

# Examining the Relationship Between Social and Emotional Skills and ACT Composite Scores in Students With Disabilities

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Numerous studies have demonstrated that social and emotional skills (SE skills) can predict academic achievement, including grades and test scores (e.g., Mammadov, 2021; Meyer et al., 2023). Prior research at ACT has shown that stronger SE skills are associated with higher ACT scores (Anguiano-Carrasco et al., 2022). However, despite the abundant evidence that SE skills are beneficial for students in general, less is known about the relationship between SE skills and academic achievement among students with disabilities, who make up approximately 15% of all public school students (National Center for Education Statistics, 2023). In this study, we examined the relationship between SE skills and ACT scores among students with and without disabilities.

Using data from the Mosaic™ by ACT® Social and Emotional Learning assessment (hereafter referred to as Mosaic), we created two matched groups of 410 students each, one whose members had disabilities and one whose members did not. Each group had the same breakdown of demographic information (race/ethnicity, gender, grade level when students took Mosaic, and academic year when students took the ACT® test; see Table 1). Sixty percent of students took the ACT in 2021, and 40% took it in 2022. All students in the disability sample had at least one neurodevelopmental disability, and 46.3% of this sample had more than one disability (see Table 2 for details). The average ACT score was 17.2 ( $SD = 4.9$ ) for students with disabilities and 21.6 ( $SD = 5.9$ ) for students without disabilities, consistent with previous findings (Moore & Schnieders, 2022).

**Table 1.** Demographic Information for Students With and Without Disabilities

Demographic information		Percentage of students in each sample
Gender	Female	43.2%
	Male	56.8%
Race/ethnicity	Asian	0.5%
	Black/African American	7.3%
	Hispanic/Latinx	10.0%
	Missing race/ethnicity	6.1%
	Native American	2.9%
	White	70.5%
	Two or more races	2.7%
Grade level when student took Mosaic SEL assessment	9	49.5%
	10	32.4%
	11	12.7%
	12	5.4%

**Table 2.** Percentages of Students With Disabilities, by Disability Category

Disability category	Percentage of students with disabilities
Neurodevelopmental (e.g., autism, ADHD, learning disabilities)	100%
Physical/sensory (e.g., hearing impairment, visual impairment)	7.1%
Psychological (e.g., anxiety, depression, behavior disorder)	16.3%

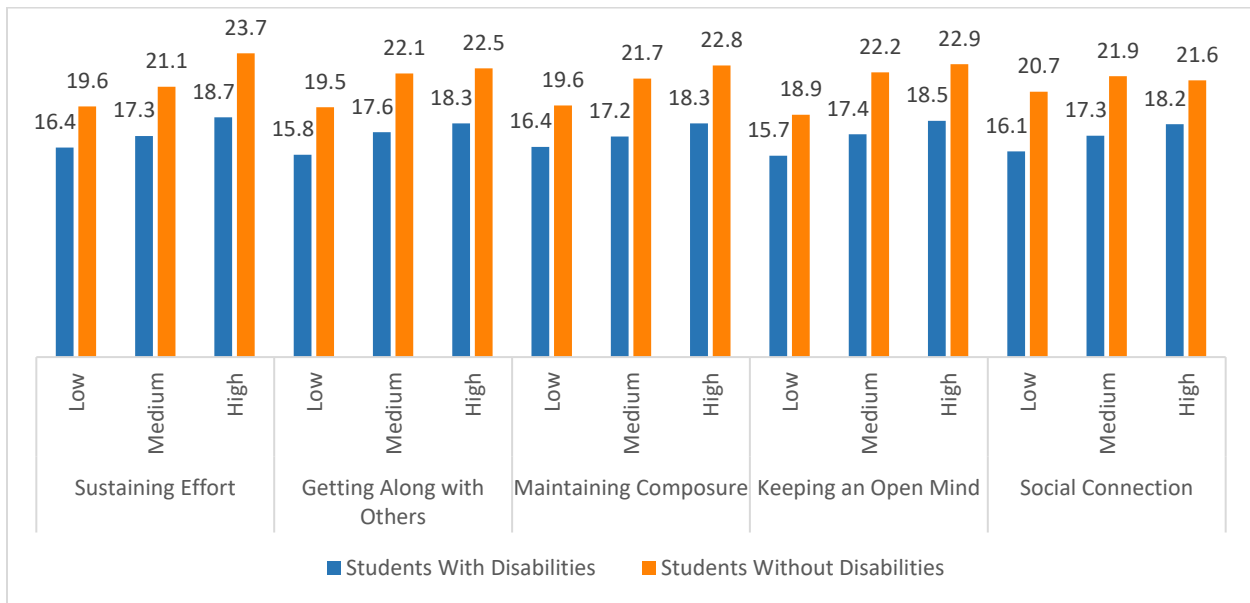
Students' Mosaic assessment data were captured during the 2018–2019 and 2019–2020 school years. The assessment measures five SE skills, which are described below in terms of the student behaviors that accompany each skill:

