

Assessing Social Emotional Skills as Early Warning Indicators for Academic Performance and Graduation Rates

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Objective

Demonstrate how resiliency skills relate to academic, career, and personal/social development

Demonstrate how resiliency skills serve as an early warning of high school success

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Resiliency Skills

- Building Academic Confidence
- Managing Academic Stress
- Promoting Well-Being
- Increasing School Motivation
- Valuing Importance of School
- Establishing Relational Connections

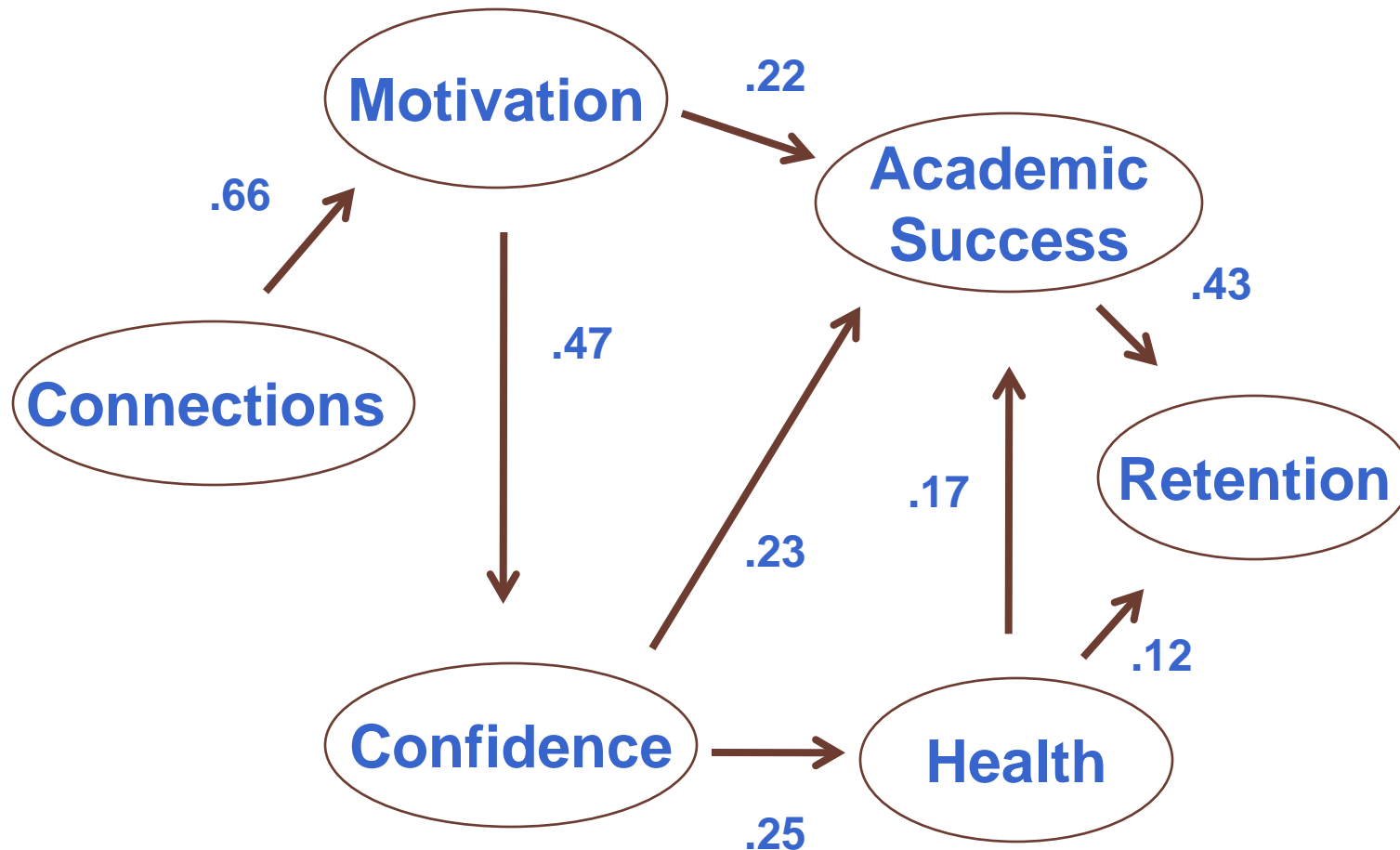
Interpreting Effect Sizes

$\beta > .10$ is a small effect

$\beta > .30$ is a medium effect

$\beta > .50$ is a large effect

Resiliency & School Success



Objective

Demonstrate how resiliency skills relate to academic, career, and personal/social development

