Measuring social and emotional skills to support children’s growth

Dan Cloney
Dan.Cloney@acer.org

@dr_dan_c

Australian Council for Educational Research
What are Future Skills anyway?

- What do we agree on?
  - Includes both hard and soft skills
    - Problem solving
    - Interpersonal skills
  - Lifelong learning
    - From childhood through to adult
  - Changeable/modifiable
    - A role for educators
    - A role for ECEC!
What are Future Skills anyway?

• What do we *not* agree on?
  – A name
    • 21st century skills
    • Transversal skills
    • Transferable skills
    • Competencies
    • …
  – A set of skills
    • Many frameworks
    • All include some set of social and emotional skills
The OECD Learning Framework 2030

OECD Learning Framework 2030: Work-in-progress
Why do we care about social and emotional skills?

- Important in their own right
  - A core part of 21C skills frameworks
  - Ability to function in a social world
  - Increasingly important in a globalised world
- SE skills cause gains in other domains
  - New Australian evidence shows ES 0.3 SD for SE skills (age 5) on NAPLAN scores (age 8)
  - [https://doi.org/10.3102/0013189X19848724](https://doi.org/10.3102/0013189X19848724)
<table>
<thead>
<tr>
<th>Reading</th>
<th>General abilities</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 14</td>
<td>Pre-reading skills</td>
<td>Level 11</td>
</tr>
<tr>
<td>Level 13</td>
<td>Aural comprehension</td>
<td>Level 10</td>
</tr>
<tr>
<td>Level 12</td>
<td>Identify</td>
<td>Level 9</td>
</tr>
<tr>
<td>Level 11</td>
<td>Letter recognition</td>
<td>Level 8</td>
</tr>
<tr>
<td>Level 10</td>
<td>General abilities</td>
<td>Level 7</td>
</tr>
<tr>
<td>Level 9</td>
<td>Examples</td>
<td>Level 6</td>
</tr>
<tr>
<td>Level 8</td>
<td>Fluid reasoning</td>
<td>Level 5</td>
</tr>
<tr>
<td>Level 7</td>
<td>Executive function</td>
<td>Level 4</td>
</tr>
<tr>
<td>Level 6</td>
<td>Comprehension knowledge</td>
<td>Level 3</td>
</tr>
<tr>
<td>Level 5</td>
<td>Pre-math skills</td>
<td>Level 2</td>
</tr>
<tr>
<td>Level 4</td>
<td>Examples</td>
<td>Level 1</td>
</tr>
</tbody>
</table>

**Early development**

Extending general skills to younger age groups (if desired)
So, what are social and emotional skills?

- **Social Interaction**
  - The capacity to relate to and establish relationships with others

- **Social Responsibility**
  - The capacity to function within the school environment and interact with groups of others in socially prescribed ways

- **Transcending Social Difficulties**
  - Social self-regulation and social problem-solving capacities

- **Other frameworks exist, e.g., Collaborative for Academic, Social, and Emotional Learning (CASEL):**
  
So, what are social and emotional skills (CASEL 5)?

- **Self-Awareness**
  - recognise personal strengths and limitations
  - have well-grounded confidence and optimism.

- **Self-Management**
  - regulate emotions, thoughts, and behaviours
    - Both self regulation and goal setting

- **Social Awareness**
  - perspective taking and empathy
  - understand social and ethical norms

So, what are social and emotional skills (CASEL 5)?

- **Relationship Skills**
  - maintain healthy relationships
  - communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively

- **Responsible Decision-Making Skills**
  - Making choices based on considerations of ethical standards, safety, social norms, consequences, and the well-being of self and others.

ECEC and SE skills

• *Play is essential to stimulate and integrate a wide range of children’s intellectual, physical, social and creative abilities.* (VEYLDF)

• **OUTCOME 1: IDENTITY**
  – …feeling included and secure in the social settings that are part of everyday life.

• **OUTCOME 2: CONNECTED WITH AND CONTRIBUTE TO THEIR WORLD**
  – being in groups and contributing to family and social life

• **OUTCOME 3: STRONG SENSE OF WELLBEING**
  – develop a range of social skills and dispositions.

• **OUTCOME 4: CONFIDENT AND INVOLVED LEARNERS**
  – contribute positively and effectively to other children’s learning.

