



2020 Online Learning for Students with Mild/Concussion, Moderate, & Severe Acquired Brain Injuries

All public schools in Colorado & Pennsylvania are in the best position to support students with acquired brain injury, regardless if students are in brick & mortar school buildings or taking online classes, because schools have access to the **BrainSTEPS** Brain Injury School Consulting Program.

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 with students participating in remote online learning during the pandemic.

BrainSTEPS was created by the PA Department of Health in 2007 and is jointly funded by the PA Department of Health and the PA Department of Education, Bureau of Special Education.

During online learning students with acquired brain injuries may have difficulty:

- *Visual scanning* - Searching/scanning for visual information
 - *Visual attention* - Mentally focusing on what is on the screen
 - *Visual memory* – Difficulty recognizing, encoding, recalling 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 suggested academic adjustments that may help alleviate common concussion symptoms when participating in online learning

**colored font below is clickable*

- Discourage student from doing online learning on a smart phone – the screen is too small and can cause eye fatigue and cognitive fatigue. Encourage use of laptop or computer screen (use largest screen available)
- 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
 - Encourage student to try out alternative screen colors
 - Contrast desktop screen from light to dark
- Computer blue light blocking glasses may help reduce eye fatigue

- 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)
- Schedule longer “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.**
- Clock 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, plan a project
- Provide extended time for projects and assignments
- Offer “office hours” via Zoom, etc.
- Offer online tutoring

- Encourage sticking to a daily schedule
- Discourage student naps – it is important to remain on a normal sleep schedule to reduce symptoms
- 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 with concussion to experience additional anxiety and/or depression due to the social isolation coupled with symptoms
- 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

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>

****Emotional mood changes, depression, anxiety can be effects of concussion.** 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 listed.*

BrainSTEPS - PENNSYLVANIA

Brenda Eagan-Johnson, EdD, CBIST
BrainSTEPS Program Coordinator
Phone: 724-944-6542
Email: eagan-johnson@biapa.org

BrainSTEPS - COLORADO

Janet Tyler, PhD, CBIST
BrainSTEPS CO Program Coordinator
Phone: 303-866-2879
Email: Tyler_J@cde.state.co.us

