Posture and Wheeled Mobility 2010 Abstract

Modification and Expansion of an Assessment Tool for Powered Mobility Use

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Summary

Two classical Grounded Theory researchers in mutual collaboration reanalysed their previously collected data and findings. Both had independently written dissertations and generated tools for assessing and facilitating learning powered mobility use. Their constant comparative analyses enabled the emergence of a new modified assessment tool and strategies facilitating the learning process.

Aims and Objectives

Reanalysis of previously collected data and findings from both researchers in order to generate a more cohesive and comprehensive understanding of the process of learning powered mobility use.

Modify and expand a new tool for assessment of powered mobility use.

Modify and generate strategies facilitating the learning process

Locate and capture sections of video data illustrating the process.

Write a joint publication on the findings

Background, Technique, Standards, Clinical Detail, Results and Testing

Two researchers, Durkin J. (2006) and Nilsson L.(2007) independently carried out PhD studies in the substantive field of people with multiple and complex disabilities learning powered mobility use. Both researchers had used video data from typically developing children as well as children with multiple and complex disabilities, Nilsson had also used video data from adults with cognitive disabilities of varying degrees.

Working from a common basis of classical grounded theory, in this narrow niche of powered mobility research, both researchers agreed to work in a mutually collaborative way. They decided to jointly do an extended constant comparison and reanalyses of their previously collected video data with the aim to arrive at a modified and expanded tool for assessment of powered mobility use.

The collaborative work started by each researcher presenting and exploring the others perspectives, this process enabled clarification of each others theoretical frameworks, which led onto the identification of common views and similarities in each others work. The following research questions were posed:

1.What is the process of learning powered mobility use?

2.What facilitates and what hinders the process?

3.Which abilities are indicating progress in the learning process?

4.What are the benefits from engaging in powered mobility learning, apart from gaining independent mobility?

5.Is the learning process connected to providing technology and not viewed as developing activity in its own right by many?

The processes used to address the research questions began by each researcher having the opportunity to apply a different assessment tool to their familiar data and to view unfamiliar data using a familiar assessment tool. The next step was to dismantle the two instruments into pieces/indicators and redo the relating and grouping of indicators and concepts into categories. The most difficult part was to start the generation of a common framework for the new instrument. It was necessary to go back to the video data and view numerous sections of participant activity. Simultaneous sorting and resorting of old but also novel indicators and categories into a fresh new instrument took place. Discussion on other data sets together with repeated analyses of the video data and further comparisons with the literature from renewed perspectives also occurred.

The outcome is a new assessment tool. The new tool has eight phases which have been described using aspects of the Dreyfus & Dreyfus Model of skill acquisition and Reynell's Levels of Attention. Four observational categories emerged; Activity & Movement; Understanding of Tool Use; Expressions & Emotions; Interactions & Communications; for each of the eight phases. Three distinct stages were also generated ranging from the Introvert stage from Phases 1-3; through the Difficult Transition Phase 4-5; to the Extrovert Phases 6-8. Comparisons with the therapeutic approaches of Intensive Interaction, Sensory Integration and the Hanen Play and Communication Approach have been intertwined within the assessment tool and the written strategies for facilitating the development of use.

These tools are being trialled with children, young people, adults, families, carers and peers in the U.K. and Sweden.

Discussion

The evolvement of this new assessment tool comes from within the researcher's bias towards a social model of disability (Oliver 1990; Johnstone 1998) and therefore embraces the many factors that can influence a person's performance in a powered wheelchair (Hardy 2004). The assessment tool is founded on a basis of observation of 'typically developing children' not as a means to compare disabled children or adults but in order to understand how powered mobility use emerges along a developmental continuum. This assessment tool begins at one end of the spectrum with the Novice who has low levels of attention, who may initially reject the activity and who may display anxiety or avoidance to an unfamiliar task and ends with the Expert who knows what to do based on mature and practiced understanding, who has achieved integrated tool use and is able to interact and communicate at a multi-level of integrated interaction. The assessment tool therefore does not exclude an important group of users who have neurodisabilities and learning difficulties. The new assessment tool embraces the learning needs of all users; addresses the appropriate learning stage at which electronic mobility guidance systems can be introduced and can also be used with users who need to achieve higher levels of integration and greater understanding of tool use.

Empowerment of users occurs with transference of power from professionals (Williamson 2005) and this is implicit within the written strategies where further comparison with the literature on empowerment (Tengland 2006) was undertaken.

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To Be Considered For: Platform