Demonstrate how resiliency skills serve as an early warning of high school success

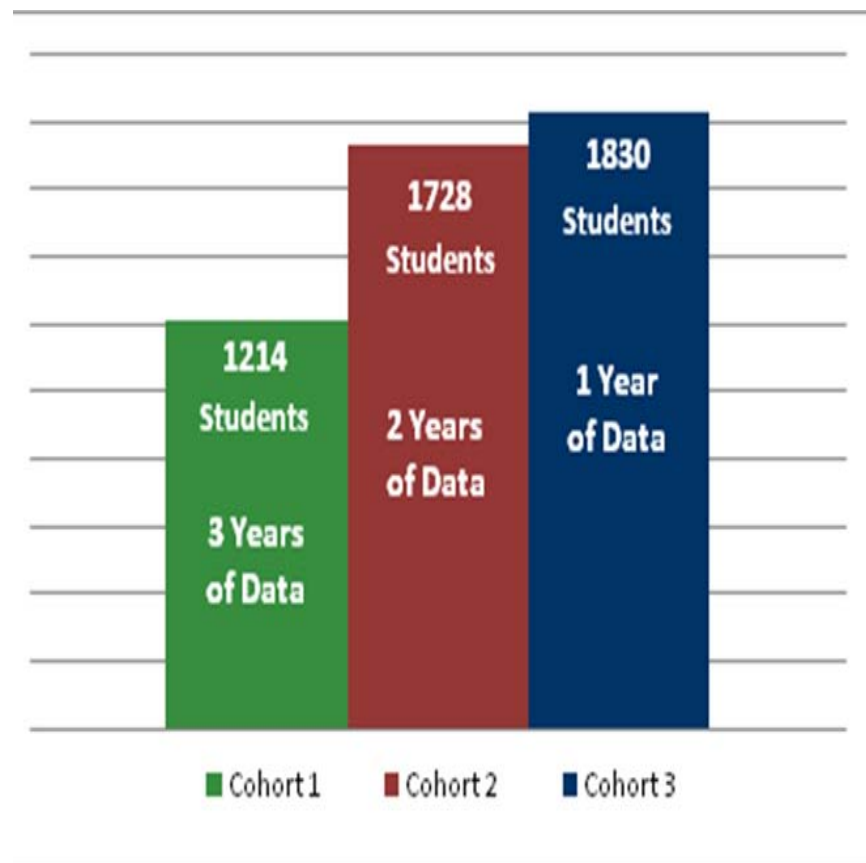
Purpose of Studies 1- 3

- Evaluate whether resiliency skills are predictive of future academic performance.
- If successful, then resiliency skills could provide districts and high schools with an early-warning system to identify students most at-risk and what types of risk a student may be experiencing
- This information could be used by district personnel in: tiered interventions, guidance/teaching partnerships, differentiated instruction, other initiatives aimed at supporting the whole child.

Sample

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- 4,772 students participating in a summer transition program prior to entering 9th grade in
- 2007 (Cohort 1), 2008 (Cohort 2), or 2009 (Cohort 3)



