

Australian Early Development Census

Understanding the Multiple Strength Indicator



How is the Multiple Strength Indicator calculated?

The Multiple Strength Indicator (MSI) is a measure of children's developmental strengths to show what is going well for children when they start their first year of full-time school.

It uses questions from the Australian version of the Early Development Instrument (AvEDI), the Instrument used in the **Australian Early Development Census (AEDC)**¹, and focuses on the more advanced skills, competencies, and dispositions to explore how many 'strengths' children have at school entry.

Rather than presenting information on each of the domains individually, the MSI combines information from all five **domains**² of child development providing an important summary of children's strengths. Two other summary indicators that are reported through the AEDC program are – 'developmentally vulnerable on one or more domains' and 'developmentally vulnerable on two or more domains'.

What is the difference between the Multiple Strength Indicator and the other AEDC summary indicators?

The main difference between the MSI and the other AEDC summary indicators is that the MSI focuses on the strengths that children have developed when they start school whereas the other two indicators show whether children are facing challenges in their development.

Communities can use the information provided by the MSI in addition to the other indicators to inform planning.

¹ www.aedc.gov.au/abtdata

² www.aedc.gov.au/abtldom

What does the Multiple Strength Indicator measure?

The AvEDI measures a whole range of different skills, competencies and dispositions. Most children have some of these skills, such as being independent in toileting, knowing how to hold a book, and being able to write their own name, when they start school. Other skills are more advanced and a smaller percentage of children have them when they start school. The MSI focuses on the more advanced skills and competencies captured through the AvEDI and identifies how many strengths' children have when they start school. There is evidence to show that children who have more advanced skills may experience some advantages at school.

Selection of the Multiple Strength Indicator items

A group of early childhood experts reviewed the 96 items in the AvEDI to determine which items provided an indication of whether a child showed advanced skills, or 'better than expected development', for his or her age. A total of 39 questions were identified and the MSI was calculated using these items.

What types of strengths are measured?

The MSI measures strengths from all five development domains of the AEDC. Examples from each domain are presented below:

- **Social competence** – playing with various children, getting along with and respecting peers and teachers, having good self-control, showing curiosity about the world, working independently, and adjusting to changes in routine
- **Emotional maturity** – comforting a child who is upset, inviting other children to join in a game, and helping to stop a quarrel or dispute between children
- **Language and cognitive skills** – being able to read and write simple words, and being interested in reading and mathematics
- **Communication and general knowledge** – being able to communicate needs to adults and peers and being able to tell a story
- **Physical health and wellbeing** – being able to hold a pen, crayon or brush, and having good overall physical development.

How is the Multiple Strength Indicator calculated?

MSI scores are calculated for each individual child where enough **valid scores**³ have been recorded through the AvEDI. Children receive a score between 0 and 39 on the MSI, higher scores indicate that the child has strengths in more of the 39 items. Using the 2009 AEDC data, the following cut-off scores (or benchmarks) were established for the MSI to classify children into one of three categories, based on the number of strengths they exhibited:

- **Highly developed strengths** – children with strengths in 28 to 39 of the MSI items
- **Well developed strengths** – children with strengths in 19 to 27 of the MSI items
- **Emerging strengths** – children with strengths in 18 or less of the MSI items.

The cut-off scores set in 2009 will remain the same for future cycles and provide a reference point against which later MSI results can be compared.

Figure 1 – Number of strengths (0–39) on the Multiple Strength Indicator



Table 1 – Characteristics of children in each of the MSI categories 'highly developed strengths', 'well developed strengths' and 'emerging strengths'.

Highly developed strengths (Above 50th percentile in 2009)	Children have strengths in most of the 39 MSI items. These children are likely to be on track on all five AEDC domains, and show strengths across all AEDC domains.
Well developed strengths (25th to 50th percentile in 2009)	Children are showing strengths in 50-70% of the following skills: relating to peers and teachers, self-control, curiosity about the world, working independently, reading and writing simple words, communicating effectively with peers and teachers, and story-telling.
Emerging strengths (Below 25th percentile in 2009)	Children may be meeting developmental expectations when they start school but they do not demonstrate a high number of strengths. Children in this category range from those with strengths in none of the 39 MSI items, to children with strengths in about half of the MSI items.

3 www.aedc.gov.au/defterm

Can children with vulnerabilities also have highly developed strengths?

Children can display developmental vulnerabilities while still demonstrating strengths in their development. About 75% of children who are vulnerable on one or more domains of the AEDC are classified as having emerging strengths. The remaining 25% of children are classified as having well developed or highly developed strengths.

Children who are vulnerable on two or more domains of the AEDC face challenges in a range of different areas of their development. The majority of these children have emerging strengths on the MSI, approximately 5% have well developed strengths and almost none have highly developed strengths.

This exemplifies how the MSI and other summary indicators provide different information about child development at school entry.

Understanding the Multiple Strength Indicator at a community level?

There are communities where the percentage of children who are vulnerable on one or more domains is higher than the national average, and the percentage of children with well developed or highly developed strengths are also higher than the national average. This suggests that some communities may have high percentages of vulnerability in a specific AEDC domain, such as language and cognitive skills, but also show strengths in other domains of development, such as social, emotional or communication skills.

Where can I find more information?

MSI Community Summaries, which report on 2015 results at the community, state and national level, are available on the **AEDC Data Explorer**⁴.

To learn more about the MSI, refer to the **AEDC Research Snapshot**⁵ summarising the research into the MSI and the **technical report**⁶.

These resources along with a whole range of other supporting materials, including the **AEDC National Report 2018**⁷, can be accessed through the **AEDC website**⁸.

4 www.aedc.gov.au/data

5 www.aedc.gov.au/res-snap-msi

6 www.aedc.gov.au/tech-rep-msi

7 www.aedc.gov.au/natrep18

8 www.aedc.gov.au