# Chapter 14
# Using Mobile Technology in Schools to Develop Social Skills in Children with Autism:
## Teacher Attitude Makes All the Difference

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## EXECUTIVE SUMMARY

*There has been developing interest in the potential for the use of mobile technology to achieve educational objectives, in particular for children with Autistic Spectrum Disorder (ASD). The HANDS (Helping Autism-diagnosed teenagers Navigate and Develop Socially) project has developed a software application for mobile phones, which helps children with ASD to develop social and self management skills. Two successive prototypes of this application have been implemented and tested with 15 teachers and 27 children with ASD at four special schools in the UK, Demark, Hungary, and Sweden. This chapter reports on issues involved with introducing this technology innovation at one of the schools. Interviews were undertaken with teachers on the project during the introduction of the technology. The extent to which teachers identify themselves as teachers of social skills development, which is often considered an expression of informal learning (Jordan, 2005), is identified as a key factor in determining the extent to which the successful engagement with the technology solution occurred.*

DOI: 10.4018/978-1-4666-1933-3.ch014

## BACKGROUND

In recent years, technology has been integrated into schools at a rapid rate in the developed world, with the UK in particular seeing an enormous investment in to Information and Communication Technology (ICT) resources (Hennessy & Deaney, 2004; Becta, 2008). There has also been a fast developing interest in the potential use of mobile technology in the classroom. Given the very rapidly changing nature of mobile technology, it is perhaps not surprising that the academic literature has tended to lag behind the actual use of such technology in the classroom. However, in the last few years, there has been a rise in studies evaluating the use of mobile technology as a learning tool. For example, in the UK, the Mobile Learning Network (Molenet), co-ordinated 104 projects across 37 schools in the UK. One such project, Learning2go, has been the largest collaborative mobile learning project in the UK, rolling out over 1500 portable devices across 18 schools (Learning2Go, 2009). Findings of the project reported some evidence of effective use of drill and practice software in mathematics and literacy development, with students displaying highly positive orientations towards their mobile devices in the learning.

The European M-Learning Project was conducted across UK, Italy, and Sweden in colleges and further education. Students used their mobile phones to support maths and literacy. The evaluation indicated that mobile devices attracted young people to learning, helped to maintain their interest and could help support learning, in particular in mathematics (Attewell, 2005).

The nQuire project used mobile phones to assist students in conducting science experiments outside of the classroom. The project found that the device was particularly useful for experiments outside school, on school trips, and at home. There was some evidence to indicate that the use of mobile technology promoted engagement in learning by the students (Mulholland, Collins, &Gaved, 2010).

There has been significant interest in schools in the use of newer mobile technologies such as tablets and game based consoles (see Learner, 2011; Dodson, 2010). However, as Murray and Olcese (2011) point out in a recent review, there remains as yet little evidence on the impact of such technologies on learning. Other active projects such as the Learning on Foot project in the Netherlands (www.lopendleren.nl) and the Learnosity project in Ireland (www.learnosity.com/) have yet to report results.

There has also been growing interest in the last ten years in the use of mobile technology to support young people with emotional and cognitive impairments with social skills and daily living skills, such as young people with Autism Spectrum Disorders (ASD).

Autism Spectrum Disorders are developmental disorders of the human nervous system. They have biological—largely genetic—origins, arising in early childhood,