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## **Best Practices to Make Online Learning an Advantageous Tool for Students with Specific Learning Disorder**

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# Best Practices to Make Online Learning an Advantageous Tool for Students with Specific Learning Disorder

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## Background

Specific Learning Disorder (SLD) is commonly referred to as Dyslexia. However, its definition in the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders encompasses much more:

- Difficulties learning and using academic skills for at least 6 months despite provisions of interventions
- Affected academic skills should be substantially and quantifiably below those expected for the individual's age
- Academic difficulties can be in reading, written expression, and mathematics

Online learning has been prevalent for years, but with Covid-19 pandemic, it became the primary method of instruction for students all over the world.

- One of the most common reported reasons for choosing online schooling is the flexibility it provides<sup>5</sup>
- Many students with SLD were enrolled in online schools before the pandemic<sup>14</sup>

**Thesis:** Online learning can allow for flexibility and individualization by making affordances such as asynchronous learning, multimedia presentation, and reading affordances available for students with Specific Learning Disorders.

## Methods

A literature review was conducted using the following databases and search terms:

**Databases:** PsychINFO, Education Research Complete, ERIC, APA, Google Scholar

**Search Terms:**

- **SLD:** SLD, Dyslexia, learning disabilities/difficulties/disorders, reading difficulties
- **Online:** Virtual, Remote, Distance, E-learning
- **Learning:** Education, Class, Classroom, Environment

## Asynchronous Learning

Synchronous Learning	Asynchronous Learning
Students engage with the instructors, other students, and the material in real-time	Students access course materials such as video recordings of lectures outside of a regimented class time

- For most students, synchronous learning is preferred due to the increased interaction
- Students with SLD perform better in asynchronous courses<sup>5</sup>
- Students also reported feeling less pressure to keep up and a better understanding of the material<sup>5,18</sup>
- However, some students prefer the additional interaction in synchronous learning<sup>5</sup>
- Teachers also reported seeing an improvement in student results and experience<sup>12</sup>

## Multimedia Presentation

Text based learning only involves reading words	Can combine text and 	Also possible to combine text with 	
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Giving students the opportunity to learn in various formats could be helpful

- Cognitive Load Theory Suggests that it could lead to difficulties integrating the information<sup>9</sup>
  - Cognitive Load Theory: each person has a processing capacity and learning that requires an amount of processing beyond those limits actually makes it harder to take in information<sup>15</sup>
- Evidence shows that students with SLD struggle more to integrate various modes of information<sup>1</sup>
- Other evidence shows that when comparing various modes of instruction, the best combinations are audio+picture, or text+audio+picture<sup>11</sup>

## Reading Affordances

- Reading Affordances: Methods of making text easier to read and absorb
- Ways to make the text more accessible<sup>4,7</sup>:
  - More spacing between letters and words
  - San-serif fonts
  - Using bullet points instead of blocks of text
  - Dark text on light, but not white, backgrounds

## Conclusions

- Accommodations such as Asynchronous Learning, Multimedia Presentation, and Reading Affordances can be helpful for students with SLD
- It's ideal to make accommodations for students available, and then let them choose which ones optimize their learning.
- Online education provides a unique opportunity to do this

## Limitations

- Most studies done on students ages 10-20
- A lot more research needs to be done on SLD and online learning
- Much of the research that has been done has been inconclusive
- These studies and conclusions don't take into account the toll it takes on educators to design classes or the extra effort it would require to provide extra affordances

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