

Chapter 16

A Model for Gaze Control Assessments and Evaluation

Eva Holmqvist
DART, Sweden

Margret Buchholz
DART, Sweden

ABSTRACT

Technical aids can contribute towards improved health and satisfaction in life by giving the user increased possibilities for participation in a number of areas of daily life. Assessing people with disabilities that affect their motor, communication and cognitive skills can be a complex matter. The result of an assessment might be the user's only way of independent activity and communication. This stresses the importance of making high quality assessments. This chapter discusses the prerequisites, structure and key elements of a successful gaze control assessment.

INTRODUCTION

Health is more than just not being sick. Health is influenced by the experience of being active, being able to participate and having a sense of connection.

The World Health Organisation stresses the meaning of health in the International Classification of Functioning, Disability and Health (ICF) (World Health Organization 2008). It describes the components affecting health from a biological, individual and social perspective, underlining both the environment and participation as highly

important factors. Participation can be defined as taking part in meaningful and purposeful activities, as well as interacting with the environment. Technical aids can contribute towards improved health by giving the user increased possibilities for participation in a number of areas of daily life. A person's satisfaction with life depends on how well he or she is able to achieve participation and engage in meaningful activity.

Assessing people with disabilities that affect their motor, communication and cognitive skills can be a complex matter. The result of an assessment might be the user's only way of independent activity and communication. This stresses the importance of making high quality assessments.

DOI: 10.4018/978-1-4666-4422-9.ch016

An essential prerequisite for high quality assessment is the use of a trans-disciplinary team committed to working towards a shared goal. The team typically comprises a range of professionals such as ICT educational consultants, occupational therapists, speech and language therapists and technicians, although this range will vary. Each team member contributes his or her specific knowledge and experience in relation to the user, the activity, the environment and the technology on an equal basis, and the composition of the team should be based on the outcomes that the team is aiming to achieve for the individual. To achieve effective teamwork the requirements need to be identified and distinct goals set, and the responsibilities of each team member must be made clear.

TAKING A CLIENT-CENTRED APPROACH

A client-centred approach is a basic condition for self-determination and empowerment of the user in all assessment work. Use of an assessment model offers an effective means of ensuring consensus within the team and a high quality outcome. The assessment model referred to here is based on the Canadian Model of Occupational Performance (CMOP) (Townsend, 1997) and has been adapted for the assessment of Assistive Technology (AT). It has resulted in the book “Be active using a computer – possibilities for people with physical disabilities” (Lidström and Zachrisson 2005). The structure of its clinical process is based on the Occupational Performance Process Model (Townsend, 1997), which has a client-centred perspective. It is easy to follow and is applicable in most cases (Buchholz and Holmqvist 2009). The steps of the process are summarized as follows:

- Identify, describe and prioritize issues
- Select theoretical approaches
- Describe the conditions for the activities

- Describe targeted outcomes and develop an action plan
- Implement plans
- Evaluate outcomes

Identify, Describe, and Prioritize Issues

The work of identifying, describing and prioritizing occupational performance issues is, whenever possible, undertaken mainly by the user. The results are used as a foundation for further assessment. To achieve this, we need to listen to the user and ask appropriate questions.

The issues addressed must be specific and describe the limitations in the daily life of the user. The aim is to establish close cooperation between the user and the team members and to work towards a common goal. The user (with support from the team) decides which issues and activities are most important to them. If needed, the interview and discussions with the user should be adapted to meet his or her cognitive and physical abilities. Different approaches are used depending on whether the user is an adult or a child and whether there are cognitive and/or communicative problems. For many users with communicative and cognitive disorders use of the Talking Mats method is useful in helping make the decision-making process easier (Murphy and Cameron 2006).

Select Theoretical Approaches

The theoretical approaches can include theories, models or paradigms and they aim to help clarify further future actions, including assessments and implementations. For example, the ICF, client-centred models, CMOP (Townsend, 1997), laws and praxis models are concerned with the prescription of technical aids and are all potentially applicable.

10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/a-model-for-gaze-control-assessments-and-evaluation/80618

Related Content

A Brief Survey on User Modelling in Human Computer Interaction

Pradipta Biswas (2014). *Assistive Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 102-119).

www.irma-international.org/chapter/a-brief-survey-on-user-modelling-in-human-computer-interaction/80608

Sensors, Networks, and Clouds

(2014). *Enhancing the Human Experience through Assistive Technologies and E-Accessibility* (pp. 1-18).

www.irma-international.org/chapter/sensors-networks-and-clouds/109944

Socially Assisted Robotics as an Intervention for Children With Autism Spectrum Disorder

Sandy White Watson (2023). *Using Assistive Technology for Inclusive Learning in K-12 Classrooms* (pp. 24-41).

www.irma-international.org/chapter/socially-assisted-robotics-as-an-intervention-for-children-with-autism-spectrum-disorder/329325

The Impact of International Management on Inclusion of Persons with Disabilities in the Workforce

George S. Mouzakitissand Despoina Goutou (2014). *Assistive Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 932-946).

www.irma-international.org/chapter/the-impact-of-international-management-on-inclusion-of-persons-with-disabilities-in-the-workforce/80652

The User as the Source of the Inspiration for the Future

(2021). *Dyslexia and Accessibility in the Modern Era: Emerging Research and Opportunities* (pp. 199-233).

www.irma-international.org/chapter/the-user-as-the-source-of-the-inspiration-for-the-future/256017