Using the MSS to Create Youth Profiles of Developmental Skills, Supports, & Challenges

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• MSS is a rich database
• Data on student background provides unique access to investigate unique group differences
• Large data base that provides access to deeply investigate unique communities, and to examine variability within a single group
• Population survey of students in grades 5, 8, 9, 11
• Three forms of the survey (5th, 8th, 9th/11th)
• 336 questions on the 9th/11th grade forms
• Optional for schools (84% of public districts in 2013)
• Administered every 3 years (2013 most recently)
• 162,034 students
MSS 2013 Participants (excluding Mpls)

- White: 73%
- Asian: 3%
- Black: 5%
- Multiple: 7%
- Latino: 7%
- Hmong: 3%
- Somali: 1%
- American Indian: 1%
• Too many variables (336)
• Item-level data are less meaningful at program, system, and policy levels
• Many districts have limited capacity to work with large databases
• Student group disaggregation is promising
• Composite measures are desired
Our Process
• Using a positive youth development framework and ecological models of development, we identify items related to research-based constructs
• Confirmatory factor analysis is employed to test model-data fit
• Items are calibrated using the Rasch family of measurement models
• Scores are estimated and transformed to support score interpretation
• Evaluating the ecological model of youth development
• Investigating components of youth development
• Contributing to the developmental skills (assets) framework research
• Investigating substantive issues related to youth development
• Investigating racial and ethnic variation
• Youth have an inherent capacity for positive development
• That is enabled and enhanced through multiple meaningful relationships, contexts, and environments
• Where community is a critical delivery system
• And youth are major actors in their own development
The work in this area is exploring many aspects of context, all which might influence positive youth development, including success in school and beyond – providing useful information for strong policy development and positive youth development programming.
Ecology of Youth Development

- Student
- School
- Family
- Peers
- Neighborhood - Community
- Society
Our Current Efforts
• Demonstrate how items can be used to create meaningful and useful measures to monitor school and district-wide efforts and special programs

• Respond to the efforts of Generation Next to measure aspects of social-emotional learning (providing support for the 6th goal area)

• Provide composite scores to schools regarding developmental skills, supports, and challenges
<table>
<thead>
<tr>
<th>Developmental Skills</th>
<th>Developmental Supports</th>
<th>Developmental Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commitment to Learning</td>
<td>1. Empowerment*</td>
<td>1. Bullying</td>
</tr>
<tr>
<td>2. Positive Identity*</td>
<td>2. Supported</td>
<td>2. Bullied</td>
</tr>
<tr>
<td>*DAP</td>
<td></td>
<td>4. Mental Distress</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Family Violence</td>
</tr>
</tbody>
</table>
To support interpretation, the score scale was converted to a scale that generally ranges from a low of 5 to a high of 15.

A score of 10 is the mid-point of the scale. It describes the point at which a development skill or support goes from weak to strong or negative to positive.

A score of 10 indicates that the skill, support, or challenge is more true for a student than not.
Learning about MN Students
• 10 is scale mid-point
• Second vertical bar is MN average (11.4)

• Overall HIGH CtL
• 87% report positive CtL
• CtL decreases for some from grade 5 to 8
• Student groups vary
• Overall, PI is moderate to high overall (11.1)
• 79% report positive PI
• PI decreases for most from grade 5 to 8
• Student groups vary
• Overall, SC is moderate to high
• 85% report positive SC
• SC decreases for most from grade 5 to 8
• Student groups vary
Commitment to Learning

- Asian
- Hmong
- Somali
- Black
- White
- Latino
- Multiple
- Am Indian

Grade 5 8 9 11
Empowerment

Grade 5 8 9 11

White
Somali
Black
Asian
Latino
Multiple
Am Indian
Hmong
• Disparities are defined in the next few slides as group differences from the State Average Score.
• Each bar represents the number of standard deviations difference between youth in each group and the state average.
• We generally interpret these differences as being:
  0.2 or less = very small
  0.2 to 0.4 = small
  0.4 to 0.6 = moderate
  0.6 + = large
Disparities in Commitment to Learning

Effect Size: Difference from MN Average

- Hmong
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Am Indian

Disparities in Commitment to Learning
Disparities in Positive Identity

Effect Size: Difference from MN Average

- Hmong
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Am Indian
Disparities in Social Competence