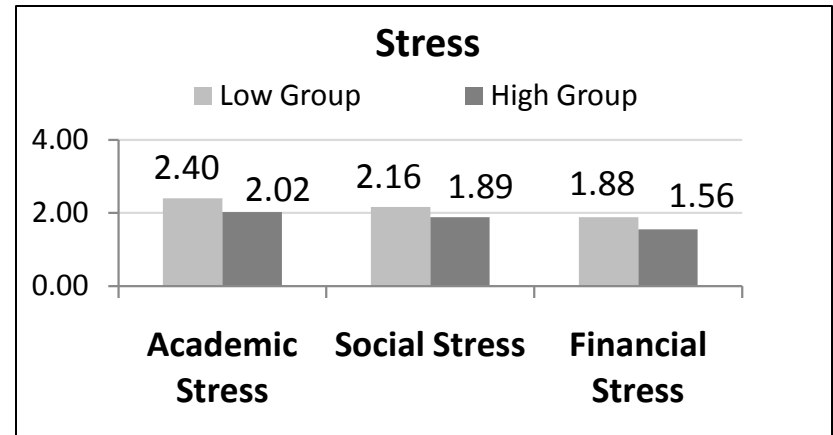
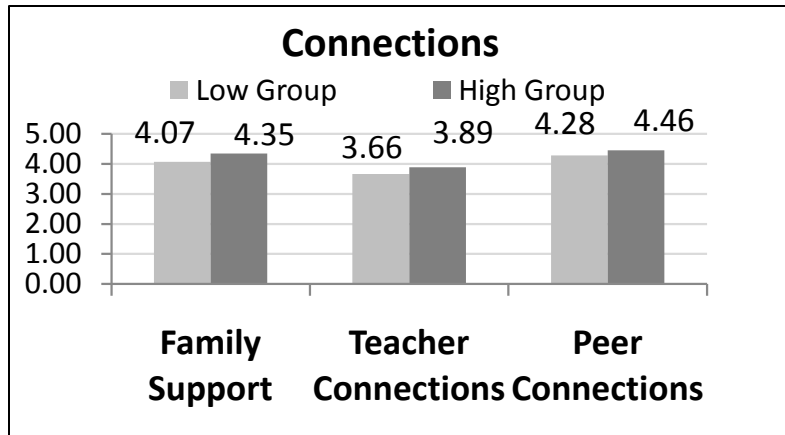
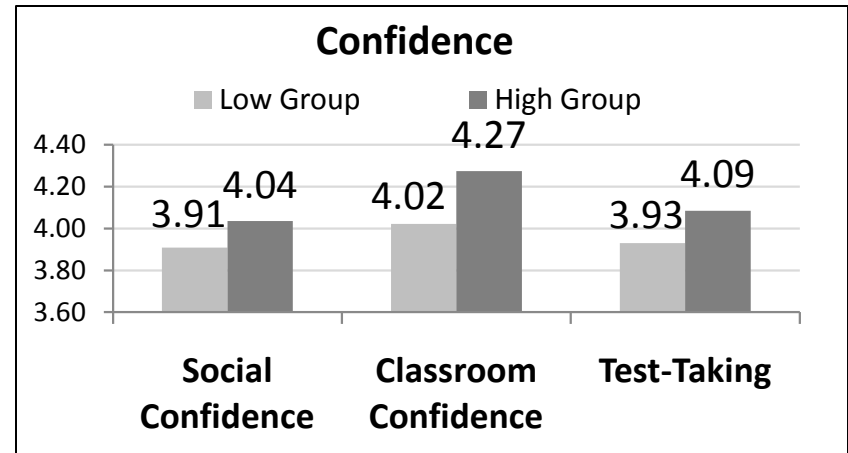
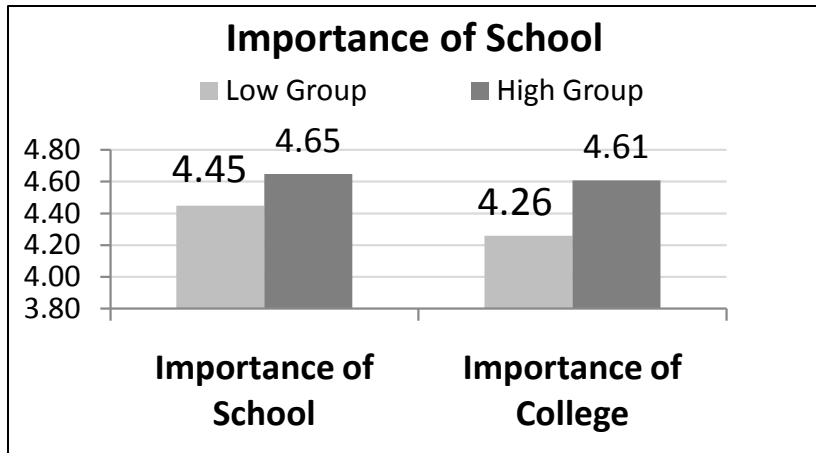
Academic Performance Data

