

STUDENT VOICES from AP CSP

Addressing Challenges Related to **Written Expression**

About Our Student Partners

Over the 2016-2017 school year, **13 student research partners** enrolled in AP Computer Science Principles (CSP) at Wolcott School shared their successes and challenges in the course during every-other-week interviews with the Outlier research team.

Keep in mind that while our student partners were enrolled in an AP CSP course using the Code.org curriculum, the challenges they identified could occur in *any* high school CS course and for *any* student, not just those with diagnosed learning and attention disorders.

164 total student interviews

STUDENTS:

- were in 10th – 12th grade.
- had varying levels of prior experience with computer science.
- had at least one diagnosed learning or attention disorder.

62% ADHD/Executive Function,
54% Writing, 46% Reading,
31% Math, 15% Language.

What We Heard: Common Challenges Related to **Written Expression**

I have to write 100 words on 2 or 3 things and 250 words on 2 things, maybe 3 things. It's a lot of writing and I have to make it like I'm saying different things. It's not enjoyable.

Some students had a hard time meeting word count requirements – they either wrote too much or too little.

Getting the write-up done [for the Create Performance Task]. That was the toughest part...I'm very hands on and creative so I can do the app and what not. And when it comes to write up and all the words on the page, it's like black and white. Really tough to focus and just sit and get it done.

Sometimes students were unsure how to structure and organize their ideas before writing.

A few students didn't really like writing, so they tended to avoid it.



Some students knew what they wanted to say, but didn't know how to put their thoughts into words or write their ideas down quickly enough.

Written Expression was a challenge for 8 of the 13 students in the AP CSP course.

How to Help

Addressing **Written Expression** Challenges in CS Classrooms

The following recommendations are informed by research-based practices for supporting students who learn differently, combined with the practical expertise of our team learning specialists and study findings.

Provide **sentence starter templates** (verbally, or in writing) to help students formulate their thoughts and express them in writing.

Offer the use of **text-to-speech software** to let students listen to and edit their written responses.

Encourage students to use **graphic organizers** (that you create, or find online) as part of planning for writing, to help them structure and organize their ideas.

Offer students the use of **dictation software** to add their thoughts and ideas to electronic documents (e.g., Word documents) as the first step before working to organize those thoughts into a cohesive written text.

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