Measuring Knowledge, Skills, Values and Attitudes for Sustainable Development

UNESCO GCED Forum

Koji Miyamoto

Paris, 27 Jan 2015
Simple framework

Contexts
- Family: Parenting styles, Learning resources
- School: Teachers quality, Pedagogy
- Community: Peer interactions, Learning opportunities

Skills
- Cognitive
- Social & emotional

Progress
- Education
- Employment
- Health
- Citizenship
- Anti-violence
Outline of Presentation

1. Lessons learned on ways to measure GCED
2. Contribution of OECD to subsequent work
3. Ways to improve the measurement agenda
• **Importance of the ‘whole child’**
  – The powers of socio-emotional skills
  – Not all socio-emotional skills are relevant across countries
  – Paucity of evidence on learning approaches that works across countries
Lessons learned

- Socio-emotional skills are ‘hard to measure’
  - Socio-emotional skills are hard to reliably measure w/i a country, extremely difficult to measure across countries
  - Behavioural measures can be reliably measured but the underlying construct is not clear
• **ESP** (Education and Social Progress) – conceptual and methodological work
  – Identify relevant socio-emotional constructs
  – Identify relevant measurement instruments
    • Reducing biases inherent in rating scales
    • Mobilising performance-based and behavioural measures

• **PISA 2015**
  – Non-cognitive outcomes

• **PISA 2018**
  – Global competencies
Improving the measurement agenda

• **Be holistic:** address key dimensions of human capabilities
  – Include socio-emotional capability

• **Be selective:** choose relevant constructs and reliable measures
  – Drop learning context measures?
  – Include constructs that are relevant across countries: e.g., perseverance, self-efficacy, sociability, self-esteem
  – Include reliable measures: self-reports and behavioural measures

• **Be realistic:** explore pre-scheduled micro-data that is ‘likely to’ include relevant and reliable measures across a large number of countries
  – e.g., ICCS2016, PISA2015, PISA2018
Thank you
### Improving the measurement agenda

<table>
<thead>
<tr>
<th>GCED and ESD key conceptual dimensions / priorities for measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive</strong></td>
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<tr>
<td>Learners acquire knowledge, understanding and critical thinking about global issues and the interconnectedness/interdependency of countries and different populations</td>
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<tr>
<td><strong>Socio-emotional</strong></td>
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<tr>
<td>Learners have a sense of belonging to a common humanity, sharing values and responsibilities and holding rights</td>
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<td>Learners show empathy, solidarity and respect for differences and diversity</td>
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<td><strong>Behavioural</strong></td>
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<tr>
<td>Learners act effectively and responsibly at local, national and global contexts for a more peaceful and sustainable world</td>
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</table>
Bullying by skills (Korea)
Skills

Conceptual Framework

Cognitive
- Basic cognitive ability
  - Pattern recognition
  - Processing speed
  - Memory
- Knowledge-acquired
  - Access
  - Extract
  - Interpret
- Knowledge-extrapolated
  - Reflect
  - Reason
  - Conceptualise

Social and Emotional
- Achieving goals
  - Perseverance
  - Self-control
  - Passion for goals
- Working with others
  - Friendliness
  - Respect
  - Caring
- Managing emotions
  - Calm
  - Optimism
  - Confidence

Mental capacity to acquire knowledge, thoughts & experience
- Interpret, reflect and extrapolate based on knowledge acquired
Outcomes

- Education and skills
- Material Conditions
- Environment
- Subjective well-being
- Family and social connections
- Personal security
- Civic engagement
- Health status
- Labour market

Well-being and social progress
### Which social and emotional skills matter?

<table>
<thead>
<tr>
<th>Tasks that demand social and emotional skills</th>
<th>Social and emotional skills</th>
<th>BEL</th>
<th>CAN</th>
<th>CHE</th>
<th>GBR</th>
<th>KOR</th>
<th>NOR</th>
<th>NZL</th>
<th>SWE</th>
<th>USA</th>
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<tbody>
<tr>
<td>Achieving goals</td>
<td>Responsibility</td>
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<td>Persistence, Perseverance</td>
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<td>Locus of control, Self-efficacy</td>
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<td>Working with others</td>
<td>Extraversion, Sociability</td>
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<td>Adaptability</td>
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<td>Managing emotions</td>
<td>Reactivity, Mood</td>
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<td>Self-confidence</td>
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OECD (2014, forthcoming)
### Which social and emotional skills matter?

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Social and emotional skills fostered</th>
<th>Outcomes</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>Education</td>
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<tr>
<td>1. Achieving goals</td>
<td>Conscientiousness</td>
<td>-</td>
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<td></td>
<td>Openness to new experience</td>
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<tr>
<td></td>
<td>Self-efficacy</td>
<td>● Educational attainment (Seattle)</td>
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<tr>
<td>2. Working with others</td>
<td>Social, communication and team-working skills</td>
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<td></td>
<td>Agreeableness (externalising behaviours)</td>
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Heckman and Kautz (2014)
### Which Learning contexts Matter?

**Key features of promising intervention programmes**

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<thead>
<tr>
<th>Programme Period</th>
<th>Family Involvement</th>
<th>Parent-child attachment</th>
<th>Mentoring</th>
<th>Programmes</th>
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<tbody>
<tr>
<td><strong>Early Childhood (0-4)</strong></td>
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<td>Abecedarian (US), Jamaican Supplementation Study, Head Start (US), Perry Pre-school (US), Chicago Child Parent Center (US), Sure Start (US)</td>
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<td><strong>Childhood (5-9)</strong></td>
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<td>○</td>
<td>–</td>
<td>Project Start (US), Seattle Social Development (US), Montreal Longitudinal Experimental Study (Canada)</td>
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<tr>
<td><strong>Adolescence (10-18)</strong></td>
<td>○</td>
<td>–</td>
<td>●</td>
<td>Big Brothers Big Sisters (US), Entrepreneurs for Social inclusion (US), Becoming a Man (US), Pathways to Education (Canada), National Guard Challenge (United States), Job Corps (US), Dominican Youth employment Program, Year-up (US), Joven (Chile)</td>
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