Indicator	Data Type	
Achievement	Math/Reading	Scale Scores and Proficiency Levels
	G.P.A.	Semester and Cumulative
Engagement	Attendance	Number of Days Enrolled/ Days Present
	Citizenship	Suspensions & Expulsions
	Tardy Rate	Tardy Rates
Graduation	Continuing Enrollment	Leave Code (or Disenrollment Code)
	On-Track to Graduate	Number of Accrued Credits

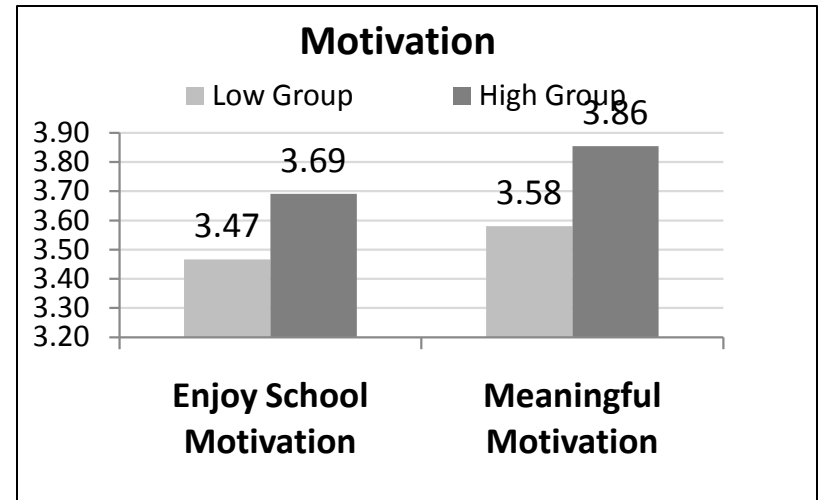
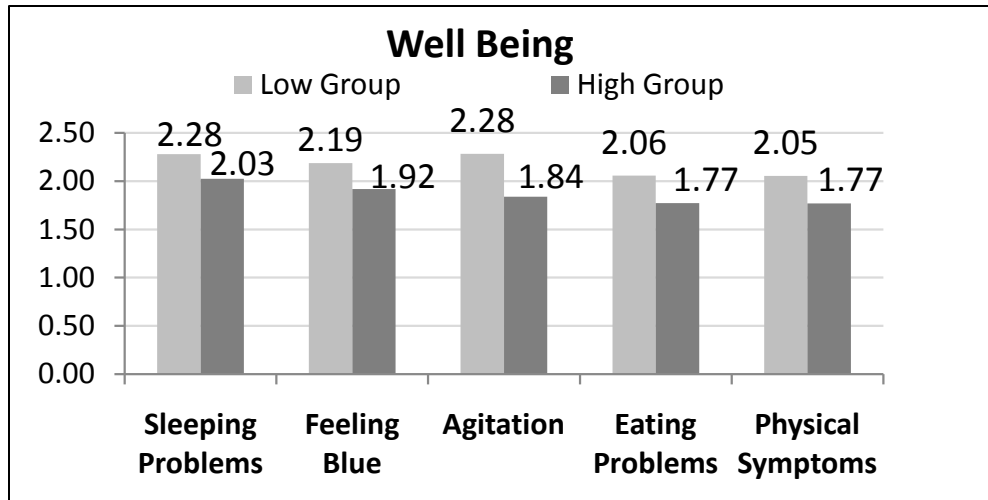
Early-Warning Indicators (Studies 1&2)

- Created single standardized indicator by averaging:
 - Attendance – Days present
 - Behavior - Suspension reports
 - Course Performance – Cumulative GPA
- Divided the sample:
 - High Success group: comprised of the upper 25% of the distribution
 - Low Success group: comprised of the lower 25% of the distribution

Study 1: Results



Study 1: Results (Cont.)



