Learning Divides:

Using data to inform educational policy

J. Douglas Willms

The Learning Bar
Educational Prosperity
A life-course approach to educational assessment
The Short Course

I. Educational Prosperity
II. School ready
III. From learning-to-read to reading to learn
IV. Engagement and mental health
## Educational Prosperity

**A Life-Course Approach**

### Prosperity Outcomes

**PRE-NATAL**
- Healthy pregnancy
- Healthy delivery

**EARLY DEVELOPMENT**
- Language development
- Cognitive development
- Physical development
- Self-regulation

**PRE-PRIMARY**
- Awareness of self and environment
- Social skills and approaches to learning
- Language development
- Cognitive development
- Physical development

**EARLY PRIMARY**
- Educational attainment
- Reading literacy
- Numeracy
- Health and well-being
- Engagement

**LATE PRIMARY AND LOWER SECONDARY**
- Educational attainment
- Academic achievement
- Health and well-being
- Engagement

**UPPER SECONDARY**
- School completion
- Ethical citizen
- Leadership skills
- Health and well-being
- Communication and interaction skills

### Foundations for Success

**Family Factors**
- Nutrition
- No exposure to toxins
- Mother’s physical health
- Mother’s emotional health

**Institutional Factors**
- Breast-feeding and nutrition
- Mother’s physical health
- Mother’s emotional health
- Parenting skills
- Intra-family relations

**Community Factors**
- Social capital
- Resources

**HEALTH-CARE FACILITY:**
- Prenatal care
- Primary health care

**HEALTH-CARE FACILITY:**
- Post-natal care
- Primary health care

**PRE-SCHOOLS:**
- Child-centered
- Goal-oriented
- Opportunities to socialize

**SCHOOLS:**
- Safe and inclusive
- Quality instruction in code and language skills
- Learning time
- Material resources

**SCHOOLS:**
- Safe and inclusive
- Quality instruction
- Learning time
- Material resources

**SCHOOLS:**
- Opportunity to learn life and career skills
- Material resources

**SCHOOLS:**
- Social capital
- Resources

**SCHOOLS:**
- Social capital
- Resources

- Parenting skills
- Intra-family relations
- Family involvement

- Parenting skills
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- Parenting skills
- Intra-family relations
- Family involvement
Success accumulates in four ways

1. Biological embedding
2. Cumulative effects
3. Foundations for success
4. Selection
Educational PROSPERITY
A LIFE-COURSE APPROACH

PRE-NATAL
- Healthy pregnancy
- Healthy delivery

EARLY DEVELOPMENT
Ages 0 - 2
- Language development
- Cognitive development
- Physical development
- Self-regulation

- Nutrition
- No exposure to toxins
- Mother’s physical health
- Mother’s emotional health

HEALTH-CARE FACILITY:
- Prenatal care
- Primary health care

- Social capital
- Resources

PRE-SCHOOLS:
- Child-centered
- Goal-oriented
- Opportunities to socialize

- Social capital
- Resources

SCHOOLS:
- Safe and inclusive
- Quality instruction in code and language skills
- Learning time
- Material resources

- Social capital
- Resources

SCHOOLS:
- Safe and inclusive
- Quality instruction
- Opportunity to learn life and career skills
- Material resources

- Social capital
- Resources

LATE PRIMARY AND LOWER SECONDARY
Ages 10 - 15
- Educational attainment
- Academic achievement
- Health and well-being
- Engagement

- Parenting skills
- Intra-family relations
- Family involvement

SCHOOLS:
- Safe and inclusive
- Quality instruction
- Material resources

- Social capital
- Resources

UPPER SECONDARY
Ages 16 - 18
- School completion
- Ethical citizen
- Leadership skills
- Health and well-being
- Communication and interaction skills

- Parenting skills
- Intra-family relations
- Family involvement

SCHOOLS:
- Safe and inclusive
- Quality instruction

- Social capital
- Resources

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School Ready
Prosperity outcomes at age 5

**Awareness of Self and Environment**
a child's understanding of the world and his or her ability to make connections with home and community experiences.

**Social Skills and Approaches to Learning**
a child’s attentiveness during classroom activities and his or her ability to interact with peers while respecting the classroom rules.

**Cognitive Skills**
a child's basic math and pre-reading skills and his or her ability to solve problems.

**Language and Communication**
a child's understanding of spoken language and his or her ability to express thoughts and feelings.

**Physical Development**

- **Fine motor** - a child's ability to perform small movements that require hand-eye coordination.
- **Gross motor** - a child's ability to perform large movements that involve arms, legs, and body.
A four-year range of skills when children enter Grade 1

Responsive Tiered Instruction based on the five prosperity outcomes
From Learning-to-Read to Reading-to-Learn
Failure to thrive

Children who have not become successful readers by age 8 or 9 have flat growth trajectories throughout their school career.