- Sustaining Effort: diligence, effort, organization, self-control, and compliance with rules
- Getting Along with Others: positive interactions, cooperation with others, kindness, friendliness, and tactfulness
- Maintaining Composure: relative calmness, serenity, and the ability to manage emotions effectively
- Keeping an Open Mind: open-mindedness and curiosity about a variety of ideas, beliefs, people, and experiences
- Social Connection: a preference for social interaction, assertiveness in social situations, and optimism

Students in the lowest quartile in a given skill were classified in the low category, students in the top quartile were classified in the high category, and the rest of the students were classified as medium.

Our data show a positive relationship between SE skills and ACT Composite scores in both students with disabilities and students without disabilities. As shown in Figure 1, students with stronger SE skills also tend to have higher ACT Composite scores. The correlations between ACT Composite scores and SE skill scores for both groups of students are found in Table 3.

**Figure 1.** Mosaic by ACT SE Skill Scales and Their Relationship to ACT Composite Scores Among Students With and Without Disabilities



**Table 3.** Correlations Between ACT Composite Scores and SE Skills Among Students With and Without Disabilities

SE skill	Correlation with ACT scores	
	Students with disabilities	Students without disabilities
Sustaining Effort	.21**	.28**
Getting Along with Others	.22**	.18**
Maintaining Composure	.18**	.14**
Keeping an Open Mind	.22**	.22**
Social Connection	.16**	.10*

*Note.* Correlations that are significant at the .01 level are denoted with \*\*. Correlations that are significant at the .05 level are denoted with \*.

Around 7.3 million students in public schools receive special education (National Center for Education Statistics, 2023). Despite this large number of students, few studies have examined how SE skills impact the academic achievement of students with disabilities. The current study provides some initial evidence of a positive association between SE skills and ACT scores. These results are consistent with a large body of research that demonstrates the importance of SE skills for various academic outcomes, including test scores (e.g., Mammadov, 2021; Meyer et al., 2023).

As with literature on the relationship between SE skills and academic achievement, a robust literature on social and emotional learning (SEL) interventions shows that participation in SEL programming can improve student skills and academic outcomes (e.g., Durlak et al., 2022; Mahoney et al., 2018). However, few studies have specifically examined the efficacy of SEL interventions on students with disabilities. For instance, a review of the well-cited meta-analysis by Durlak and colleagues (2011) found that only 15% of studies reported disability status (Rowe & Trickett, 2018). Additionally, a review of 166 studies on universal SEL interventions found that only 11.4% of studies explicitly mentioned including students with disabilities (Daley & McCarthy, 2020). Given the dearth of research on SEL with students with disabilities and the current results showing positive relationships between SE skills and ACT scores, future research can aim to examine how SEL interventions can effectively enhance SE skills in students with disabilities.

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