Using the iPad to Provide Play Opportunities in Children with Disabilities

Type of Project

Intervention

Summary

Most of the literature referencing the use of iPads for children with disabilities focuses on communication and education goals in which the apps and games are being used as a medium to develop and practice other skills in those areas.
The iPad has many features that make it a wonderful tool for providing play opportunities for children with disabilities, most importantly that it adapts games to many children both from a motor and from a cognitive perspective. From a motor perspective, because the whole game takes place on a small screen and with very few touch gestures, children with fine motor difficulties are able to manipulate game pieces and engage in play that they may not otherwise be able to. For children with more severe motor difficulties the iPad can be placed in a mount and attached to switches allowing the games to be played by a simple press on a switch.
The intuitive interface, the visual character of the display, and the immediate and significant auditory and visual feedback contribute to the high motivation we see in children to play games on the iPad. These characteristics seem to encourage children with intellectual disabilities to be interested in and motivated to play games that often don't encourage their interest in the comparable physical toy/game.
We are using a variety of apps including cause and effect apps, role playing apps, app versions of board games, and others to promote play skills and provide play opportunities for children with motor and/or intellectual disabilities. There are many Most of the apps we use are apps designed for the typically developing population.

Low-tech, high-tech products, services and contexts for play

The iPad is a touch screen tablet available in the regular market and intended for use by children and adults of all ages for a multitude of uses, including business, education, and leisure. It is manufactured by Apple, Inc. https://www.apple.com/ipad/

Among the typically developing population it is used for play by children of all ages. It is also considered a valuable device for the special needs population with major uses being for communication and learning. We believe it has incredible value in providing play opportunities as well.

The context of use

Used with children with multiple complex disabilities, in kindergarten and school settings servicing children ages 0-12. In the school setting we use the iPad in both individual and group sessions, exposing children to new apps, teaching them to play them, and demosntrating to the staff how to facilitate the child in play with the iPad. For children that have access to an iPad at home, parents are given guidance on what apps to use for play and how to use them. We provide app recommendations in a monthly newsletter that the teachers send home and we write a blog where we review relevant and interesting apps and how to use them to promote skill development and independence in many areas for children with disabilities. Examples of apps used include apps by Toca Boca, Helpkidzlearn, and Pepi Play; app versions of board games like connect 4, rush hour, Talking Tom apps and more...

Type of play in this play system

Cognitive

Practice
Constructive
Rule play (including videogames)

Social

Solitary
Cooperative

Objectives related to play according to ICF-CY

Play for the sake of play: Major life areas - d880 enagement in play

d8800 solitary play
d8801 onlooker play
d8808 engagement in play, other specified
d8809 engagement in play, unspecified

Community social and civic life - d920 recreation and leisure time

d9200 play

Play-like activities: Therapeutic and educational objectives

b1 Mental functions
b2 Sensory functions and pain
b3 Voice and speech functions
b7 Neuromusculoskeletal and movement related functions
d1 Learning and applying knowledge (learning through symbolic play, learning through pretend play)
d2 General tasks and demands
d3 Communication
d7 Interpersonal interactions and relationships

Number of participants

1-5

Chronological Age

0-3 years
6-12 years

Development Age

0-3 years
3-6 years

LUDI Categories of disabilities

Mental/intellectual impairments::
mild
moderate
severe
Hearing impairments:
Partially hearing impaired
Visual impairments:
Partially sighted
Communication disorders (speech and language disorders):
Physical impairments:
Mild
Moderate
Severe
Autism Spectrum Disorders:
Multiple disabilities:

Explanation on the use of low-tech, high-tech devices, services or contexts

Explanation

No instruction, self-discovery of the participant/subject
Verbal instruction, language and communication fitting to chronological age
Verbal instruction, language and communication is adapted
Visual and/or verbal instruction with AAC (Aumentative and Alternative Communication)
Modeling by therapist/researcher
Hand over hand: therapist/researcher leads the actions of the participant
Prompting: therapist/researcher touches the participant as a key for further actions
Guided discovery: therapist/researcher coaches the participant so s/he discovers how to use the assistive technology
Modeling by peer

Involvement

Adult: therapist/educator/researcher

Role

Providing instruction
After the instruction, providing supervision during play

Evaluation of objectives and outcome measures

Description of outcome measure(s)

Observation by professional/researcher providing the play experience
Feedback from client/parents/professionals

Summary of achieved effects

Over the last few years, as we have introduced iPads to our center, we have seen children with both motor and intellectual disabilities engage in play activities that they are unable to with regular toys. They are able to play on their own for longer periods of time than with regular toys, and they are able to access a greater variety of of toys and games. There are numerous instances of children with intellectual disabilities who have shown a development in motor and cognitive skills through play with the iPad that we were unable to achieve over years of playing with conventional toys.
In a Quality of Life survey given to parents, parents report improved quality of life and ability to play independently for longer periods.

References to the intervention or research project

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iPad, apps, special education, cause and effect, dramatic play, solitary play, cooperative play, switch use, accessibility features