Application of Universal Design for Learning Materials in Telepractice

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Background

Universal Design for Learning (UDL) is an educational framework developed by the Center for Applied Special Technology (CAST), with the intention of using new technologies to provide better educational experiences for students with disabilities (CAST, n.d.). It is based on extensive research in the fields of neuroscience and education in order to better understand the range and sources of variance in human learning. UDL is distributed across three specialized, interconnected networks:

• the recognition networks, which receive and analyze information (the “what” of learning)
• the strategic networks, which plan and execute actions (the “how” of learning)
• the affective networks, which evaluate and set priorities (the “why” of learning)

News-2-You and SymbolStix PRIME provide avenues to address all of the above principles of UDL.

Learner Objectives:
1. Describe the principles of Universal Design for Learning (UDL).
2. Summarize how an electronic newsletter and icons that incorporated principles of UDL were modified for use in a virtual format to improve communication skills in individuals with complex communication needs.
3. Apply the principles of UDL into intervention via telepractice.

This presentation will use the following case studies to demonstrate how News-2-You and SymbolStix PRIME icons were used creatively in telepractice to address client communication outcomes.

Procedures

Case 1: DR

DR is a fourteen-year-old male in the 8th grade with a speech and language impairment secondary to his primary diagnosis of Down Syndrome. He was seen one time weekly via telepractice with his mother as an e-helper. Since being evaluated in 2010, he has become increasingly verbal and no longer uses the AAC device he was originally
prescribed for communication. His speech-language goals focused on increasing receptive and expressive language skills, and improving reading comprehension skills to a functional level. DR’S goals and objectives were targeted using a universal design approach to learning. Visual supports such as a picture schedule using SymbolStix PRIME icons, brain breaks, and New-2-You news stories of favorite topics were used as multiple means for engagement and representation. DR was provided with three choices of SymbolStix PRIME icons as a multiple means of expression. Positive outcomes were seen across semesters.

Case 2: BG

BG is a 28-year-old male with a diagnosis of Congenital Cytomegalovirus (CMV), Cerebral Palsy, and Spastic Quadriplegia with seizure disorder. He graduated from the University of New Brunswick-Saint John in 2019. BG uses an Accent 1400 communication device with UNITY 60 software utilizing eye gaze to communicate. During his sessions we incorporated age appropriate, client centered materials to target BG’s goals and objectives. Therapy was conducted via telepractice by using PowerPoints, News-2-You stories, SymbolStix PRIME icons, and screen sharing of the clinician’s computer screen with UNITY software. When targeting reading comprehension, symbol-based articles about current events were read to BG. Following the reading, he was asked comprehension questions and prompted to answer given three options. During his sessions, two caregivers were present and acted as e-helpers, and a second camera was mounted behind BG’s head in order for the clinicians to see the use of his device. Positive outcomes were seen across semesters.

Case 3:

KD is a 13-year-old female who presents with Autism spectrum disorder (ASD) and a severe mixed expressive-receptive language disorder. Her language goals focus on improving receptive and expressive language skills, and improving reading comprehension skills. She was seen two times weekly via telepractice, with her mother as an e-helper. News-2-You entertainment news stories and SymbolStix icons were utilized during each telepractice session to target communication goals and objectives. During weekly sessions, clinicians provided KD with the stories in a PowerPoint format. Wh-questions were embedded throughout the stories, and three answer choice options containing SymbolStix PRIME icons that corresponded to the story were provided. KD was able to independently read each News-2-You story and answer wh-questions with minimal support. Positive outcomes were seen across semesters.

Results

News-2-You entertainment stories and SymbolStix PRIME icons were used creatively in telepractice to address client communication outcomes. Clients with varying ages and communication skill levels all demonstrated progress toward their individualized communication goals and objectives. UDL principles were successfully incorporated into intervention strategies for use in a virtual service delivery model.

References


