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.
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.
Online learning can be beneficial for adult students, working students, and students with disabilities.
• 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
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.
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.
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.
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
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
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.
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
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
Question 6

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

<table>
<thead>
<tr>
<th>Type of Support</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended time</td>
<td>6</td>
</tr>
<tr>
<td>Modified test/assignments</td>
<td>5</td>
</tr>
<tr>
<td>Note taker</td>
<td>5</td>
</tr>
<tr>
<td>Private testing area</td>
<td>6</td>
</tr>
<tr>
<td>Tutoring mentoring</td>
<td>7</td>
</tr>
<tr>
<td>Mental health services</td>
<td>5</td>
</tr>
</tbody>
</table>
**Question 7**

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

<table>
<thead>
<tr>
<th>Type of Support</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help with tests/assignments</td>
<td>4</td>
</tr>
<tr>
<td>Planning and organization</td>
<td>3</td>
</tr>
<tr>
<td>Mental health services</td>
<td>6</td>
</tr>
</tbody>
</table>
Question 8

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

<table>
<thead>
<tr>
<th>Cognitive Deficits</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning/Organization</td>
<td>9</td>
</tr>
<tr>
<td>Flexible Thinking</td>
<td>7</td>
</tr>
<tr>
<td>Monitoring Performance</td>
<td>6</td>
</tr>
<tr>
<td>Multi-tasking</td>
<td>9</td>
</tr>
<tr>
<td>Solving Unusual Problems</td>
<td>8</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>6</td>
</tr>
<tr>
<td>Learning Rules</td>
<td>5</td>
</tr>
</tbody>
</table>
Question 8

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

<table>
<thead>
<tr>
<th>Cognitive Deficits</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Behavior</td>
<td>7</td>
</tr>
<tr>
<td>Making Decisions</td>
<td>6</td>
</tr>
<tr>
<td>Motivation</td>
<td>8</td>
</tr>
<tr>
<td>Initiating Appropriate Behaviors</td>
<td>4</td>
</tr>
<tr>
<td>Inhibiting Inappropriate Behaviors</td>
<td>5</td>
</tr>
<tr>
<td>Controlling Emotions</td>
<td>8</td>
</tr>
<tr>
<td>Concentrating and Taking in Information</td>
<td>9</td>
</tr>
</tbody>
</table>
**Question 8**

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

<table>
<thead>
<tr>
<th>Physical Deficits</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches</td>
<td>7</td>
</tr>
<tr>
<td>Speaking</td>
<td>4</td>
</tr>
<tr>
<td>Seeing</td>
<td>6</td>
</tr>
<tr>
<td>Hearing</td>
<td>3</td>
</tr>
<tr>
<td>Gross/Fine Motor</td>
<td>3</td>
</tr>
</tbody>
</table>
Question 8

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

<table>
<thead>
<tr>
<th>Psychological Deficits</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral/Emotional Regulation</td>
<td>8</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>5</td>
</tr>
</tbody>
</table>
Primary research question: What are the needs of students with TBI in online learning as described by TBI service providers?
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
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.
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.
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.
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.
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.
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

