

Assessing Dual Sensory Loss in Students With Significant Cognitive Disabilities

Students with significant cognitive disabilities can meet high expectations if they receive high-quality academic instruction and appropriate educational services and supports. Some, however, do not receive appropriate access to the general education curriculum because educators and families may not realize they have vision and hearing loss. There are many strategies that can help these students engage academically and learn. But first, educators, healthcare providers, and families need to recognize potential dual sensory loss and seek an evaluation.

ABOUT THE DATA

The data in this brief is from the First Contact (FC) Survey, which collects teacher-reported characteristics and skills of students with significant cognitive disabilities who are enrolled to take the Dynamic Learning Maps® (DLM) alternate assessments. This brief uses FC Survey data collected from more than 100,000 students in grades 3 through high school in 17 states during the 2017-2018 school year. Additional findings can be found in the report [Students with Significant Cognitive Disabilities and Dual Sensory Loss](#).

STUDENTS WITH SUSPECTED DUAL SENSORY LOSS

Students identified as having suspected dual sensory loss were those in the FC Survey who had questionable vision and were deaf or hard of hearing (170 students); had questionable hearing and were blind or had low vision (280 students); or had both questionable vision and hearing (420 students). All had significant cognitive disabilities. Based on this definition, nearly 1% of students in the FC Survey (n = 870) had suspected dual sensory loss (see Table 1).

Table 1. Students With Suspected Dual Sensory Loss

	No vision loss suspected	Normal vision with correction	Blind or low vision	Questionable vision
No known hearing loss	63,098	23,196	3,817	2,325
Deaf or hard of hearing	1,341	1,341	649	170
Questionable hearing	605	523	280	420

Because assessment and instruction typically rely on a student's ability to access information via hearing and/or vision, it is not surprising that FC Survey data indicated that students with significant cognitive disabilities and suspected dual sensory loss were reported to have challenges with communication, engagement in instruction, and academic skills.

IMPACT ON COMMUNICATION AND LEARNING

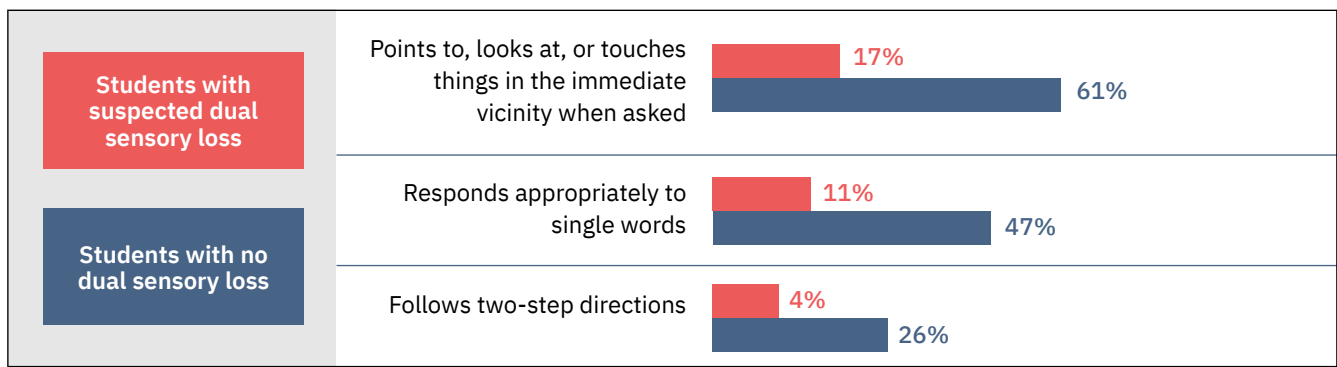
Communication

Students with suspected dual sensory loss have limited expressive and receptive communication skills.

Expressive – 26% used speech, 16% used sign, and 40% used augmentative and alternative communication (AAC). Among those who did not use speech, sign, or AAC, 86% communicated using only pre-intentional behaviors.

Receptive – Only a small percentage could consistently (more than 80% of the time) demonstrate certain receptive communication skills, which is lower than students who have significant cognitive disabilities but no dual sensory loss, as shown in Figure 1.