Conclusions

- Resiliency skills can be used to predict future high school academic success.
- Can profile whether and which types of resiliency may be at issue for each student.

Study 2: Establishing an Early Warning Indicator for High School Success

- Purpose: To determine whether a subset of the 18 subscales could be combined in order to create an early warning of school failure.
- Utilizing Discriminant analysis, 4 of the resiliency subscales were determined to significantly differentiate the High and Low Success Groups:
 - **Importance of College**
 - **Agitation**
 - **Academic Stress**
 - **Meaningfulness of School**

Study 2: Results

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- Four subscales showed ability to predict:
 - 52% Low Success
 - 76% High Success
- Predictability increased in accuracy for Low Success to 89% for 11th grade students (2007 cohort)
- Predictability for High Success most accurate at start of 9th grade; decreased over time

	Predicted Group	
Actual Group	Low Success Group	High Success Group
Low Success Group		
2009 Cohort	21%	11%
2008 Cohort	63%	19%
2007 Cohort	89%	13%
High Success Group		
2009 Cohort	5%	95%
2008 Cohort	30%	70%
2007 Cohort	80%	20%

Study 3: Establishing an Indicator of Dropout Risk

- Purpose to determine if a single indicator of a *dropout risk* could be created by assessing students' progress towards high school graduation.
- A **Progression Towards Graduation Measure** was created based on enrollment status and accumulation of credits towards graduation.
 - Unsuccessful group: (46.6% of our sample) Students failing an average of 2 or more courses per year
 - Successful group: (53.4% of our sample) Students who were enrolled and passing 93% of all courses

Study 3: Establishing Indicator of Dropout Risk

- Using Discriminant Analysis, we developed a prediction formula by examining a correlation matrix to determine how each resiliency subscale predicted Academic Success or Failure.
- The combination of subscales we found to be most predictive are:
 - **Importance of College**
 - **Meaningful Motivation**
 - **Classroom Confidence**
 - **Physical Symptoms (negative)**
 - **Academic Stress (negative)**

Study 3: Results

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Prediction Score	Probability of Academic Success	Probability of Academic Failure
-4	15%	85%
-3	21%	79%
-2	30%	70%
-1	40%	60%
0	50%	50%
+1	61%	39%
+2	71%	29%

- Able to predict academic status of 60% Unsuccessful students and 58% Successful students, for total accuracy of 58.7%
- When students scored unusually low, those scores are highly predictive of academic failure.

Summary of Conclusions

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- Academically successful students reported higher resiliency skills than students who are failing academically.
- The resiliency skills were able to differentiate high from low success groups of students, which allows educators to tailor support services to specific types of resiliency skills.
- Five of the resiliency skills – Importance of College, Meaningful Motivation, Classroom Confidence, Physical Symptoms, and Academic Stress – were found to be most predictive of academic achievement or failure.



Providing Applications of Resiliency Research for Educators

Assessing Resiliency

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- ScholarCentric has published the resiliency assessments, now available to districts to implement as part of a comprehensive system of early warning indicators
- ***Success Highways Revving Up Resiliency Assessment:***
 - Online or print delivery
 - Grades 6-12 (most often 7th – 10th grade)
 - 108 survey questions
 - About 20 minutes to complete
- Automated scoring tools and reports
- District, school, classroom, and individual results