• **OUTCOME 5: CHILDREN ARE EFFECTIVE COMMUNICATORS**
  – innately social, creative and motivated to exchange ideas, thoughts, questions and feelings.
Classroom Assessment Scoring System

- CLASS is a measure of process quality
  - Teaching through interactions
  - Applicable in multiple contexts
  - Not reliant on particular curriculum or content

<table>
<thead>
<tr>
<th>Emotional Support</th>
<th>Classroom Organization</th>
<th>Instructional Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Regard for Child Perspectives</td>
<td></td>
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</tbody>
</table>
Classroom Assessment Scoring System (3 domains)

- Emotional Support Domain
- Classroom Organization Domain
- Instructional Support Domain
- Average CLASS Score - 3 Domains

Describing children’s SE learning

• How can educators measure SE skills and ability?
• See http://bit.ly/outcome4
• Example measures
  – SDQ, SSIS, MELQO, Early ABLES
  – see also EEF database http://bit.ly/ref_ec_measures
SDQ

• Three similar forms
  – 2-4 years (parent- and educator-rated)
  – 4-10 years (parent- and educator-rated)
  – 11-17 years (self-rated)

• 3-5 dimensions
  – Internalizing (emotional symptoms + peer relationship problems) 5 + 5 items
  – Externalizing (conduct/behavioural problems + hyperactivity) 5 + 5 items
  – Prosocial behaviour 5 items

https://www.sdqinfo.com
**SDQ**

**Conduct problems Scale**
- **ITEM 5:** Often has temper tantrums or hot tempers (*I get very angry*)
- **ITEM 7:** Generally obedient… (*I usually do as I am told*)
- **ITEM 12:** Often fights with other children… (*I fight a lot*)
- **ITEM 18:** Often lies or cheats (*I am often accused of lying or cheating*)
- **ITEM 22:** Steals from home, school or elsewhere (*I take things that are not mine*)

**Hyperactivity scale**
- **ITEM 2:** Restless, overactive… (*I am restless…*)
- **ITEM 10:** Constantly fidgeting or squirming (*I am constantly fidgeting….*)
- **ITEM 15:** Easily distracted, concentration wanders (*I am easily distracted*)
- **ITEM 21:** Thinks things out before acting (*I think before I do things*)
- **ITEM 25:** Sees tasks through to the end… (*I finish the work I am doing*)

[https://www.sdqinfo.com](https://www.sdqinfo.com)
<table>
<thead>
<tr>
<th>Statement</th>
<th>Not True</th>
<th>Somewhat True</th>
<th>Certainly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considerate of other people's feelings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restless, overactive, cannot stay still for long</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often complains of headaches, stomach-aches or sickness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shares readily with other children, for example toys, treats, pencils</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Often loses temper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rather solitary, prefers to play alone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generally well behaved, usually does what adults request</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Many worries or often seems worried</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

[https://www.sdqinfo.com](https://www.sdqinfo.com)
SSIS

- Current version: SSIS SEL Screening and Progress Monitoring Scales
- Single, multi-rater version
  - 4-14 years (parent- and educator-rated)
- 5 SE dimensions + 1 motivation + 2 academic competence
  - CASEL 5
    - Self-Awareness (8 items)
    - Self-Management (15 items)
    - Social Awareness (7 items)
    - Relationship Skills (13 items)
    - Responsible Decision-Making Skills (8 items)

https://www.pearsonassessments.com/
SSIS SEL

- Self-Management
  - Uses appropriate language when upset
  - Completes tasks without bothering others.
  - Follows your directions.
  - Says when there is a problem.
  - Has temper tantrums.
  - Follows classroom rules.
  - Responds appropriately when pushed or hit.
  - ...

Never (0), Seldom (1), Often (2), and Almost Always (3)

https://www.pearsonassessments.com/
SSIS SEL

• Social Awareness
  – Tries to comfort others.
  – Feels bad when others are sad.
  – Shows kindness to others when they are upset.
  – Forgives others.
  – Is nice to others when they are feeling bad.
  – Shows concern for others.
  – Stands up for others who are treated unfairly.

Never (0), Seldom (1), Often (2), and Almost Always (3)

https://www.pearsonassessments.com/
MELQO

- Single, direct observation version
  - 3-6 years
- Open source tool developed to support SDG 4.2
- 2 SE dimensions + literacy, numeracy, executive function
  - Perspective-Taking/Empathy (3 items)
  - Understanding Feelings (2 items)

http://ecdmeasure.org
| 21b | **Say: What would you do to help her feel better?** Has one idea to make child feel better (e.g., give a hug, find someone to help, offer toy; help child get up; say something nice; say sorry) This solution should seem reasonable to the tester based on cultural norms | Write in response: |
| 21c | **Prompt ONCE by saying, Is there anything else you would do?** Has second idea to make child feel better (e.g., give a hug, find someone to help, offer toy; help child get up; say something nice; say sorry) | Write in response: |