Figure 1. Receptive Communication Skills

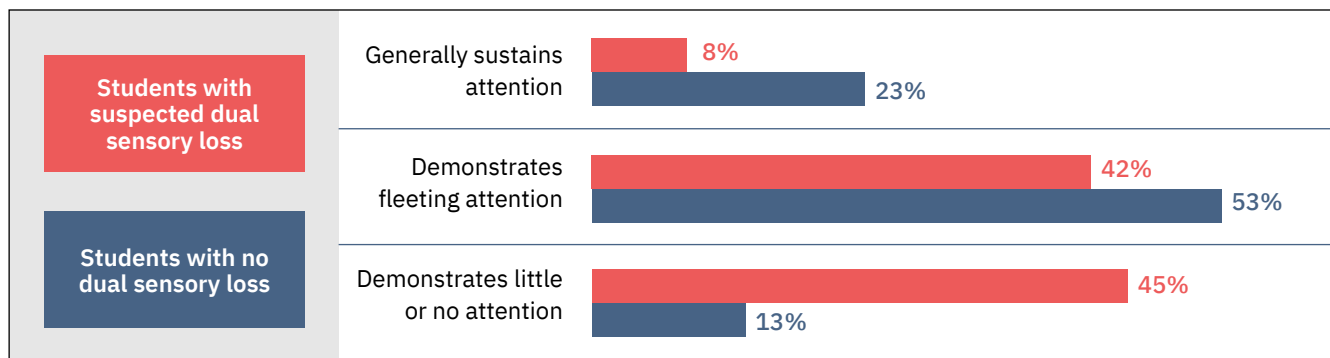


Note: Results refer to percent of students who consistently (> 80% of the time) demonstrated skills.

Engagement in Instruction

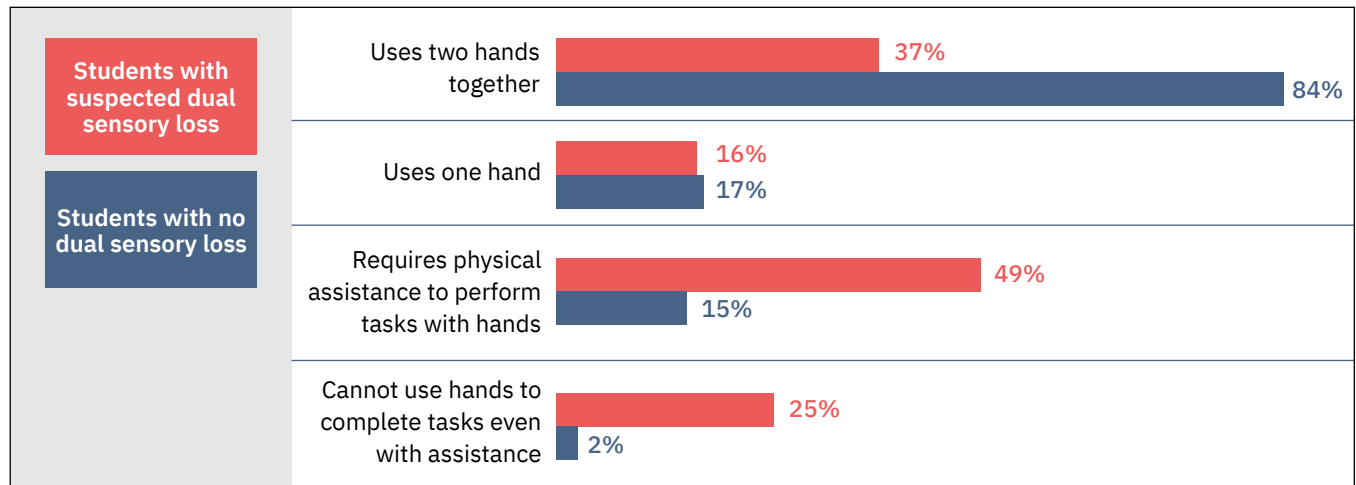
Students with suspected dual sensory loss were also reported to be less engaged in instruction than students with no dual sensory loss, suggesting that they may not be fully aware of instruction that is presented auditorily and visually (see Figure 2).

Figure 2. Level of Engagement in Teacher-Directed Instruction



Engagement was also impacted by limited hand use—reported for many students with suspected dual sensory loss (see Figure 3)—which makes it difficult to participate in instructional tasks. When vision is not available, touch is the sensory channel most often used to explore and use objects and materials.

