The Hidden Side of High Academic Achievement: Affective Learning

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Why Do We Care About Affective Learning?

- Students in Korea, China, and Japan showed high academic achievement.
Why Do We Care About Affective Learning?

- But low learning interest (and low self-efficacy). **WHY?**
Why Do We Care About Affective Learning?

- Large gap in literacy and numeracy between school-years students and adults
- Low Affective Learning → Low participation rate in lifelong learning
Math Achievement & Affective Learning

- Source: PISA 2012, OECD
- The analysis is based on mathematics related survey.

- Learning Interest: I enjoy reading about mathematics/ I look forward to my mathematics lessons / I do mathematics because I enjoy it/ I am interested in the things I learn in mathematics.
- Self-Efficacy: How confident do you feel about having to do mathematics tasks?
Teachers & Students’ Learning Interest Self Efficacy
Teaching Methods

- How often have you encountered the following types of mathematics tasks during your time at school?
  - Working out from a <train timetable> how long it would take to get from one place to another.
  - Calculating how much more expensive a computer would be after adding tax.
  - Calculating how many square metrics of tiles you need to cover a floor.
  - Understanding scientific tables presented in an article.
  - Finding the actual distance between two places on a map with a 1:10,000 scale.
  - Calculating the power consumption of an electronic appliance per week.
  - Solving an equation like 3x+5=17.
Teachers’ Attitude toward Professionalism

In my school (School Survey)
- Mathematics teachers are interested in trying new methods and teaching practices.
- There is a preference among mathematics teachers to stay with well-known methods and practices.
- There is consensus among mathematics teachers that academic achievement must be kept as high as possible.
- There is consensus among mathematics teachers that it is best to adapt academic standards to the students’ levels and needs.
- There is consensus among mathematics teachers that the social and emotional development of the students is as important as their acquisition of mathematical skills and knowledge in mathematics classes.
- There is consensus among mathematics teachers that the development of mathematical skills and knowledge in students is the most important objective in mathematics classes.

Source: PISA 2012. OECD
## Teachers In General

<table>
<thead>
<tr>
<th>Completion of teacher education or training program (%)</th>
<th>Principals believing that the teaching profession is valued in society (%)</th>
<th>Teachers who report a high level of need to develop their ICT skills for teaching (%)</th>
<th>Teachers who report a high level of need to develop the skills to teach students with special needs (%)</th>
<th>Teachers who believe they can help their students to value learning (%)</th>
<th>Teachers who believe they can help their students to think critically (%)</th>
<th>Teachers who believe that the teaching profession is valued in society (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Korea</strong></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>96.1</td>
<td>89.6</td>
<td>24.9</td>
<td>36</td>
<td>78.3</td>
<td>63.6</td>
<td>66.5</td>
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<tr>
<td>87.8</td>
<td>44.2</td>
<td>25.9</td>
<td>40.6</td>
<td>26</td>
<td>15.6</td>
<td>28.1</td>
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<td><strong>Canada (Alberta)</strong></td>
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<td></td>
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<tr>
<td>98.3</td>
<td>68.7</td>
<td>9.3</td>
<td>8.7</td>
<td>79.2</td>
<td>82.2</td>
<td>47</td>
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<td></td>
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<tr>
<td>92.5</td>
<td>78.6</td>
<td>17.5</td>
<td>12.6</td>
<td>77.3</td>
<td>72.8</td>
<td>58.6</td>
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<td><strong>Netherlands</strong></td>
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<tr>
<td>91.5</td>
<td>47</td>
<td>14.9</td>
<td>10.7</td>
<td>70.2</td>
<td>77.8</td>
<td>40.4</td>
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<tr>
<td><strong>Sweden</strong></td>
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</tr>
<tr>
<td>89.9</td>
<td>9.5</td>
<td>25.5</td>
<td>19.8</td>
<td>76.6</td>
<td>75.1</td>
<td>5</td>
</tr>
<tr>
<td><strong>TALIS Average</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.8</td>
<td>44</td>
<td>18.9</td>
<td>22.3</td>
<td>80.7</td>
<td>80.3</td>
<td>30.9</td>
</tr>
</tbody>
</table>

