

# Understanding the Experiences of Students with T.B.I. in Online Learning

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# Purpose of Today's Presentation

- Understand the experiences of students with TBI in online learning.
- Explore common deficits related to a TBI diagnosis.
- Discuss recommendation and possible changes or modifications that can be made to online programs.

# Introduction

The purpose of this basic qualitative study was to gain a deeper understanding of the needs of adult students with TBI in the online learning environment and about the factors that influence the students' experiences.

# Background

Online learning allows students to:

- Complete coursework from an alternative setting (home, office, hospital room, etc.)
- Allows for flexibility in learning.
- Avoid being in large crowds.
- Allows students time to think about their answers/comments.

# Background

Online learning can be beneficial for adult students, working students, and students with disabilities.

# Background

- Approximately 1.4 million Americans sustain a traumatic brain injury (TBI) each year (MacLennan & MacLennan, 2008).
- The highest incidence of TBI occurs in the age group of fifteen years-of-age to twenty-four years-of-age (Rouff, 2001).
- Currently, there is no literature specifically looking at the experiences students with TBI have in online learning.

# Significance of the Study

- Previous researchers have discussed the challenges faced by students with disabilities in general in the online learning environment.
- Researchers have not addressed challenges faced by students with brain injuries and have not addressed the unique deficits that may be faced by students with a TBI diagnosis.
- This study looks at deficits commonly associated with a TBI diagnosis and how they relate to their experiences in online learning.

# Statement of the Problem

Adult students with TBI often have deficits related to executive functioning such as:

- planning and organization
- monitoring performance
- solving unusual problems
- self-awareness
- learning rules
- making decisions
- motivation
- concentration



# Statement of the Problem

- Online students are often expected to be independent and self-directed learners.
- Professors and support staff can be difficult to get ahold of.
- There are limited accommodations/disability supports for students in online classrooms.

# Statement of the Problem

Deficits in executive functioning may influence a student's ability to be a self-directed learner.

Students with TBI often have deficits related to executive functioning.

Program developers and administrators often do not have an understanding of how TBI impacts executive functioning.

# Assumptions/Hypothesis

- Executive functioning deficits would be the most common deficits for students.
- Professors would not have the time to work one-to-one with students with TBI.
- Lack of supports for students with TBI in online learning.

# Research Questions

Primary Question:

What are the needs of students with TBI in online learning as described by TBI service providers?

# Research Questions

## Subquestions:

- (1) What factors do service providers describe as influencing a student's experience in online learning?
- (2) What aspects of the online learning environment do service providers believe need modification for students with TBI?

# Methodology

The inclusion criteria identified for the sample were:

- Participants must be (or were) a TBI service provider (teacher, disability support, social worker, vocational counselor, or other TBI related service provider).
- Must have worked with adult students diagnosed with a TBI who have taken part in at least one online course at the postsecondary level.
- Sample consisted of nine participants.

# Methodology

## Data Collection:

- Semi-structured interview.
- Interview questions were developed by researcher and reviewed by a panel of experts.

# Methodology

## Instrumentation:

- One thirty to forty minute, audio recorded, interview.



# Interview Questions

## Question 1

***What have the experiences of your clients been like in online courses? Did your client receive any supports/accommodations? If so what were these supports?***

- issues with time management
- access to the online instructor
- appropriate accommodations

# Interview Questions

## Question 2

***Tell me about a time when your client felt that the online learning environment worked for them?***

- allowed to work at their own pace
- able to submit assignments when they were ready
- scheduled class time with peer and instructor interaction
- course was accessible for learners with and without disabilities
- well written syllabus

# Interview Questions

## Question 3

***Tell me about a time when your client felt that the online learning environment did not work for them?***

- lack of face to face contact
- difficulty with time management and deadlines
- navigating the online classroom.