Assessing Resiliency to predict Academic Success or Failure

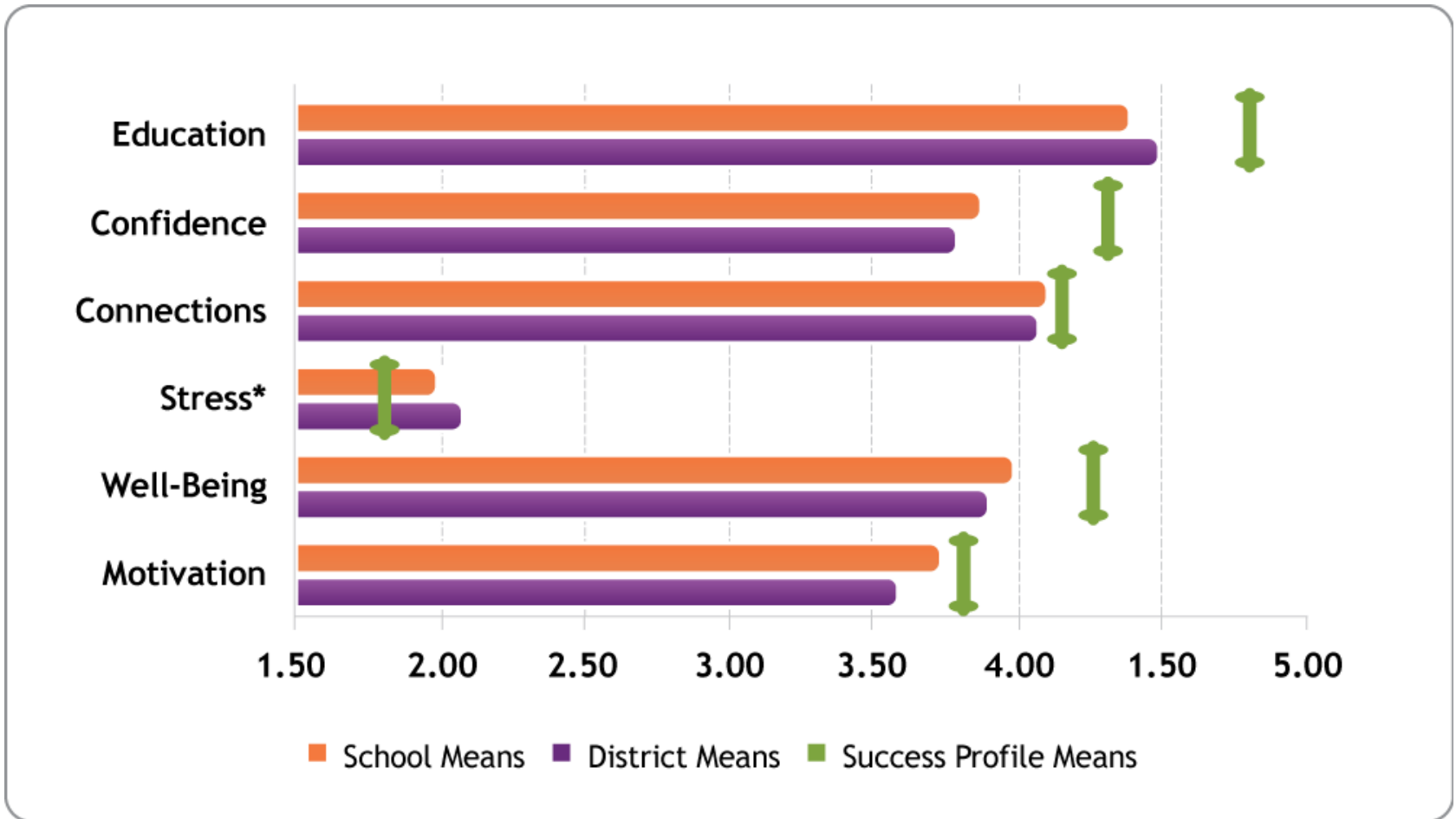
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Based on Dr. Solberg's longitudinal research, reports include information about student performance as they relate to

- **Success Profile score:** score indicated by students who performed at the top 25% of their class up to 3 years later
- **Risk Profile score:** score indicated by students who performed at the bottom 25% of their class up to 3 years later
- **Academic Risk Index Score:** a composite measure of each student's risk level for future academic failure and likelihood of dropping out/failing

Early-Warning Reports

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Early-Warning Reports

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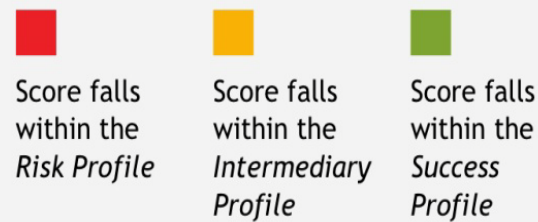
Early-Warning Reports

