

DESIGNING PLAY EQUIPMENT FOR THE HOLISTIC DEVELOPMENT OF CHILDREN WITH CEREBRAL PALSY

Anna Borzenkova

Supervisor:

Prof. Kristina Niedderer

University of Wolverhampton

RESEARCH AIM

This research is studying how to design play equipment for the holistic development (physical, emotional, social, cognitive) of children with cerebral palsy. While most existing designs focus on physical and cognitive improvements, this study will specifically investigate the psychosocial aspect of play equipment. Positive emotions during the play process, beneficially influence on the all aspects of children's well-being and help to rise motivation.

CHILDREN WITH CEREBRAL PALSY

Cerebral Palsy affects nearly 1800 children every year in the UK (NHS). Cerebral palsy is the general term for a number of non-progressive neurological conditions that affect movement and coordination, and can be accompanied by disturbances of sensation, cognition, communication and perception disorder (Bax et al., 2005). There is both medical and non-medical equipment for therapeutic development. The aim of this study is to design non-medical equipment to facilitate holistic play to support the child's holistic development needs.

Bax M, Goldstein M, Rosenbaum P, Leviton A & Paneth N 2005. Proposed definition and classification of cerebral palsy, April 2005. Developmental Medicine and Child Neurology 47(8):571-6

DESIGNING FOR CHILDREN WITH CEREBRAL PALSY

By means of design, it is possible to create play equipment for promoting and inciting participation of children themselves in the process of rehabilitation. It is important to focus on the abilities, rather than the disabilities (Vygotsky, 1978) and stimulate user for certain behavior patterns through visual, sound and haptic senses (Bruce, 2004). The equipment is supposed to provide the holistic development of children with cerebral palsy and motivate them with positive connotation, be friendly to user.

Vygotsky, L. (1978). Mind in society. Cambridge, MA: Harvard University Press.
Bruce, T. (2004). Developing learning in early childhood. London: Paul Chapman.

METHODOLOGY

To answer the research question, this study combines theoretical investigation with design practice (Creswell & Plano Clark, 2011). In order to define context and the key concepts of the research, the literature review was conducted. On this basis a new model of play equipment for the holistic development of children with cerebral palsy will be created, supported by analysis of examples from current design practice. The empirical part of this research will be carried out to test the usefulness of the new model of play equipment.

Creswell, J. W., Plano Clark, V. L. (2011) Designing and conducting mixed methods research. 2. ed. Los Angeles: Sage.

RESULTS AND CONTRIBUTION

The principles of designing for the holistic development and socialization of the children with cerebral palsy will be defined, based on analysis of the current equipment, characteristics of the equipment and existing approaches for development of children with cerebral palsy. The new model of play equipment for complex development will be designed and tested. The possibility of applying such designing principles for creating equipment that engage and motivate children with similar diseases will be studied on the assumption of obtained results.



ACKNOWLEDGEMENTS: Thank you to my supervisor and all those who have supported me furthering my research experience through a feedback and presentation opportunities.