# Interview Questions

## Question 4

***What aspects of the online classroom would you/your client change?***

- helping clients/students to understand their disability to become a better self-advocate
- increase access to the professor
- structured class times
- Classes that are well organized, and have clear expectations

# Interview Questions

## Question 5

***Tell me about your clients' traditional (non-online) classes. Did your client have any difficulties with them? Did your client receive any supports/accommodations? If so what were these supports?***

- accommodations were more readily available in the traditional classroom
- structured nature of the traditional classroom was beneficial to their clients

# Interview Questions

## Question 6

*What types of disability related supports did your client receive from the school?*

Type of Support	Number of Students
Extended time	6
Modified test/assignments	5
Note taker	5
Private testing area	6
Tutoring mentoring	7
Mental health services	5

# Interview Questions

## Question 7

*What types of supports does/did your clients receive at home or in the community?*

Type of Support	Number of Students
Help with tests/assignments	4
Planning and organization	3
Mental health services	6

# Interview Questions

## Question 8

*Did/does your client experience any of the following deficits?*

Cognitive Deficits	
Deficit Type	Number of Students
Planning/Organization	9
Flexible Thinking	7
Monitoring Performance	6
Multi-tasking	9
Solving Unusual Problems	8
Self-awareness	6
Learning Rules	5



# Interview Questions

## Question 8

*Did/does your client experience any of the following deficits?*

Cognitive Deficits	
Deficit Type	Number of Students
Social Behavior	7
Making Decisions	6
Motivation	8
Initiating Appropriate Behaviors	4
Inhibiting Inappropriate Behaviors	5
Controlling Emotions	8
Concentrating and Taking in Information	9

# Interview Questions

## Question 8

*Did/does your client experience any of the following deficits?*

Physical Deficits	
Type of Deficit	Number of Students
Headaches	7
Speaking	4
Seeing	6
Hearing	3
Gross/Fine Motor	3

# Interview Questions

## Question 8

*Did/does your client experience any of the following deficits?*

Psychological Deficits	
Type of Deficit	Number of Students
Behavioral/Emotional Regulation	8
Substance Abuse	5

# Results

Primary research question: What are the needs of students with TBI in online learning as described by TBI service providers?

# Results

Sub-question 1: What factors do service providers describe as influencing a student's experience in online learning?

Emergent themes:

- Accommodations
- Access to instructor and peers
- Structure of online course
- Cognitive limitations

# Results

Sub-question 2: What aspects of the online learning environment do service providers believe need modification for students with TBI?

Emergent themes:

- Accommodations
- Access to instructor and peers
- Structure of online course

# Results

## Accommodations

- The findings of this study show that students were not successful in online learning when they were not provided appropriate accommodations.
- Instructors can support students with TBI in the online environment by considering possible accommodation needs and understanding how these accommodations may work in the online learning environment.

# Results

## Access to instructor and peers

- Service providers reported that their students needed their professors and peers to be more accessible.
- Access may allow students with TBI to become more self-directed, as it will allow for guidance and feedback, limiting frustration and confusion.



# Results

## Structure of online course

- Online course developers and instructors should ensure that the course outline and layout is clear and simple to navigate.
- Online instructors should also make sure that their syllabus is well written, easy to understand, and has expectations that are clear.

# Results

## Cognitive limitations

- Executive functioning deficits were reported as being the most common deficits experienced by the participants' students.
- These deficits can influence a student's ability to make decisions, plan, and solve problems, which are all skills needed to become a self-directed learner.

# Conclusions

- Students with TBI have disability specific learning needs.
- Accommodations in the online classroom may not be enough for students with TBI.
- Access to instructors and peers influences the online learning experience.

# Conclusions

- Structure and organization of online classroom also influenced experience.
  - Cluttered and unorganized online classrooms lead to confusion and frustration.
- Deficits related to executive functioning were found to be the key factor influencing self-direction.

# Recommendations

Increased access to instructor and peers.

- Scheduled meeting times
- Regular office hours
- Use of Skype or other face-to-face communication system.

Professors should provide a clear outline and layout of online course and course syllabus.

# Recommendations

Provide accommodations specifically designed for students with TBI, especially in the area of executive functioning.

- Assistance with time management.
- Peer support/mentor or use of a learning specialist.

# Implications for Veterans

- As of 2014 25,111 Veterans have been diagnosed with a TBI (Defense and Veterans Brain Injury Center, 2015).
- Between 2000 and 2012, more than 900,000 veterans and military service members received education benefits through the U.S. Department of Veterans Affairs (Sherman, Klein-Collins & Palmer, (2012).

# Future Research

Suggested areas for additional research include:

- Interviewing of students with TBI to better understand their needs and experiences in online learning;
- Interviewing of online instructors regarding their experiences working with students with TBI;
- Assessing the effectiveness of changes to the online learning environment for students with TBI;



# Future Research

Suggested areas for additional research include:

- Addressing the effectiveness of accommodations in the online learning environment for students with TBI;
- Exploration of low frequency findings such as privacy in online learning;

# Conclusion

Closing Comments

Questions

# References

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