LivelyButton

Type of Project

Finished research project

Summary

A key thought behind the design of LivelyButton is to explore the concept of spatial co-location. As a situated comment to the prevalent distant projections and distance between buttons and effects, the design focuses interaction in a single, but rich locus of inner beauty. The design is a simple and crude construct of a capacitive sensor controlling RGB LED strips connected to an Arduino board and a stepper motor via a motor shield. The motor spins two metal spirals below the surface of a semi-transparent fabric on the top of a wooden black box.
Meant for kids with motoric disabilities.

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

The children have engaged by poking, pressing and leaning, using cheeks, chins, teeth, hands and arms. Three qualities stand out: a) the first initial reaction of light giving the feel of agency; b) the pedagogical importance of setting he behaviour to suit the situation; and c) pressing the spirals, so they stop, vibrate, peck, or start, became part of the shifts between musing while feeling the vibrations and then exploring by poking/pressing the spiral to change sound.
In general, the design has aided attention, a feeling of agency as well as exploration and musing. Thus, the children have been engaged for much longer than average.

The context of use

to be used in home or rehab center

Type of play in this play system

Cognitive

Practice

Symbolic

Social

Solitary

Objectives related to play according to ICF-CY

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

d8800 solitary play

Play-like activities: Therapeutic and educational objectives

b1 Mental functions

b7 Neuromusculoskeletal and movement related functions

Number of participants

1-5

Chronological Age

0-3 years
3-6 years
6-12 years
12-18 years

Development Age

0-3 years

LUDI Categories of disabilities

Mental/intellectual impairments::
severe
profound
Communication disorders (speech and language disorders):
Physical impairments:
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
Hand over hand: therapist/researcher leads the actions of the participant

Involvement

Adult: therapist/educator/researcher
Parent or significant others

Evaluation of objectives and outcome measures

Description of outcome measure(s)

Observation by professional/researcher providing the play experience
Video analysis

Information about availability of outcome measure: publisher, website, contact person

This artefact is a prototype. See references for possible availability!

Summary of achieved effects

In general, the design has aided attention, a feeling of agency as well as exploration and musing. Thus, the children have been engaged for much longer than average.

References to the intervention or research project

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http://sid.desiign.org/portfolio/livelybutton-erfaringer-g/

Publication

Caltenco, H. A., & Larsen, H. S. (2014). Designing for Engagement: Tangible Interaction in Multisensory Environments. NordiCHI ’14 Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational, 1055–1058. http://doi.org/10.1145/2639189.2670274