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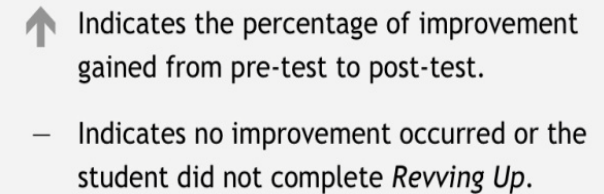
Academic Risk Index Key



Academic Profile Scores



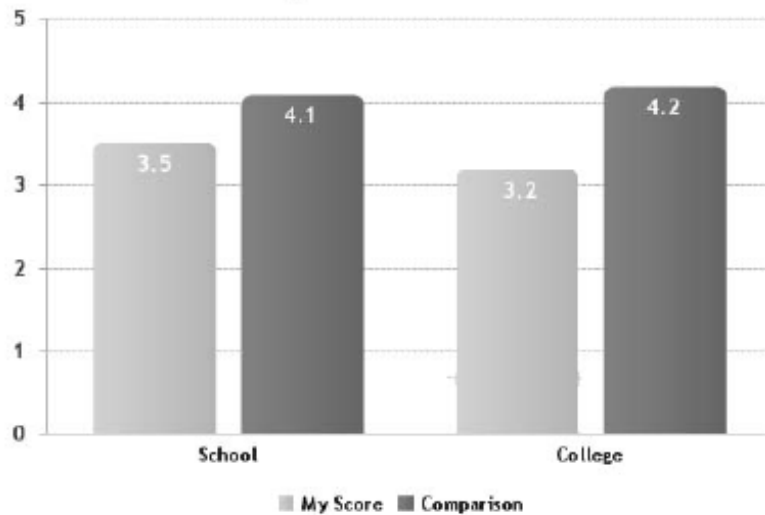
Improvement Gains



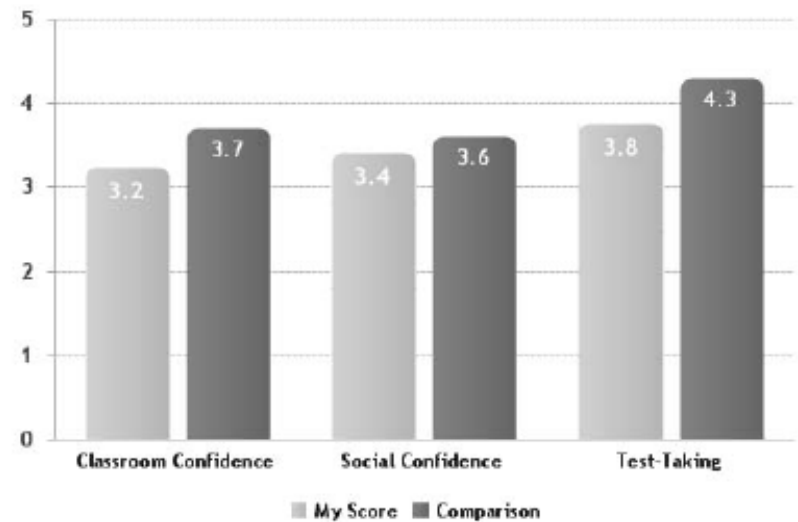
Student ID	Academic Risk Index	Education	Confidence	Connections	Stress	Well-Being	Motivation
603401							
605322							
607790							
611037							
614989							

