and Cultural
- Social and Emotional
- Cognition and Reasoning
- Language

Laos
- Creative
- Math
- Mental
- Physical
- Socio-Emotional

Mongolia

Philippines
- Motor and Physical Well-Being
- Social
- Emotional
- Cognitive
- Language
- Moral
- Creative

Thailand

Vanuatu
- Physical
- Emotional & Social
- Language & Communication
- Cognitive

Vietnam
Established an Indicator Database

1738 indicators for children aged 3, 4, and 5 from seven countries’ ELDS

Developed categories + sub-categories

7 categories

Determined # of indicators in each category

Based on the proportion of the total # of indicators in each category

Selected indicators in each category

To construct a 100-item regionally-sensitive measure

Converted indicators to items

Form a 100-item measure

Focus on rationale and process
## Process of development

Converting indicators to items

<table>
<thead>
<tr>
<th>Code</th>
<th>Sub-category</th>
<th>Indicator selected</th>
<th>Countries</th>
<th>Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA16</td>
<td>Draws/writes without an example</td>
<td>Draws a human figure (head, eyes, mouth, trunk, arms, legs, etc.) without prompts</td>
<td>Philippines(4); Cambodia(5); Thailand(4;5);</td>
<td>4, 5</td>
</tr>
</tbody>
</table>
Process of development

Phase II: Pilot studies

1. To field-test items in three countries

2. To modify the Scales based on the results and feedback

3. To develop a revised version of the Scales which can be used in many countries in Phase III
Pilot study:
Mongolia
Fiji
China

Send draft to countries
Translation & checking
Field trials
Modification

Field Consultancy Support
Process of development

Phase III

• EAP-ECDS with 85 items across 7 domains + Parent Questionnaire (85 questions)
• June - December 2013, EAP-ECDS assessments in six countries (Cambodia, China, Mongolia, Papua New Guinea, Timor-Leste, Vanuatu)
• Number of children assessed in each country : 900 to 1803
• Samples included boys and girls between ages 3 to 6 residing in urban and rural settings, attending preschool programmes or not
Process of development

Phase III

- Total of over 8,000 children and their parents
- Sampling in all countries was stratified by child’s Age, Gender and Urbanicity
Process of development

Country adaptations

- Translated versions of the EAP-ECDS Instruction Manual, Scoring Form and Parent Questionnaire

<table>
<thead>
<tr>
<th>Country</th>
<th>Translated versions in the country’s native language(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>Khmer</td>
</tr>
<tr>
<td>China</td>
<td>Chinese</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Mongolian</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>Tok Pisin</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>Tetum</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>Bislama</td>
</tr>
</tbody>
</table>
## Process of development

### Country adaptations

**Item 52: Letters, characters / symbols**

<table>
<thead>
<tr>
<th>Country</th>
<th>Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭 🇰🇭</td>
</tr>
<tr>
<td>China</td>
<td>大, 小, 人, 山, 水, 日, 月, 木, 树, 手, 牛, 羊。</td>
</tr>
<tr>
<td>Mongolia</td>
<td>А, Н, О, М, Б, У, С, Э, Т, И, Р, Л;</td>
</tr>
</tbody>
</table>
Process of development

Country adaptations

Item 61: Child in bathroom with a sink

Cambodia

Timor-Leste

China

PNG

Mongolia

Vanuatu
## Findings

Easiest and most difficult Items in Motor development Domain across countries

<table>
<thead>
<tr>
<th><strong>Motor Development</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Easiest items</strong></td>
<td></td>
</tr>
<tr>
<td>43.1</td>
<td>Strung large bead (6 countries)</td>
</tr>
<tr>
<td>37.1</td>
<td>Walked forward on a straight line (6 countries)</td>
</tr>
<tr>
<td><strong>Hardest items</strong></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Hit the target on 3 out of 3 attempts (6 countries)</td>
</tr>
<tr>
<td>42.2</td>
<td>Following instructions to fold a piece of paper (3 countries)</td>
</tr>
</tbody>
</table>
End of Phase III

• First regional tool

• Bottom-up approach to development of assessment tool

• Ensuring context-sensitivity of items, and developing a psychometrically robust tool
Process of development
Phase IV

• Develop a shorter version but maintain the test robustness
• Maintain reliability and validity
• Developmentally appropriate
• Culturally appropriate for the region

EAP-ECDS SHORT VERSION
Phase V (Current)

- Have started to implement EAP-ECDS Short Form (33 items across 7 domains)
- Revised Parent Questionnaire (70 questions)
- Shorter assessment time
- Flexibility:
  - Adapted items
  - Optional items
Phase V (Current)

• Maintain quality assurance:
  ✓ Translations and back-translations
  ✓ In-country training
  ✓ Inter-coder reliability
  ✓ Technical support on test administration (e.g., feedback on country’s pilot test videos by child psychologist)

• Next steps:
  ✓ Training video
  ✓ Digital scoring?
Tool Kit

EAP-ECDS Short Form Test kit
1. Picture Book
2. Test materials

Assessment protocols
1. Instruction Manual (33 items)
2. EAP-ECDS Short Form Scoring Form
3. Parent Questionnaire (70 items)
4. OCR Forms/ iPad?
5. Future: Training video
East Asia-Pacific Early Child Development Scales (EAP-ECDS)

Summary

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Advantages - Background

• Based on regional educational standards and goals

• Country-adapted, cultural items (song, written script, environment, ways to show gratitude)

• Flexibility which allows for extra items (Assessment + Parent Questionnaire)
Advantages – Short vs Long Form

• More suitable to young children and their attention spans
• Less time spent to collect data
• Less costly
• Easier to transport (less manpower and resources)
Advantages - Application

• Comprehensive data – developmental levels + family backgrounds + child’s early home learning, health and habits

• Robust (good reliability/ validity) due to sound training (face-to-face or DVD/ + sampling of pilot test video) and interrater reliability checks

• Training allows inclusion of more complex items (e.g. Approaches to Learning items)
Advantages Technical Support

• Training
• Ongoing feedback on country-adapted items
• Feedback pilot study (Sample video)

If needed:
• Data Analysis
• Report Writing
• Recommendations on policies
Thank you!