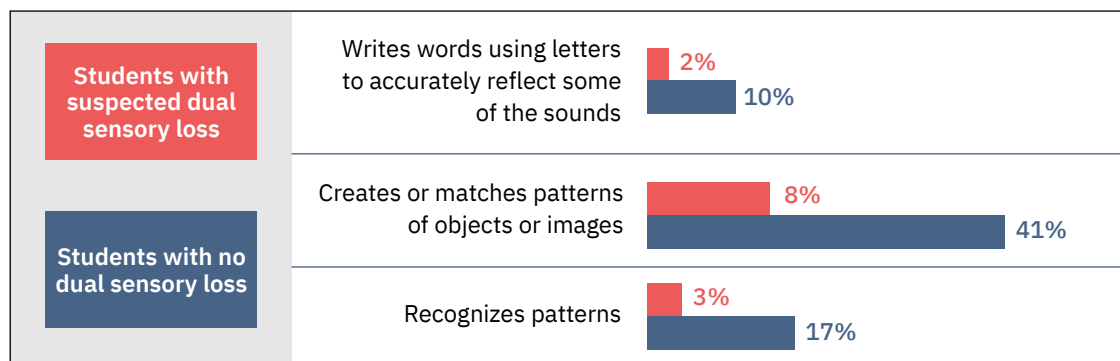
Figure 3. Hand Use



Impact on Academic Skills

The FC Survey found that 72% of students with suspected dual sensory loss did not read any words in print or braille compared to 21% with no dual sensory loss. Only 6% read above a first-grade level compared to 34% with no dual sensory loss. A comparison of additional skills for students with suspected and no dual sensory loss is shown in Figure 4.

Figure 4. Selected Academic Skills



Note: Results refer to percent of students who consistently (> 80% of the time) demonstrated skills.

WHY DUAL SENSORY LOSS CAN BE HARD TO ASSESS

As the data show, students with suspected dual sensory loss in addition to significant cognitive disabilities often struggle with communication, engagement in instruction, and academic skills. This is likely because they are not receiving adequate access to auditory and visual information. A combination of factors (e.g., not accessing language through speech or sign, difficulties sustaining attention, limited hand use) further complicates medical and functional assessments.

High-quality assessment findings guide the selection of appropriate educational strategies. To obtain the most useful information, professionals with expertise in students who have cognitive disabilities and sensory loss should conduct assessments using specialized tools and methods.

A number of additional factors may contribute to the difficulty of assessing students with dual sensory loss and significant cognitive disabilities:

- Healthcare providers and educators may not be familiar with dual sensory loss or know that it includes varying degrees of usable vision and hearing.
- Evaluators may use tests and methods that do not account for the varied and often subtle ways that students with significant cognitive disabilities and dual sensory loss express themselves.
- A student may not have the skills to engage in medical evaluations and no other methods of testing are used.
- Behaviors due to hearing or vision loss may instead be attributed to intellectual disabilities, poor motor control, or medical fragility (Anthony, 2016; Erickson & Quick, 2017).

Recommendations

- Always evaluate students with a known loss in one area (vision or hearing) for a loss in the other.
- In addition to medical tests, conduct functional vision and hearing assessments to determine how a student uses any hearing or vision they do have.
- Ensure that whoever is testing hearing and vision understands how a student receptively and expressively communicates as well as their other needs (e.g., hand use, positioning).
- If communication is dependent on a knowledgeable partner, include that person in the assessment process.
- Train educators/IEP teams to consider whether behavior challenges and lack of instructional engagement might be due to inadequate sensory access.
- Train educators to recognize the signs and risk factors of vision and hearing loss.
- Repeat evaluations regularly to monitor for changes in hearing and vision.

RESOURCES

Appropriate Assessment Strategies: NCDB Practice Guide – This and other practice guides outline essential components of assessment and instruction for children who are deafblind

State Deafblind Projects – Provide consultation and training on deafblindness to families, school teams, and other service providers

Deafblindness Overview – Information about deafblindness (what it is, etiologies, and vision and hearing characteristics)

NCDB Info Topics – A range of resources on conducting individualized assessments and supporting instruction for children who are deafblind

Teaching Children Who Are Deafblind: Professional Development for Educators – Practical two-hour modules broken into short video sections with numerous examples

REFERENCES

Anthony, T. L. (2016). Early identification of infants and toddlers with deafblindness. *American Annals of the Deaf*, 161(4), 412-423.

Erickson, K., & Quick, N. (2017). The profiles of students with significant cognitive disabilities and known hearing loss. *Journal of Deaf Studies and Deaf Education*, 22(1), 35–48.

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