

Switch Adapted Toys for Children with Disabilities

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Introduction

Toys are highly beneficial for the psychological, social, emotional, and physical development of children, but many children with disabilities do not have access to toys they can use (Prazak et al., 2004). This project attempted to provide more children with disabilities access to adaptive toys that can be independently utilized. The project focused on program design in assistive technology for pediatrics.

Processes/Methodology

The project was organized into 4 steps. First, a literature review was conducted to ensure the need for adaptive toys for children with Down's Syndrome. This step taught me the importance of understanding a population's needs and cemented my knowledge of how to find evidence-based research. The next step focused on learning 3D printing, connecting with other groups completing similar projects, and establishing working knowledge of switch adaptation. This phase showed me the benefit of community participation in gaining new skills. Next, was the task-focused phase of the project. Switches were developed, tested, and adapted. Social media posts were made to educate others on switch production. Donations were received and adapted. This phase taught me about how to adapt the context surrounding an occupation. Lastly, the switches and adapted toys were provided to GiGi's Playhouse and tested with the clientele there. This phase taught me the importance of being able to grade up/down different activities to promote participation.

Outcomes

There were 3 main outcomes for this project. First, the project provided GiGi's Playhouse in Houston with switches, adaptive toys, and battery disrupters. Next, I learned how to adapt toys to accommodate the specific needs of the clientele. After introducing the adapted toys to the

children, some designs were removed and some were adapted. For example, the joystick design was removed because the children at GiGi's Playhouse demonstrated excellent finger isolation. Lastly, this project provided educational resources on how to adapt toys, create battery disrupters, and create switches.

The clientele of GiGi's Playhouse in Houston consisted of children with Down's Syndrome and their families. The children enjoyed playing with a variety of toys. One parent said, "These toys will really help my daughter be able to play with her brother. They want to play with each other all day but it's hard to find toys they can both play with."

This program demonstrated the expertise occupational therapy providers have in modifying occupations and environments. The PEO model guided this project as it provided information on the necessity of adapting the occupation or the environment to allow a person to participate (Law et al., 1996). Occupational therapists are uniquely situated to create assistive technology as occupational therapists are trained and educated on how to properly adapt the environment (Graham et al., 2019). In addition, by utilizing adaptive toys instead of traditional ones, the children at GiGi's Playhouse focused on building processing and social skills.

Conclusion

This capstone experience has allowed me to gain skills in adaptive technology and provide services/equipment to an underserved population. Play is an important occupation for children and by utilizing adaptive technology more children can access this occupation (American Occupational Therapy Association, 2020). Through adapting the environment at GiGi's Playhouse, all of the clients were able to participate in play-based activities independently.

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