Revving Up Student Report

Importance of School

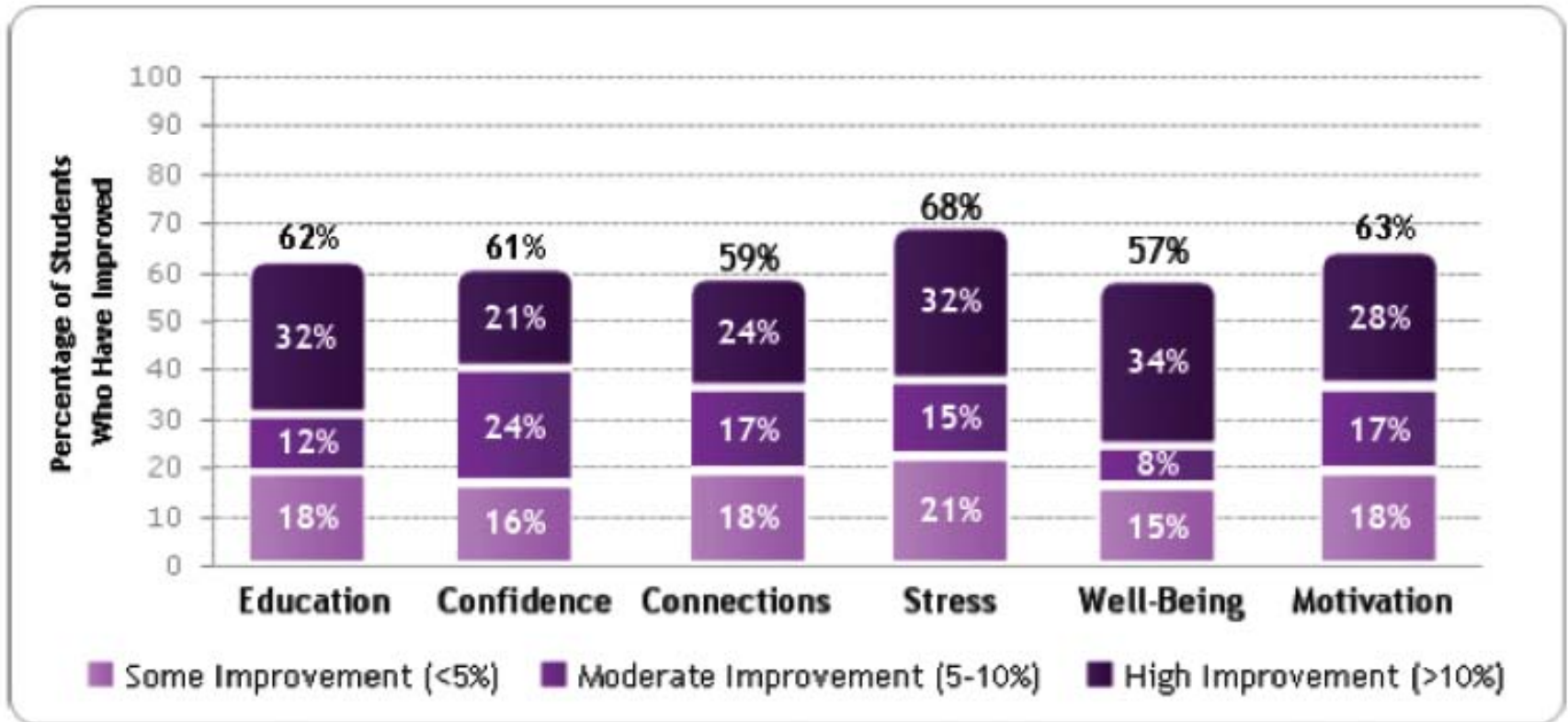


Confidence



Percentage of Resiliency Improvement

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Post Test Data Reports

Academic Risk Index Key



Academic Profile Scores



Improvement Gains

- ↑ Indicates the percentage of improvement gained from pre-test to post-test.
- Indicates no improvement occurred or the student did not complete *Revving Up*.

Student ID	Academic Risk Index*	Education	Confidence	Connections	Stress	Well-Being	Motivation
601009664		↑ 10%	↑ 2%	↑ 6%	↑ 5%	↑ 36%	↑ 13%
601010508		↑ 25%	↑ 3%	↑ 7%	↑ 21%	–	↑ 25%
602009728		↑ 3%	↑ 3%	–	–	↑ 5%	↑ 8%
602011102		↑ 4%	↑ 1%	↑ 4%	↑ 3%	↑ 5%	–
602028520		–	↑ 9%	↑ 34%	–	↑ 28%	↑ 2%

Questions and Answers

For more information

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