

Online Learning for Students with Brain Injury - 2020

Schools in Colorado & Pennsylvania who have trained BrainSTEPS Teams are in the best position to support students with brain injury, regardless if students are in brick & mortar school buildings or taking online classes.

Because students with brain injury may have difficulty with some aspects of online learning, BrainSTEPS developed a list of academic adjustments that can be used for students with brain injury who are participating in remote online learning during the COVID-19 pandemic.

During online learning students with brain injury may have difficulty with:

- Attention and Concentration:
 - *Mentally focusing on what is on the screen – can't keep up*
 - *Following multi-step directions*
 - *Shifting attention to another topic or transitioning to another activity*
 - Processing Speed:
 - *Responding in the time allotted*
 - *Following lectures*
 - *Integrating information from several sources*
 - Memory:
 - *Recognizing, encoding, or recalling information recently learned, or information from passages/readings*
 - *Repeatedly asks the same questions*
 - *Following multi-step directions*
 - Sensory and Motor:
 - *Increased distractibility during activities*
 - *Visual scanning - searching/scanning for visual information*
 - *Cognitive fatigue - a decrease in cognitive energy that occurs from focusing on sustained cognitive demands (e.g., schoolwork, learning), independent of sleepiness.*
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BrainSTEPS suggestions for students when participating in online learning

**blue font below is clickable*

- Discourage students from doing online learning on small screens (e.g., a smart phone) – this can cause eye fatigue and cognitive fatigue. Encourage use of laptop or computer screen
- Adjust computer display
 - Increase font size (large print is defined as 16 -to 18-point bold type, depending on the typeface used)
 - Adjust screen settings to enlarge entire screen
 - Dim screen brightness
 - Turn Night Light setting on; reduces blue light and may help with eye fatigue and sleep patterns
 - Encourage student to try out alternative screen colors
 - Contrast desktop screen from light to dark
- Reduce screen glare (encourage student to sit away from windows, bright lights)
- **Text-to-speech** for a student who may find reading too taxing they can have books or documents read aloud. Examples include:
 - [Snap and Read](#)
 - Audio Books: [Audible](#), [Scribd](#)
 - Reads other types of documents- [NaturalReader](#), [Voice Dream Reader](#)
- **Speech-to-text** - Speech recognition software that will turn a student’s speech into text on the computer screen.
 - Siri’s dictation feature offers real-time speech-to-text conversion, recording the words you say as typed text on Apple products.
 - [Mac Speech to Text](#) (Apple products)
 - [Dragon](#)
 - [Google Docs Speech to Text/Voice Typing](#) on Chrome browser
- Scanners with [Optical Character Recognition \(OCR\)](#) software which converts print-to-speech output
- Have student use word prediction software that predicts words while the student is typing such as:
 - [Co:Writer](#)
 - [TypeIt4Me](#) (Macs only)
- Cue student to take short “eye breaks” from computer screen (e.g., focus on something across the room to give eyes a rest, close eyes for a short period of time)
- Lead students through mindfulness, belly-breathing strategies for brain breaks, transitioning, or calming
- Schedule “brain breaks” from the computer throughout day

- Reduce visual clutter on the screen pages to reduce visual overload
 - [Immersive Reader](#)
 - [Safari Reader](#) on the Safari browser
 - [Mercury Reader](#) extension on Chrome browser
- For students with visual field neglect, provide cues to scan entire screen for content.
- A teacher should use headings for any content changes on the screen
- A teacher can read exams to the student via [Zoom](#) or other online platform. **Zoom is currently offering free subscriptions for all K-12 public schools.**
- Use clock/timer apps to time built in breaks, to chunk reading time, break up screen time, etc.
- Record online session content so student can review
- Use *concept mapping* software – to help the student organize thoughts, get started on a writing assignment, or plan a project
- Provide extended time for projects and assignments
- Offer “office hours” via Zoom, etc.
- Offer online tutoring
- Create a routine and encourage sticking to a daily schedule
- Discourage student naps – it is important to maintain a normal sleep schedule
- Provide checklists that break down tasks, classwork, homework, key learning content to alleviate difficulty keeping up during online learning
- Offer a *touch-base teacher, school counselor, social worker* or school psychologist for emotional support - online learning can cause the student to experience additional anxiety and/or depression due to the social isolation
- Encourage use of noise blocking headphones when doing schoolwork at home if there are other siblings/parents in the same room or within close vicinity
- Teachers of online content should use *Tables* and *Frames* online sparingly – these may be difficult for text-to-speech readers to translate

Additional assistive technology found on all mobile device smart phones (iPhone, Android, etc.):

1. https://www.understood.org/en/school-learning/assistive-technology/assistive-technologies-basics/assistive-technology-thats-built-into-mobile-devices?_ul=1*598qj*domain_userid*YW1wLXpvQ1lXVXdfTmVJdFV3TDV1NTISbFE.
2. <https://www.youtube.com/watch?v=-gTn4Q-9Lk8&feature=youtu.be>

Additional strategies may be found in [Brain Injury in Children and Youth – A Manual for Educators](#)

Emotional mood changes, depression, and anxiety: Monitor the student for signs of anxiety related to online learning, increasing pandemic fears, social isolation and refer all concerns to parent, school psychologist, school counselor, and/or social worker for follow up.

**Please Note: Specific programs listed are provided as possible resources. The BrainSTEPS program has not individually vetted and does not endorse any specific programs.*

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