Perspectives of ICT in special education
Potential and possibilities of WEB 2.0 and social software

Workshop at Knowledge Media Research Center, 72072 Tübingen, Germany
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Computers are effective media to support learning processes of people with cognitive disabilities. These findings are proved by both special education practice and research (cf. Zellmer,1976; Walter, 1984; Kulik & Kulik, 1991; Lamers, 1999).

At Knowledge Media Research Center (KMRC) in Tübingen/Germany there have been two major projects dealing with this topic. In WIGEM (Weiterbildung durch das Internet für Menschen mit einer geistigen Behinderung, engl.: further education via internet for people with cognitive disabilities) two consecutive studies fundamentally explored the possibilities of multimedia for the target group (Zentel, Opfermann & Krewinkel, 2007). In LMMP (Lernunterstützende Multimediaplattform, engl.: learner supporting multimedia platform) teachers, researchers and software developer are working in a participatory design process to develop a multimedia toolbox like learning platform which can be easily adapted to the heterogeneous needs of pupils with cognitive disabilities or learning difficulties (Lingnau, Zentel & Cress, 2007; Lingnau, Zentel, & Mästle, 2007).

The experiences of both projects should now be carried into a new project to harness recent developments in ICT, particular the concepts of *web 2.0* and *social software* technologies, for people with cognitive disabilities. Web 2.0 subsumes applications which offer active participation to the user. Information does not just flow unidirectional to the recipient. Instead the user can take direct and indirect action on the content. Furthermore the web 2.0 application can automatically or manually be adapted to the individual needs of a user.

Furthermore social aspects, i.e. community building, become more and more important, e.g. for cooperative creation of information and content (e.g. in Wikipedia), advertising and control of attention or self-portrayal (e.g. blogs).

For us these possibilities offer a high potential for the target group of people with cognitive disabilities. So far static internet pages can be customised for the user respectively becoming automatically adjustable through intelligent mechanisms. An individual modification of the representation of content for those users who are not able to read and write is imaginable.

Particularly social aspects of web 2.0 seem to be promising. Until now cooperative learning and collaborative knowledge communication played a secondary role in the field of cognitive disabilities. As a reason fundamental problems can be mentioned which occur during communication and exchange of people with cognitive disabilities in small groups: they are less eloquent, often unable to express their point of view and react inadequate to the needs of their communication partners. Furthermore they have problems to take an active role in small group activities. Although those problems which have been consternated by Cosden, Goldmann und Hine (1990) cannot be generalised for all people with cognitive disabilities, they describe a common tendency.

We now assume that media technology for communication could compensate those problems by assuming parts of the communication process, e.g. by controlling turn-taking of the user.

Within a workshop at Knowledge Media Research Center together with experts we would like to fathom possibilities and potential dangers of web 2.0 technologies for our target group and search for new opportunities for research and practice within this context.

The workshop will approach the topic from two sides: on the one hand from the perspective of special education and pedagogy and on the other hand from the perspective of computer science.

For the field of special education, in retrospect questions about the previous impact of technology for the target group we will discuss findings about social cognition, collaborative learning and methodological characteristics in empirical studies about people with cognitive disabilities.

For the field of computer science developments paradigms from the last decades will be reinvestigated how far people with cognitive disabilities can benefit from technical improvements and which standards have been established so far.

We would like to discuss these questions together with German and international experts and debate how the two so far mainly independent traces of special education and learning technology can be consolidated.

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