[http://ecdmeasure.org](http://ecdmeasure.org)
#22 Understanding Feelings

**Materials:** None  
**STOP RULES:** None

<table>
<thead>
<tr>
<th>Instructions</th>
<th>Correct Answer</th>
<th>Appropriate Response (1)</th>
<th>Inappropriate Response (0)</th>
<th>Child Says I Don’t Know / No Response (99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Say: <strong>Now I’m going to ask you another question. Please tell me what makes you feel unhappy?</strong></td>
<td>Names at least one reason for feeling sad (e.g., loses toy; gets hurt; fight with other child)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[http://ecdmeasure.org](http://ecdmeasure.org)
Early ABLES

• Single form
  – 2-5 years (educator-rated)
  – Specifically for children with additional needs
  – Validation data up to 18 years

• Validated and scaled using contemporary measurement theory (e.g., IRT)

• 1 SE dimension + speaking and listening, and reading

http://ecdmeasure.org
Early ABLES

- Example item from earlier study

<table>
<thead>
<tr>
<th>3. Using conversational skills</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pupil does not typically display skills/behaviours at a beginning level</td>
<td>0</td>
</tr>
<tr>
<td>Focuses attention on a communicative partner, but does not converse</td>
<td>1</td>
</tr>
<tr>
<td>Contributes to the conversation only when prompted (e.g., answers the questions of others)</td>
<td>2</td>
</tr>
<tr>
<td>Uses information supplied by others to maintain the flow of conversation (e.g., asks questions relevant to the current conversational topic)</td>
<td>3</td>
</tr>
<tr>
<td>Draws on shared knowledge or knowledge about his/her partner to initiate and/or maintain a conversation</td>
<td>4</td>
</tr>
<tr>
<td>Adjusts communication style and/or content to suit context and social expectations</td>
<td>5</td>
</tr>
</tbody>
</table>

For more information, visit:
http://www.arc-ots.com/earlyABLES/
Study 1

- UNICEF Bogor
Study 1

- Good fit to 1PL partial credit model
- Reliability lower than in other published studies (>0.7)
  - Internalizing 0.638, Externalising 0.610, Prosocial 0.456
  - Reliability != reliability (PV reliability vs alpha)
- Internalizing and Externalising highly correlated
  - 0.895
- Prosocial negatively correlated with Internalizing (-0.230) and Externalising (-0.388)
- Adequate psychometric properties
Each '*' represents 5.5 cases
Study 2

- Unnamed study
Growth?
Growth?

Age in Months

W score

WJ-III Test

- Applied Problems
- Brief Intellectual Ability
- Concept Formation
- Rapid Picture Naming
- Sound Awareness
- Understanding Directions
- Verbal Comprehension
- Visual Auditory Learning
- Visual Matching
What is the value added?

- Cross sectional (with temporal lag) shows significant effects
  - Social skills influence academic outcomes
  - Quality practice influence social skills
- Growth models show less-clear effects
  - Within-child growth is flat by age 5 on many measures
- What is the issue?
  - Social skills strongly correlated with other domains (e.g., selection may play a role in cross sectional designs)
  - Measures are inadequate to measure growth over medium term
  - Measures are not scaled using contemporary measurement theory (e.g., using sum scores instead)
Are we measuring the right things?

- SE skills appear through ECEC and School curriculums
- We have some measures but they don’t capture the higher-order abilities
  - A focus on managing stress, controlling impulses, internalising behaviours like withdrawing.
  - But what about empathy, working in diverse communities, negotiation, resolving conflict, goal setting and decision making?
    - E.g., is self awareness in SSIS really capturing empathy and perspective taking?
  - Can these things be measured through checklist about frequency of behaviours (never, seldom…)?
So what?

• Nearly all children attend ECEC
  – 3 year-old K roll out
• Public investment in ECEC is high
  – For 0-2-year-olds, private investment is also high
  – Costs of ECEC are increasing (HILDA: childcare costs up 145% in since 2002,)
• Need an effective and fair system
  – Give all children the best start in life
  – Quantify the value-add of the ECEC sector
    • Identify examples of best practice
  – Showcase the expertise of educators
  – Facilitate clinical practice
Key links

• Mapping VEYLDF to F-10 curriculum

• Framework for 21C skills

• Relationship between social skills and academic achievement
  – [https://doi.org/10.3102%2F0013189X19848724](https://doi.org/10.3102%2F0013189X19848724)

• Assessing children as confident and involved learners

• ACER LPs

• MELQO
  – [http://ecdmeasure.org](http://ecdmeasure.org)

• EEF database