

# Associations between High School Students' Social-Emotional Competencies and Their High School and College Academic and Behavioral Outcomes in the Commonwealth of the Northern Mariana Islands

This study addresses the need expressed by education stakeholders in the Commonwealth of the Northern Mariana Islands to better understand their high school students' social-emotional competencies and how those competencies might be associated with students' academic and behavioral outcomes in high school and college. Social-emotional competencies refer to the knowledge, beliefs, and behaviors that help students recognize and manage their emotions, build positive relationships, and make responsible decisions. In May 2019 grade 11 and 12 students who were enrolled in high schools within the Commonwealth of the Northern Mariana Islands Public School System responded to survey questions regarding their self-management, growth mindset, self-efficacy, sense of belonging, and social awareness using a 5-point scale, with higher scores reflecting greater social-emotional competencies. The study found that high school students and high school students who went on to attend Northern Marianas College scored highest in self-management and lowest in self-efficacy. High school students with higher growth mindset or self-efficacy scores had higher high school grade point averages and grade 10 ACT Aspire math and reading scale scores. Higher self-efficacy scores were also associated with fewer days absent from high school. Students with higher social awareness scores had lower high school grade point averages. Among the high school students who went on to attend college at Northern Marianas College, higher growth mindset scores were associated with higher first semester college grade point averages, after student characteristics were controlled for. None of the four other social-emotional competency domains was associated with any of the college academic or behavioral outcomes.

## Why this study?

Education stakeholders in the Commonwealth of the Northern Mariana Islands (CNMI) Public School System and Northern Marianas College are interested in examining the nonacademic, or social-emotional, competencies that support student learning. A previous Regional Educational Laboratory (REL) Pacific study found that many students in the CNMI might be unprepared for college when they graduate from local public high schools;<sup>1</sup> a second REL Pacific study found that students were more likely to be placed into credit-bearing math courses if they had better high school academic preparation.<sup>2</sup> In reviewing findings from these studies, education leaders in the Public

1. Herman, P., Carreon, D., Scanlan, S., & Dandapani, N. (2017). *Using high school data to understand college readiness in the Northern Mariana Islands* (REL 2017–268). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Pacific. <https://eric.ed.gov/?id=ED573812>.
2. Herman, P., Scanlan, S., & Carreon, D. (2017). *Comparing enrollment, characteristics, and academic outcomes of students in developmental courses and those in credit-bearing courses at Northern Marianas College* (REL 2017–269). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Pacific. <https://eric.ed.gov/?id=ED573813>.

School System and Northern Marianas College noted that other research has shown that strengthening students' social-emotional competencies plays a role in promoting students' high school and college academic and behavioral outcomes.<sup>3</sup> These education leaders partnered with REL Pacific on a study to investigate students' average social-emotional competencies and the associations between these competencies and students' high school and college academic and behavioral outcomes after high school and college student characteristics were controlled for. Findings from this study could inform practices to improve students' high school and college outcomes in the CNMI.

### What was studied and how?

This study examined the extent to which high school students' social-emotional competencies are associated with their high school and college academic and behavioral outcomes. High school students' social-emotional competency scores were generated using student responses to a social-emotional competencies survey.

The social-emotional competency domains included in the survey were self-management, growth mindset, self-efficacy, sense of belonging, and social awareness. Response options ranged from 1 to 5 on a Likert scale, with higher scores corresponding to greater self-reported social-emotional competency.

High school academic outcomes included grade point average, grade 10 ACT Aspire math scale scores, and grade 10 ACT Aspire reading scale scores.

High school behavioral outcomes included number of days absent from at least one course.

College academic outcomes included first semester college grade point average, enrollment in developmental math, enrollment in developmental English, and completion of all attempted credits in the first semester.

The college behavioral outcome examined was persistence into a second semester.

The study addressed four research questions:

1. What were the high school students' scores for each of the social-emotional competency domains?
2. To what extent were social-emotional competency scores associated with students' high school academic and behavioral outcomes, after high school student characteristics were controlled for?
3. What were the scores of high school students who went on to attend college for each of the social-emotional competency domains?
4. To what extent were social-emotional competency scores associated with students' early college academic and behavioral outcomes, after college student characteristics were controlled for?

The CNMI Public School System and Northern Marianas College provided data for the study. The study team created two analytic samples for this study. The first sample included 439 students who were in grade 11 or 12 at a Commonwealth of the Northern Mariana Islands public high school during the 2018/19 academic year, who took the social-emotional competence survey in May 2019, and whose survey results could be linked to CNMI Public

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3. Carneiro, P., Crawford, C., & Goodman, A. (2007). *The impact of early cognitive and non-cognitive skills on later outcomes*. Centre for the Economics of Education. <https://eric.ed.gov/?id=ED530081>. Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>.

