HANDS – lesson learned from an unusual case

1. Premises
2. Results
3. Analysis
4. Conclusions

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The core aim of HANDS

“A HANDS toolset based on new research from Human-Computer Interaction will be developed which will support them in handling situations where they have to act autonomously, as well as to develop their social skills and self management skills.”

From HANDS Abstract, Annex I
Project description

- MYP with a diagnosis: Autism
- Schools: Welldefined institutionalised frames
- 3 universities, 3 software developers, 4 schools
- Status Prototype 1: done, prototype 2: coming up
Incluso conference No. 4 of 12

Teachers application

Pupils phone

Programs

For the pupil

Log of single pupils use of the programs
Results: Numbers

- 4 schools
- Approx 4x10 pupils involved in testgroup, 4x10 in controlgroup
- Electronic footprints
- Interviews with pupils, teachers and parents
<table>
<thead>
<tr>
<th>School</th>
<th>Amount of usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egebakken (DK)</td>
<td>570</td>
</tr>
<tr>
<td>Swedenskolan (SE)</td>
<td>708</td>
</tr>
<tr>
<td>Helen Allison (UK)</td>
<td>1275</td>
</tr>
<tr>
<td>Autism Foundation (HU)</td>
<td>3437</td>
</tr>
</tbody>
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Results - interviews with teachers

- Managing emotions - eg ”How to handle stressful situations”.
- Personal hygiene and health - eg ”He is being reminded of some rules in eg. Sex and health.
- Taking medication - ”With the help of the machine he was capable independently preparing, packing together necessary equipment
- Shopping - ”To get to the store and shop groceries”
- Daily routine eg. He(36.223) comments about how good it was for him to help with his daily routine at home and stuff like that.
- General social skills - eg. ”Formed friendships. (sense of camaraderie with other children using the machine
- Communication - eg. Development of independence.

Quotes from D3.4.1, p20-30, available at http://hands-project.eu/
Interactions
- numbers it has been used

Mobile HANDS functionality being used

- Social Stories
- Managing Time Interventions
- Synchronisation
- Other
Special HANDS moments

”It gives me chance to help him(22.103) in his spare time and I didn’t have before, so I think that’s its around him for 24 hours its a very good thing and that makes ME think differently.” teacher at Egebakken

The teacher could work on new things - ”With the help of the machine we were able to realise those activities, processes, which aid indepence(the teaching of emotions, arts and crafts activities)”, teacher at Autism Foundation

”When I can help him write these things down or let the technology take my place its much, much better.”, teacher at Svedenskolan

Quotes from D3.4.1, p20-30, available at http://hands-project.eu/
Factors Mediating Engagement and Impact

- Technical
  - Speed
  - Flexibility
  - Daily schedule
  - Look and feel
  - Screen freezing
  - User interface
  - Sounds
  - Battery time
- Child
  - Self awareness
  - Emotional experience
  - Appropriateness to age and cognition
  - Phone functions
  - Motivation
- Teacher
  - Knowledge
  - Quality and quantity of input
  - Reflection
  - Successfull engagement and Impact
  - School wide factors
  - Time

Research assistant Morten Aagaard
Analysis: Usages about largest innovative potential

1. Routinalisation of social skills
2. Extending the therapeutical room
3. Scaffolding of activities and days

Summarising D2.2.1, D3.4.1, D4.3.2, available at http://hands-project.eu/
Conclusions - evaluation of prototype 1

- Cognitive support systems on ICT appears relevant to pupils and teachers.
- The mobile platform promise potentials and pitfalls.
- The needs are highly individual and so should the cognitive support system.
- (Persuasive) Meta applications (authorware) is a required.
- Teachers AND pupils are aims of Persuasion
- Cognitive support tools are innovation of teaching traditions and should be designed as good innovation.