Growth trajectories for mathematics performance, by age 8 reading quintile
The simple view of reading

‘The simple view of reading’ (Rose, 2006) has two critical, complementary dimensions:

**Code-related skills**
the ability to ‘decode’ (sound out) and recognize particular words, and

**Language skills**
being able to understand and interpret spoken and written language.
Traversing the Reading Mountain

Code-Related Skills

- Concepts About Print
- Phonological Awareness
- Letter Knowledge
- Reading Fluency

Supra-Phonemic Awareness (Large Units)
Phonemic Awareness (Small units)
Accuracy: Word Decoding and Spelling
Accuracy: Word Recognition and Spelling
Speed and Prosody
Traversing the Reading Mountain

Language Skills

- Vocabulary
- Receptive Language
- Expressive Language
- Written Language
## Traversing the Reading Mountain

<table>
<thead>
<tr>
<th>Code-Related Skills</th>
<th>Kindergarten</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
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</thead>
<tbody>
<tr>
<td>Concepts about print</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonological Awareness – Supra-Phonemic Awareness</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Phonological Awareness – Phonemic Awareness</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Letter Knowledge</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fluency – Word Decoding and Spelling</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fluency – Word Recognition and Spelling</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fluency – Speed &amp; Prosody</td>
<td>27</td>
<td></td>
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</tbody>
</table>
Traversing the Reading Mountain

**Code-Related Skills**
- Concepts about print: 22
- Phonological Awareness – Supra-Phonemic Awareness: 25
- Phonological Awareness – Phonemic Awareness: 19
- Letter Knowledge: 23
- Fluency – Word Decoding and Spelling: 86
- Fluency – Word Recognition and Spelling: 78
- Fluency – Speed & Prosody: 27
Engagement and Mental Health
<table>
<thead>
<tr>
<th></th>
<th>Engaged</th>
<th>Dis-Connected</th>
<th>Dis-Engaged</th>
<th>Struggling</th>
<th>Alienated</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>32%</td>
<td>26%</td>
<td>12%</td>
<td>23%</td>
<td>7%</td>
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<tr>
<td>Grades</td>
<td>8.5</td>
<td>8.0</td>
<td>7.4</td>
<td>4.4</td>
<td>4.0</td>
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<tr>
<td>Social Engagement</td>
<td>6.9</td>
<td>4.5</td>
<td>5.7</td>
<td>5.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Institutional Engagement</td>
<td>8.1</td>
<td>7.0</td>
<td>5.1</td>
<td>6.6</td>
<td>3.3</td>
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<tr>
<td>Intellectual Engagement</td>
<td>7.4</td>
<td>5.9</td>
<td>5.4</td>
<td>5.8</td>
<td>4.0</td>
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<tr>
<td>Positive Behaviour</td>
<td>9.4</td>
<td>9.2</td>
<td>6.4</td>
<td>8.7</td>
<td>4.5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcomes</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Suffering Anxiety</td>
<td>3%</td>
<td>8%</td>
<td>8%</td>
<td>7%</td>
<td>17%</td>
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<tr>
<td>Suffering Depression</td>
<td>2%</td>
<td>7%</td>
<td>9%</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>Victim of bullying</td>
<td>7%</td>
<td>13%</td>
<td>20%</td>
<td>12%</td>
<td>30%</td>
</tr>
<tr>
<td>Probability of Completion</td>
<td>91%</td>
<td>75%</td>
<td>61%</td>
<td>65%</td>
<td>28%</td>
</tr>
</tbody>
</table>
How is Educational Prosperity relevant to improving adolescent mental health?
Maintain a relentless focus on the Foundations for Success
At least 20% of Swedish children are ‘vulnerable’

About 19% of students reach 15 with only basic reading skills – in PISA this is Level 1, which corresponds about a Grade 2 reading level.

A further 22% are at Level 2, with skills comparable to students in Grade 4 or 5.
Literacy results have not improved over the last two decades
Inclusive Contexts

Inclusive schools are schools in which all students can succeed.
Developing an Inclusive School

- Monitor student engagement
- Identify advocates for disengaged students
- Help students become affiliated with school through clubs, sports, volunteer activities or other school events.
Developing an Inclusive School

Check-in daily with students that display behavioural problems.

Develop effective programs to deal with bullying, exclusion and sexual harassment.

Develop school-wide and individual interventions to help those suffering anxiety or depression.
Giving all children the opportunity to thrive

• Establish consensus on a set of goals for student learning and wellness based on *growth* or changes in student outcomes.

• Maintain a relentless focus on the Foundations for Success

• Monitor progress towards achieving goals with a life-course approach.
Thank You!

For further information please contact:

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(English)

(Spanish)

(French)

http://uis.unesco.org/en/blog/educational-prosperity-framework-helping-countries-provide-foundational-learning-all