Measuring Student Engagement as an Indicator of Student Agency and Voice within the Classroom Environment

November 8, 2019

Presenters: Stephen Murphy and Vicki Denmark
“If students are not engaged, there is little, if any, chance that they will learn what is being addressed in class.”

Heflebower, Marzano, & Pickering, 2011
The Highly Engaged Classroom: the Classroom Strategies Series
## Student Engagement Matters

<table>
<thead>
<tr>
<th>Disengaged</th>
<th>Engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>53% of US students (Gallup, 2018); steady decline from 5&lt;sup&gt;th&lt;/sup&gt; to 10&lt;sup&gt;th&lt;/sup&gt; grades</td>
<td>74% of 5&lt;sup&gt;th&lt;/sup&gt; grade students</td>
</tr>
<tr>
<td>Higher dropout rate</td>
<td>Lower dropout rate</td>
</tr>
<tr>
<td>700% more likely to be discouraged about their future</td>
<td>200% more likely to attend college</td>
</tr>
<tr>
<td>More likely to be disruptive, off-task, tardy or absent</td>
<td>Experience higher level of academic success, attendance, pro-social behaviors</td>
</tr>
<tr>
<td>More likely to become adults who place little value on active citizenship, lifelong learning, responsibility for self</td>
<td>Significant predictor of continuing motivation and commitment in their careers; higher overall performance in college</td>
</tr>
</tbody>
</table>
Survey Design

What is measured
Design Purpose

“The Student Engagement Survey’s primary purpose is to delve deeper into student’s learning experiences by collecting direct feedback from students regarding their level and quality of engagement in the learning process. In addition to elevating the importance of student voices, this survey provides additional information and actionable data for school staff to use to improve teaching and learning.”

-- Innovation Lab, Cognia
Three Domains

- Behavioral
- Cognitive
- Emotional

Types of Engagement

- Committed
- Compliant
- Disengaged

Levels

- Invested
- Immersed
- Strategic
- Ritual
- Retreatism
- Rebellion
## Three Domains of Student Engagement

<table>
<thead>
<tr>
<th>Behavioral</th>
<th>Cognitive</th>
<th>Emotional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive processing a student brings to academic tasks as well as the amount and type of strategies a student utilizes</td>
<td>Observable actions or participation while at school that is investigated through a student’s positive conduct, effort and participation</td>
<td>Feelings toward school, learning, teachers, and peers</td>
</tr>
<tr>
<td>Identification with academics, intrinsic/extrinsic motivation, and self-efficacy</td>
<td>Investment in learning, time on task, homework completion</td>
<td>Enjoyment of and sense of belonging to a school</td>
</tr>
<tr>
<td>Perceptions and beliefs associated with school and learning</td>
<td>Engaging in class activities, relevance of schoolwork, value of learning, etc.</td>
<td>Identification with school; feeling of connectedness</td>
</tr>
<tr>
<td>Behavior or effort in classroom</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Benefits of the Cognia Student Engagement Survey (SES)

• Domains can be measured holistically or separately to understand what students’ are saying about engagement
• Results lead to school/school district discussions/decision-making
• Helps with identification of engagement trends across a school or school district
• Can be administered several times a year to provide student voice opportunities
• Use SES data with other Cognia tools to understand engagement (families, parents, community)
Actions and Results
Instrument History and Use

- **Accountability SES 1.0**
  - Operational use in 2018-19 three state-wide implementations for ESSA accountably purposes
  - Field tested in (2016-17)
  - Use restricted for accountability purposes
  - For security, uses slightly different items than SES 2.0

- **Membership SES 2.0**
  - Operational 2019-2020
  - Pilot tested 2018-2019
  - Extremely high internal item correlations to domain construct
Methodology: SES v1

• Piloted in 2016-17 school year

• Total sample: 20,494 students across three states
  • Alabama, South Carolina and North Dakota

• School Types: High (6,514), Middle (6,880) and Elementary (7,100)

• Disaggregation by: School Level (Elementary, Middle and High), Gender, Race/Ethnicity, Special Needs, Free/Reduced Lunch, English Learner
### Student Engagement Survey Reliability (SES 1.0): *