* 출처: TALIS 2013, OECD
* % of teachers who reported ‘agree’ and ‘strongly agree’
# Teachers’ Self-Efficacy and Job Satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Teachers' Self Efficacy</th>
<th>Teachers' job satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>2.888</td>
<td>2.854</td>
</tr>
<tr>
<td>Japan</td>
<td>2.396</td>
<td>2.794</td>
</tr>
<tr>
<td>Canada (Alberta)</td>
<td>3.252</td>
<td>3.144</td>
</tr>
<tr>
<td>Finland</td>
<td>3.092</td>
<td>3.157</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.088</td>
<td>3.079</td>
</tr>
<tr>
<td>Sweden</td>
<td>3.147</td>
<td>2.843</td>
</tr>
<tr>
<td><strong>TALIS Average</strong></td>
<td><strong>3.210</strong></td>
<td><strong>3.009</strong></td>
</tr>
</tbody>
</table>

**Self-Efficacy:** Get students to believe they can do well in school work/ Help my students value learning/ Craft good questions for my students/ Control disruptive behavior in the classroom/ Motivate students who show low interest in school work/ Make my expectations about student behavior clear/ Help students think critically/ Get students to follow classroom rules/ Calm a student who is disruptive or noisy/ Use a variety of assessment strategies/ Provide an alternative explanation for an example when students are confused/ Implement alternative instructional strategies in my classroom

**Job Satisfaction:** The advantages of being a teacher clearly outweigh the disadvantages/ If I could decide again, I would still choose to work as a teacher/ I would like to change to another school if that were possible/ I regret that I decided to become a teacher/ I enjoy working at this school/ I wonder whether it would have been better to choose another profession/ I would recommend my school as a good place to work/ I think that the teaching profession is valued in society/ I am satisfied with my performance in this school/ All in all, I am satisfied with my job

* 출처: TALIS 2013, OECD
* 4 point scale
## Teachers’ Working Hours

<table>
<thead>
<tr>
<th>Country</th>
<th>Hours spent marking/correcting of student work</th>
<th>Hours spent on student counseling</th>
<th>Hours spent on general administrative work</th>
<th>Hours spent on communication and co-operation with parents or guardians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>3.9</td>
<td>4.1</td>
<td>6.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Japan</td>
<td>4.6</td>
<td>2.7</td>
<td>5.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Canada (Alberta)</td>
<td>5.5</td>
<td>2.7</td>
<td>3.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Finland</td>
<td>3.1</td>
<td>1.0</td>
<td>1.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.2</td>
<td>2.1</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.7</td>
<td>2.7</td>
<td>4.5</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>4.9</strong></td>
<td><strong>2.2</strong></td>
<td><strong>2.9</strong></td>
<td><strong>1.6</strong></td>
</tr>
</tbody>
</table>

* Source: TALIS 2013, OECD
* % of lower secondary education teachers who reported “agree” or “strongly agree”
Countries in green have a high average in principal involvement in decision making, while countries in red principals have lower than average.

* Source: OECD(2009). Creating effective teaching and learning environments: First results from TALIS.

* Administrative Leadership Index: Average of the indices for Accountable management and Bureaucratic management.

* Instructional Leadership Index: Average of the indices for Management-school goals, Instructional management and Direct supervision in the school.
Parents & Students’ Learning Interest Self Efficacy
Level of education mother has completed
Parents’ Support for Their Kids At Home

- Source: PISA 2012, OECD

- How often do you or someone else in your home do the following things with your child?
  - Discuss how well my child is doing at school.
  - Eat <the main meal> with my child around a table.
  - Spend time just talking to my child.
  - Help my child with his/her mathematics homework.
  - Discuss how my child is performing in mathematics class.
  - Obtain mathematics materials (e.g., applications, software, study guides etc) for my child.
  - Discuss with my child how mathematics can be applied in everyday life.
Parents’ Attitude toward Mathematics

- Source: PISA 2012, OECD

Parents think that
- It is important to have good mathematics knowledge and skills in order to get any good job in today’s world.
- Employers generally appreciate strong mathematics knowledge and skills among their employees.
- Most jobs today require some mathematics knowledge and skills.
- It is an advantage in the job market to have good mathematics knowledge and skills.
Implications 04
Implications

**Teachers**
- How to link Korean quality teachers to students’ affective learning
- Further studies are needed to examine out-of-classroom factors influencing affective learning

**Parents**
- Less pressure more support
- Parents’ attitudes toward mathematics

**Lifelong Education**
- Affective learning in school years encourage learners to continue even after K-16
- Continued learning help learners establish their careers and lives in the perspective of lifelong learning
THANK YOU!

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