Evidence-based early childhood education in Australia: the Abecedarian Approach

Professor Joseph Sparling
What's in a name?

abecedarian (əˈbɛˌsɛdərˈēən)
noun, adjective

one learning the rudiments of something (as the alphabet) *Etymology: Middle English abecedary, from Medieval Latin abecedarium, alphabet, from Late Latin, neuter of abecedarius of the alphabet, from the letters a + b + c + d
Elements of 3A

- Learning
- Games
- Enriched Caregiving
- Conversational Reading
Adult-Child Interaction
individual, frequent, intentional
• **Learning Games**: Educators daily engage every child in at least 1 interactive game (individually for every child under age 3, and individually or in pairs of children age 3 and 4).

• **Conversational Reading**: Educators use the 3S strategy to interactively read at least 1 book every day to every child (individually to every child under age 3, and with pairs of children age 3 and 4).

• **Enriched Caregiving**: Educators use the 3N strategy. They encourage children to practice skills (e.g., cooperating, listening, counting, colour recognition) during care routines.

All 3 elements of the Abecedarian Approach Australia are shared with parents.
## Abecedarian research studies

<table>
<thead>
<tr>
<th>Randomized Samples</th>
<th>Location</th>
<th>N</th>
<th>Duration of Program</th>
<th>Type of Program</th>
<th>Oldest age of follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abecedarian 1</td>
<td>Chapel Hill, NC</td>
<td>111 children</td>
<td>Birth to age 5 years</td>
<td>Center + social work + home visits + health care</td>
<td>age 30</td>
</tr>
<tr>
<td>Abecedarian 2</td>
<td>Chapel Hill, NC</td>
<td>64 children</td>
<td>Birth to age 5 years</td>
<td>Center + educational home visits + health care</td>
<td>age 21</td>
</tr>
<tr>
<td>Abecedarian 3</td>
<td>Boston, MA</td>
<td>138 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 4</td>
<td>New Haven, CT</td>
<td>112 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 5</td>
<td>Bronx, NY</td>
<td>138 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 6</td>
<td>Philadelphia, PA</td>
<td>101 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 7</td>
<td>Miami, FL</td>
<td>100 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 8</td>
<td>Little Rock, AK</td>
<td>128 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 9</td>
<td>Dallas, TX</td>
<td>137 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 10</td>
<td>Seattle, WA</td>
<td>131 children</td>
<td>Birth to age 3 years</td>
<td>Center + educational home visits</td>
<td>age 18</td>
</tr>
<tr>
<td>Abecedarian 11</td>
<td>Baltimore, MD</td>
<td>48 children</td>
<td>Age 1 to 2 years</td>
<td>Parent training for home intervention</td>
<td>age 2</td>
</tr>
<tr>
<td>Abecedarian 12</td>
<td>Iasi, Romania</td>
<td>65 children</td>
<td>Age 1 to 2 years</td>
<td>Home (small group in orphanage)</td>
<td>age 2</td>
</tr>
<tr>
<td>Abecedarian 13</td>
<td>Iasi, Romania</td>
<td>104 children</td>
<td>Age 2 to 3 years</td>
<td>Home (small group in orphanage)</td>
<td>age 3 years</td>
</tr>
<tr>
<td>Abecedarian 14</td>
<td>USA, national</td>
<td>2,430 parents</td>
<td>Age 3 to 4 years</td>
<td>Preschool + daily parent education groups</td>
<td>age 5</td>
</tr>
<tr>
<td>Abecedarian 15</td>
<td>Massachusetts, state-wide</td>
<td>150 family childcare educators</td>
<td>2 years (between Birth to 5 yrs)</td>
<td>Family day care homes</td>
<td>educator data only</td>
</tr>
</tbody>
</table>
A 2007 National Geographic program on brain development featured the Abecedarian Approach.

http://www.youtube.com/watch?v=xSbX-dJMjmM
Remember the yellow blocks in the video?

- 2 the same and 1 different
- Does this contain a basic rule of learning?
- Why is it an easy way to begin matching?
Post-high school education for teen mothers whose children were in the Abecedarian Project

Child IQ across the first 4 years (in the normal range, > 84)

Important and rapid cognitive growth happens very early in life.

If we wait until age 3 or 4 to enroll the most vulnerable children, they will enter far behind.
“Children who depend most on good schooling for academic growth are the least likely to receive it. If school improvement begins early in life and if sustained, the most disadvantaged children stand to benefit the most.”