<table>
<thead>
<tr>
<th>School Type</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>0.80</td>
</tr>
<tr>
<td>Middle School</td>
<td>0.80</td>
</tr>
<tr>
<td>Elementary School</td>
<td>0.67</td>
</tr>
</tbody>
</table>

*Reliability was tested using Cronbach's Alpha, with values of .7 and above representing adequate internal consistency.
Student Engagement Survey Construct Validity (SES 1.0): *

<table>
<thead>
<tr>
<th>SCHOOL TYPE</th>
<th>RMSR</th>
<th>RMSEA</th>
<th>GFI</th>
<th>CFI</th>
<th>NFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>0.0132</td>
<td>0.0339</td>
<td>0.9795</td>
<td>0.9420</td>
<td>0.9341</td>
</tr>
<tr>
<td>Middle School</td>
<td>0.0133</td>
<td>0.0342</td>
<td>0.9770</td>
<td>0.9385</td>
<td>0.9341</td>
</tr>
<tr>
<td>Elementary School</td>
<td>0.0095</td>
<td>0.0259</td>
<td>0.9860</td>
<td>0.9422</td>
<td>0.9311</td>
</tr>
</tbody>
</table>

*Construct validity was examined using confirmatory factor analysis (CFA).
All values in the Table represent good fit of the data to the model across all of the fit indices.
### Committed Level Changes (v1)

<table>
<thead>
<tr>
<th>School Comparisons</th>
<th>Behavior</th>
<th>Cognitive</th>
<th>Emotional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary to Middle</td>
<td>-19%</td>
<td>-17%</td>
<td>-27%</td>
</tr>
<tr>
<td>Elementary to High School</td>
<td>-17%</td>
<td>-9%</td>
<td>-14%</td>
</tr>
<tr>
<td>Middle to High School</td>
<td>2%</td>
<td>8%</td>
<td>14%</td>
</tr>
</tbody>
</table>
### Middle School Students (v1)

<table>
<thead>
<tr>
<th>School Type</th>
<th>Behavior Committed-level</th>
<th>Cognitive Committed-level</th>
<th>Emotional Committed-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>88%</td>
<td>61%</td>
<td>70%</td>
</tr>
<tr>
<td>Middle</td>
<td>69%</td>
<td>43%</td>
<td>42%</td>
</tr>
<tr>
<td>High School</td>
<td>71%</td>
<td>52%</td>
<td>56%</td>
</tr>
</tbody>
</table>

- Elementary school reports the highest levels of engagement for students’ K-12 experience
- Committed level of engagement significantly drops from elementary to middle school across all domains
Methodology: SES 2.0

- Completed in Summer 2019
  - 20 institutions participated
  - Geographically dispersed
  - Elementary, Middle and High Schools
  - n= 2,348 students
Data and Reporting

• Accountability Focus
  • Use of Results in Accountability Model
  • School Quality Indicator
  • Reporting
    • Engagement Levels

• Improvement Focus
  • School focus with comparisons
  • Total levels of commitment, compliant, disengaged
  • Engagement and Level
  • Subgroup results
Data and Reporting

School Engagement Profile Summary

<table>
<thead>
<tr>
<th>Engagement Domains</th>
<th>Levels of Engagement</th>
<th>Committed</th>
<th>Compliant</th>
<th>Disengaged</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Behavioral</td>
<td>195</td>
<td>68%</td>
<td>48</td>
<td>17%</td>
<td>19</td>
</tr>
<tr>
<td>Cognitive</td>
<td>231</td>
<td>81%</td>
<td>51</td>
<td>18%</td>
<td>3</td>
</tr>
<tr>
<td>Emotional</td>
<td>220</td>
<td>77%</td>
<td>28</td>
<td>10%</td>
<td>37</td>
</tr>
</tbody>
</table>

Total number of students who responded = 285
Taking Action

- Through the lens of learners
- Data disaggregation
  - District
  - School
  - Classroom
- Disengaged
- Compliant
- Committed
Questions

Thank you for your attendance and interest.

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