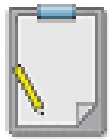


**Title****Author****Summary****Objectives**

## **Personal and social learning in connection with IT**

### **The COL project**

**By Neuropsychologist Steen Hilling**

#### **Summary:**

Based on research and development work as well as concluding studies in Scandinavia, there are results relating to the personal and social development of mentally challenged students. Can such criteria form the basis of setting up IT usage and, at the same time, fulfill mentally challenged students' needs for individual development. Based on the applied studies, it is confirmed that there are few but usable possibilities.

#### **Preface**

In the COL project, a number of relevant themes have been set up, which are all to contribute to the improvement of mentally challenged students' learning processes through the use of IT. In addition, it is considered vital that precisely the personal and social developments are furthered through learning processes and the use of IT. But how should the field be viewed?

What are the preconditions for the development of mentally challenged students?

Which requirements must subsequently be fulfilled for this group of students to learn?

What is personal development?

Which themes can subsequently be implemented as relevant for personal development?

What is social development?

Which themes can subsequently be implemented as relevant for social development?

To close in on a headline as inclusive as possible, some searches on the Internet have been attempted. Searches for inclusion, IT, learning and mental retardation – with no luck. On the contrary, some mentally challenged persons have described their own experiences with IT in school or during time off. So user-described cases about IT and user requirements within IT usage do exist. But, hereafter, it must be concluded that the themes stated are not developed or otherwise described from professional perspectives. Thus, this is new scenery being described!

The few existing cases are all from Germany and set up as relevant requirement specifications for IT. These cases will be translated and included as examples. At Munkholm Course Center, there are also some data about mentally challenged students' personal and social development, based on students, adolescents and young adults. This data will be processed for the purpose. And then there are a few bachelor theses which can contribute e.g. "Teaching methods on the web". And by analyzing IT structures from such theses, relevant guidelines can be derived.

A Ph.D. thesis has been written about IT and Danish as a subject and, in this exhaustive thesis, a number of very useful analyses and criteria have been set up – criteria which can contribute to personal and social development. But finding a number of studies about the field for mentally challenged persons and their use of IT, while the creation of personal and social development takes place, is apparently not possible.

**Keywords:** mentally challenged students, personal development, social development, IT.

## Keywords



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Keywords

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Which criteria can be formulated for the use of IT in this development?

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**Which knowledge exists about mentally challenged persons' personal and social development?**

Here three comprehensive and multi-annual development projects completed within the framework of the EU's European Social

Fund<sup>1</sup> are presented. The three schools and institutions have year-long experience with young, mentally challenged persons. Moderately mentally challenged students, who have attended special lessons or special schools. Thus, these are not severely mentally challenged students.

In this article, the results are gathered, and a joint conclusion for the further work to seek out and set up criteria for the use of IT programs is made.

Pedagogical goals and criteria:

- A sense of responsibility in the student as a personal, social and vocational awareness.
- Security in communication – adolescents who are able to speak with one another and teachers participating in the project can strengthen the student's communication.
- Social understanding – the special empathy making differences a strength.

Process goals:

- Strengthening competence discourse through mediation e.g. through the adolescent acting as mentor for other adolescents in the same situation.
- Passing from competence discourse with intermediate goals to mastering a moderate type of presentation discourse.

Evaluation:

- is characterized by interaction, understanding, responsibility, and by commitment being the staple force.
- that personal, social and vocational development is encompassed by competence discourse.
- that society accepts the students as able-bodied fellow citizens.

The project states the above criteria for the adolescents and, through focus interviews with the adolescents, there is a positive and confirmed result.

The result is very positive:

31% now have an actual wish for jobs and are realistic about job possibilities.

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<sup>1</sup> The EU's Social Development Fund, Title: "Mentally challenged persons more visible and active – Evaluation report 2005-2007", the Adult Education College of Nordfyn by Psychologist Steen Hilling; The EU's Social Development Fund, Title: "Creating professional, personal and social development for the adolescent – Evaluation report 2007", Horsens Development and Production School by Psychologist Steen Hilling; "Personality feature analysis for all students and the learning space in an independent boarding school for lower secondary students with special needs – Evaluation report 2006", Waldemarsbo Independent Boarding School by Psychologist Steen Hilling.

10% have a wish for education.

60% experience and describe improved personal and social functions.

ALL course participants have had positive experiences during their project year. Far more than half describe many very constructive and specific experiences referring to personal, social and vocational developments. This picture is confirmed by the teacher group. The course participants experience that the first advisory session with caseworkers has been constructive and that what was promised was also fulfilled. There is a thread through the decisions made in the system – from caseworker in the social system to the actual and completed education.

Moving from this social-psychological study to a more vocational study. A study emphasizing which pedagogical methods and criteria should be met in order to create development.

- Adolescents learn best through types of elementary learning i.e. one thing at a time.
- Adolescent display high competences within "image to language" and "image to action".
- The above pedagogical criteria have been applied and the results show:
  - o improved personal development by reducing fear and promoting self-esteem.
  - o improved social development by creating controlled interplay and visibility in social thinking i.e. understanding other people's expectations and thinking.
  - o improved vocational competences by learning about one's own learning model – responsibility for one's own learning.

After this, the pedagogical learning environment is examined with focus on the development of the adolescents' personal and social competences. What does it take?