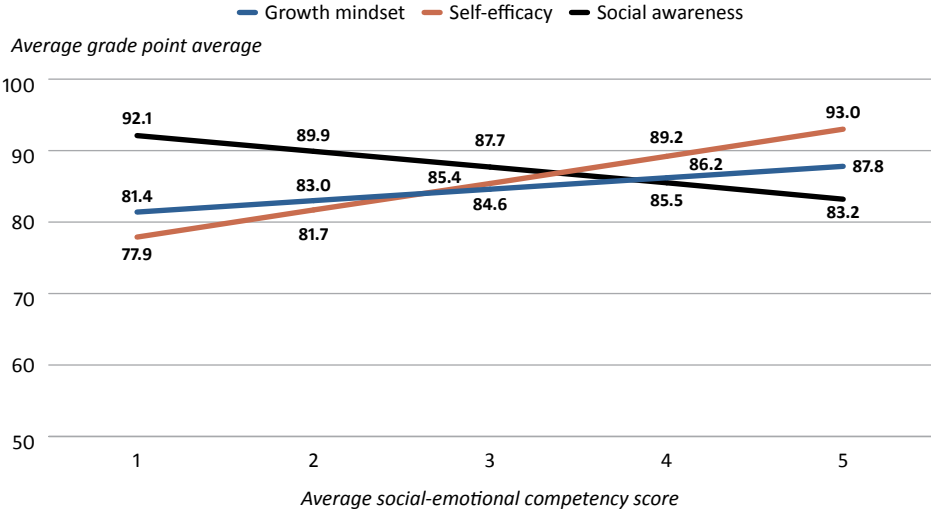
School System administrative data. The second sample included 82 students from the first sample who graduated from high school in spring 2019, who enrolled at Northern Marianas College during the fall 2019 semester, and whose high school and college data could be linked. Descriptive statistics were used to depict the students’ social-emotional competencies and high school and college academic and behavioral outcomes. Regression analyses were used to determine the association between social-emotional competencies and high school and college academic and behavioral outcomes after student characteristics were controlled for. To illustrate the study findings, researchers calculated predicted means for the outcome variables across different levels of the predictor variables, while controlling for other relevant student characteristics.

**Findings**

This section summarizes the study’s key findings.

- **High school students scored highest in self-management and lowest in self-efficacy.** High school students, on average, scored above the midpoint on each social-emotional competency domain.
- **High school students with higher growth mindset or self-efficacy scores had higher high school grade point averages, while students with higher social awareness scores had lower high school grade point averages.** After high school student characteristics were controlled for, students with an average score of 5 on self-efficacy had an average grade point average of 93.0, and students with an average score of 5 on growth mindset had an average grade point average of 87.8. In contrast, students with an average score of 5 on social awareness had a lower average high school grade point average of 83.2 (figure 1).
- **High school students with higher growth mindset or self-efficacy scores had higher grade 10 ACT Aspire math and reading scale scores.** After high school student characteristics were controlled for, students with an average score of 1 on growth mindset had an average grade 10 ACT Aspire math scale score of 416.7 and

**Figure 1. High school students who scored a 5 on growth mindset or self-efficacy had a higher grade point average than students who scored a 1, while students who scored a 1 on social awareness had a higher grade point average than students who scored a 5**



Note: n = 433. Scale scores in each domain range from 1 to 5, and higher scores reflect greater social-emotional competency.  
 Source: Authors’ analysis of linked May 2019 survey data and administrative data from the Commonwealth of the Northern Mariana Islands Public School System for students who had available high school grade point average data and who were enrolled in grade 11 or 12 in one of the five participating high schools in 2018/19.

an average grade 10 ACT Aspire reading scale score of 414.9. Students with an average score of 5 on growth mindset had an average grade 10 ACT Aspire math scale score of 421.4 and an average grade 10 ACT Aspire reading scale score of 420.9. Students with an average score of 1 on self-efficacy had an average grade 10 ACT Aspire math scale score of 415.2 and an average grade 10 ACT Aspire reading scale score of 415.3. Students with an average score of 5 on self-efficacy had an average grade 10 ACT Aspire math scale score of 424.3 and an average grade 10 ACT Aspire reading scale score of 422.5.

- **High school students with higher self-efficacy scores were absent fewer days on average.** After high school student characteristics were controlled for, students with an average score of 5 on self-efficacy were absent an average of 12 days from school. Students with an average score of 1 on self-efficacy were absent an average of 30 days.
- **High school students who went on to attend college had their highest scores in self-management and their lowest scores in self-efficacy.** High school students who went on to attend Northern Marianas College scored above the midpoint in each social-emotional competency domain.
- **Among high school students who went on to attend Northern Marianas College, those with higher growth mindset scores in high school had higher first semester college grade point averages.** After college student characteristics were controlled for, students with a score of 5 on growth mindset had an average first semester college grade point average of 3.2. Students with an average score of 1 on growth mindset had an average first semester college grade point average of 1.8.

## Implications

This is the first study to examine the role of social-emotional competencies in promoting better academic and behavioral outcomes among students in the CNMI. Because the study found that high school students' social-emotional competencies are associated with several high school and college academic and behavioral outcomes, education leaders in the CNMI could use the findings to inform practices intended to promote students' social-emotional competencies. For example, the CNMI Public School System might want to identify ways to expose students to practices that promote social-emotional competencies at an earlier age and that do so more consistently across the school environment. Additionally, educators at Northern Marianas College might want to examine promising practices for promoting students' social-emotional competencies in a college context. Using the findings to inform practices to promote students' social-emotional competencies could ultimately support improved academic and behavioral outcomes in high school and college in the CNMI.

The study was limited by its small sample, which affects the generalizability of the findings and the ability to detect associations between high school social-emotional competencies and college outcomes. This exploratory study was also limited by its descriptive, correlational design, and so it does not provide evidence regarding causal relationships. Despite the limitations, the study provides an initial look at the associations between students' social-emotional competencies and their high school and college academic and behavioral outcomes that could help to inform policies and practices.

This brief was prepared for the Institute of Education Sciences (IES) under Contract ED-IES-17-C-0010 by the Regional Educational Laboratory Pacific administered by McREL International. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. The full report is available on the Regional Educational Laboratory website at <http://ies.ed.gov/ncee/edlabs>.

Crowder, M. K., Holquist, S. E., Rentz, B., & Arens, S. A. (2021). *Associations between high school students' social-emotional competencies and their high school and college academic and behavioral outcomes in the Commonwealth of the Northern Mariana Islands* (REL 2021-102). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Pacific.