Child 36 mo. Stanford-Binet by mom’s education

IQ at 36 months

Control Group
Abecedarian

Some High School
High School Graduate
Some College
College Graduate

Type of child care and intellectual development


![Graph showing the mean IQ scores of different child care groups over time.](image-url)
% of borderline IQ at 36 months of age by program participation

Ramey et al., (1992), *Pediatrics*
• Lift to 40 per cent the proportion of people aged between 25 and 34 who hold a bachelor degree by 2025; and

• Increase to 20 per cent the proportion of students from low SES backgrounds enrolled in higher education by 2020.
At age 21, almost three times as many individuals in the treated group (39.5%) compared to the control group (13.7%) had attended, or were still attending, a 4-year university.

\[ \chi^2(1, N = 104) = 6.78, p < .01 \]

Long-term health outcomes for Abecedarian children

• Fewer symptoms of depression (p<.03) at age 21

• Healthier life styles. The odds of reporting an active lifestyle in young adulthood were 3.92 times greater compared to the control groups

• A significant treatment-related reduction in reports of recently using marijuana (18% vs. 39% for the controls, p<.05)

• A significant reduction in teen parenthood (26% compared with 45% of controls, p<.05)

• Fewer risky behaviors (on the Youth Risk Behavior Surveillance System) at 18 years of age (p<.05)

Victorian Early Years Learning and Development Framework

Identity
Community
Wellbeing
Learning
Communication
**LEARNING**

Early Years Learning Development Outcomes 4: Children are confident and involved learners

|-------------------------------------------------------------|---------------------------------|---------------------------------|

Children develop dispositions for learning such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, persistence, imagination and reflexivity.

This is evident, for example, when children:
- express wonder and interest in their environments.
- are curious and enthusiastic participants in their learning.
- use play to investigate, imagine and explore ideas.
- follow and extend their own interests with enthusiasm, energy and concentration.
- initiate and contribute to play experiences emerging from their own ideas.
- participate in a variety of rich and meaningful inquiry-based experiences.
- persevere and experience the satisfaction of achievement.
- persist even when they find a task difficult.

- Sustains attention: 7, 8, 9, 10, 12, 13, 21, 32, 33, 35, 36, 39, 53, 61, 73, 78, 84, 94
- Observes objects and events with curiosity: 101, 106, 108, 109, 123, 132, 145, 146, 148, 154, 155, 164, 175, 190

Children develop a range of skills and processes such as problem solving, inquiry, experimentation, hypothesising, researching and investigating.

This is evident, for example, when children:
- apply a wide variety of thinking strategies to engage with situations and solve problems, and adapt these strategies to new situations.
- create and use representation to organise, record and communicate mathematical ideas and concepts.
- make predictions and generalisations about their daily activities, aspects of the natural world and environments, using patterns they generate or identify, and communicate these using mathematical language and symbols.
- explore their environment.
- manipulate objects and experiment with cause and effect, trial and error, and motion.
- contribute constructively to mathematical discussions and arguments.
- use reflective thinking to consider why things happen and what can be learnt from these experiences.

- Understands how objects can be used: 19, 25, 26, 28, 34, 45, 52, 62, 63, 66, 73, 78, 82, 87, 89, 95, 100
- Shows a beginning understanding of cause and effect: 6, 9, 11, 16, 23, 41, 45, 51, 73, 86, 94, 97
- Shows a beginning understanding that things can be grouped: 25, 28, 34, 35, 39, 50, 52, 53, 57, 60, 65, 71, 73, 76, 77, 78, 82, 83, 87, 93, 100
- Approaches problems flexibly: 104, 111, 116, 128, 129, 133, 140, 168, 172, 180, 190, 196
- Explores cause and effect: 108, 129, 142, 148, 174, 190
- Classifies objects: 105, 116, 122, 124, 130, 137, 152, 154, 157, 163, 172, 180, 194
- Compares/ measures: 111, 122, 124, 127, 154, 155, 161, 185
- Arranges objects in a series: 107, 124, 167, 172
- Recognizes patterns and can repeat them: 112, 127, 167, 171, 187, 194, 200
- Shows awareness of time concepts and sequence: 135, 142, 159, 165, 177, 185, 187, 191
- Shows awareness of position in space: 112, 117, 125, 138, 146, 155, 161, 183
- Uses one-to-one correspondence: 115, 140, 160, 195
- Uses numbers and counting: 115, 160, 188,
A sample LearningGames activity

Game 94. What’s Gone?
Age 30 mos.
Is this child learning the basic rules of learning?
A sample Conversational Reading activity

Reading and using 3S with a 1 year old
Meal time
Does this educator draw out child language through her questions?
2010 Study and Mini-training Trips

Trip 1 Sponsored & funded by DEECD
Trip 2 Sponsored by SNAICC, funded by DEEWR
A remote town, NT
Play group at Gunbalanya
Regional visits in Victoria

September 19 – 23, 2011

- Yarrunga Primary School Hub Building, Wangaratta, VIC
- Wilmont Rd Primary School, Shepparton, VIC
- Lulla’s MACS, Shepparton, VIC

Multifunctional Aboriginal Children’s Services (MACS)
Regional visits in Victoria

October 24 – 28, 2011

- Lake Tyres MACS, Lake Tyres, VIC
- Gippsland & Eastern Gippsland Aboriginal Corporation, Bairnsdale, VIC
Current and Future Steps

- On an opt-in basis, train leaders within MACS and Family Day Care Schemes so that they can incorporate 3A to the locally desired degree
- Visit MACS to follow up on training
- Integrate 3A into the Masters of Teaching degree in Melbourne Graduate School of Education (MGSE)
- Establish a cadre of 3A trainers at MGSE to respond to 3A in-service training requests in Victoria and beyond
- Prepare an ARC Linkage Grant application (for May 2012 submission) Department of Education and Training, NT is a committed partner
For future updates on 3A, visit:


Or send email to:

Joseph.Sparling@unimelb.edu.au