- Am Indian
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Hmong

Effect Size: Difference from MN Average
Disparities in Empowerment

Effect Size: Difference from MN Average

- Am Indian
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Hmong

Disparities in Empowerment
Disparities in Supported

Effect Size: Difference from MN Average

- Hmong
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Am Indian
Disparities in Teacher/School Support

Effect Size: Difference from MN Average

- Hmong
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Am Indian
Disparities in Mental Distress

Effect Size: Difference from MN Average

- Hmong
- Somali
- Latino
- White
- Multiple
- Black
- Asian
- Am Indian

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• Since we use a common effect size – the difference between groups in standard deviations, we can compare disparities in developmental skills with those we see in achievement (achievement gaps).

• Similar data was obtained for 2013 MN Student Survey and the 2013 state MCA tests in Reading and Mathematics.

• We see much larger disparities in achievement than we do with Developmental Skills.
8th Grade MCA & PI Disparities v. White

-1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4

- Latino
- Black
- Asian
- Am Indian

Positive Identity

Reading  Math  PI

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Equipped for Learning
To be equipped means that, on average, the student
• recognizes characteristics associated with the
developmental skill as being very much or extremely like them;
• agrees or strongly agrees with values, behaviors, and characteristics defining each skill;
• engages in relevant skill-based behaviors most or all of the time.
Developmental Skills

Positive Identity
- 4% have 0 Skills
- 6% have 1 Skill
- 5% have 2 Skills
- 39% have 3 Skills

Social Competence
- 5% have 0 Skills
- 12% have 1 Skill
- 12% have 2 Skills
- 39% have 3 Skills

Commitment to Learning
- 17% have 0 Skills
- 21% have 1 Skill
- 23% have 2 Skills
- 39% have 3 Skills
Proportion Equipped: Commitment to Learning

Grade

Hmong
Asian
Black
Somali
White
Latino
Multiple
Am Indian

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Proportion Equipped: Social Competence

Grade

Somali
Asian
White
Black
Hmong
Multiple
Latino
Am Indian
Proportion Equipped: Positive Identity

Grade 5 8 9 11

- Somali
- Black
- White
- Latino
- Asian
- Multiple
- Hmong
- Am Indian
Unending Questions...
Equipped Skills & Grades Earned in School
Equipped Skills & Afterschool Participation

![Chart showing the relationship between the number of skills equipped and the percentage in afterschool activities for different grades.]

- Grade 5
- Grade 8
- Grade 9
- Grade 11
Disparities in After-School Participation

- Teacher/School Support
- Social Competence
- Supported
- Positive Identity
- Empowerment
- Commitment to Learning
- Grades
- Mental Distress
Of students in grades 8-11 in St. Paul:

- About 31% report to work at least 1 hour a week (of these, 22% work more than 10 hours/week).

- Of those working, 77% participate in after-school activities.

- Of those not working, 70% participate in after-school activities.

Does working affect after-school participation?
Which of the following best describes you?

- Heterosexual (straight)
- Bisexual
- Gay or lesbian
- Not sure (questioning)
<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual (straight)</td>
<td>95.1%</td>
<td>92.1%</td>
<td>72,798</td>
</tr>
<tr>
<td>Bisexual</td>
<td>1.3%</td>
<td>4.4%</td>
<td>2,223</td>
</tr>
<tr>
<td>Gay or lesbian</td>
<td>1.0%</td>
<td>0.7%</td>
<td>655</td>
</tr>
<tr>
<td>Not sure (questioning)</td>
<td>2.6%</td>
<td>2.7%</td>
<td>2,082</td>
</tr>
<tr>
<td>Total</td>
<td>38,955</td>
<td>38,803</td>
<td>77,758</td>
</tr>
</tbody>
</table>
Disparities: Sexual Orientation

-1.0 -0.8 -0.6 -0.4 -0.2 0.0

Commit to Learning
Positive Identity
Social Competence
Empowerment
Supported
Tchr/School Support

-1.0  -0.8  -0.6  -0.4  -0.2  0.0

Disparities: Sexual Orientation

Questioning  Gay or lesbian  Bisexual
Disparities: Sexual Orientation
During the last 12 months, have you used marijuana?
During the last 12 months, have you used marijuana?
During the last 12 months, have you used marijuana?
I feel safe at school.
I feel safe at school.
I feel safe at school.