



## Online Learning for Students with Concussion - 2020

Schools in Colorado & Pennsylvania who have trained **Return to Learn Concussion Management Teams** under the BrainSTEPS Program are in the best position to support students with concussion, regardless if students are in brick & mortar school buildings or taking online classes.

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

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### During online learning students with concussion may have difficulty with:

- *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.
- 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 can be used to build in breaks, chunk reading, 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
- 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\\*YW1wLXpvQ1XVXdfTmVJdFV3TDV1NTISbFE](https://www.understood.org/en/school-learning/assistive-technology/assistive-technologies-basics/assistive-technology-thats-built-into-mobile-devices?_ul=1*598qj*domain_userid*YW1wLXpvQ1XVXdfTmVJdFV3TDV1NTISbFE).
2. <https://www.youtube.com/watch?v=-gTn4Q-9Lk8&feature=youtu.be>

*\*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.*

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