The modern constructivist perception emphasizes that the student constructs his/her own experience by being an active participant. In a constructivist plan of action, pedagogues will emphasize the construction of situations so the students discover strategies for learning and problem-solving (Bråten, 2006, pp. 153 -54). Poplin (1988) emphasizes a totality perspective of the formation of experience:

- Emphasis on the student's activity and continuous search for meaning
- Positive utilization of the student's wrong answers
- Attention on the impact of feelings on learning
- Focus on the student's general change in knowledge
- Correspondence between what the student is already

capable of and the current formation of experience

Then a viewpoint from dialectic constructivism can be added, in which the student will experience support for his/her own attempts to learn through the help of six principles:

- To arouse the student's interest in the task
- Simplification of the task so the student can complete parts of it
- Maintenance of and focus on an agreed goal through motivation and control of the activity
- Indication of what lacks for the task to be solved perfectly
- Control of frustration and risk
- Demonstration of the task and the way to the task

This will have great impact on the plan for learning. A chain of dynamic measures is created, all of whose final purpose is to create a higher cognitive awareness in the student, so the present experiences and the experiences created are part of the total development of the student's potential towards competence levels. The impact entails that the pedagogical assessment must be used with emphasis on potential and competences (Bråten, 2006, p. 160 ff.), cooperation with parents should be strengthened, tasks must be placed in a learning environment creating activity, interaction and interplay must be strengthened, tasks must be relevant and motivating, assessment models should be useable by the student, parents and the pedagogical personnel for joint reflection (Hilling, 2004, the POLOK book) and the logbook/portfolio must show the student's development through a number of years, and the parents and the student are the ones who possess this knowledge about the student's development.

From a potential perspective, the pedagogical view should lean on the area, from which it seems that the students self-developments can benefit. Based on the study, this area is the area of self-confidence, and hereby there is focus on creating maximum success for the student through situations and tasks, which really succeed and where they can see that they succeed. More specifically, it is a good idea to work with positive subjects relating to a reduction of anxiety by the student experiencing that he/she can handle many different situations – they should collect situations reducing anxiety. They must be able to display more emotional swings, so that they experience that, in their self-development, anger due to injustice is permitted, that crying when facing obstacles is allowed, and that there is a competent adult helping to process things experienced into positive experiences. Uncertainty in the everyday life should be reduced through the presence of help at all times for picking up daily timetables and the contents required to manage. This can be friends or the pedagogical personnel, but it is important that the

students never feel alone with a problem without knowing who to turn to in order to reduce their own insecurity. When the student is very sensitive, it is important to have the time required not to create undesirable hypersensitivity in relation to feeling rejected. Ensuring oneself the time and ability to explain to the student:

- What is going to happen?
- Why is this going to happen?
- With whom will cooperation take place?

These questions are important here in order to avoid the feeling of rejection. The difficult part about working with the construction of self-confidence is the uncritical social form of contact which some of these students display. This means that the students have an expectation of doing things and getting much attention and praise for, most often, routine work, for which they should actually not be praised. But here it is important to know that this should take place and that the student expects to be praised for things which may be trivial. With advantage, skill marks and the like can be incorporated as a reward for concretizing this difficult area.

Some students have a tendency to exaggerate their own capabilities, and here the pedagogical personnel must really be careful. Working with great caution is necessary because exaggeration is a small step on the way to knowing what is desirable for the student to be good at. In such a phase, they are very sensitive and touchy. If one as a pedagogue or a teacher can agree with them that we are on the right path, this is a form of support which can often have a desirable effect.

Conclusion from the three studies:

Criteria for the development of personality, social flexibility and empathy	Pedagogical models and methods
General didactics All three studies underline that there must be explicitness and clearness, i.e. that didactic principles must be followed.	Securing the time and ability to explain to the student: <ul style="list-style-type: none"> <li>- What is going to happen?</li> <li>- Why is this going to happen?</li> <li>- With whom will cooperation take place?</li> </ul>
Professional principles Studies show that the element-based and simplified	Support for the student's own attempts to learn through the help of six principles: <ul style="list-style-type: none"> <li>- To arouse the student's interest in the task</li> </ul>

<p>approach to tasks would be optimal. That image perception is well-developed and that experience from acting is well-developed, but that the linguistic development is problematic.</p>	<ul style="list-style-type: none"> <li>- Simplification of the task so the student can complete parts of it</li> <li>- Maintenance of and focus on an agreed goal through motivation and control of the activity</li> <li>- Indication of what lacks for the task to be solved perfectly</li> <li>- Control of frustration and risk</li> <li>- Demonstration of the task and the path to the task</li> </ul> <p>and as a seventh point: using images and actions through workshop teaching as a completely vital principle.</p>
<p>Personal development There are a number of requirements for the teaching measures so that the students experience a purpose – with methods and contents.</p>	<p>Emphasis on a totality perspective of the formation of experience:</p> <ul style="list-style-type: none"> <li>- Emphasis on the student's activity and continuous search for purpose</li> <li>- Positive utilization of the student's wrong answers</li> <li>- Attention on the impact of feelings on learning</li> <li>- Focus on the student's general change in knowledge</li> <li>- Correspondence between what the student is already capable of and the current formation of experience.</li> </ul>
<p>Social development There are problems in the communicative development, and a number of social rules are lacking for the person to be able to function in groups.</p>	<p>Improved social development by creating controlled interplay and visibility in social thinking, i.e. understanding other people's expectations and thinking.</p>

Based on case studies, a number of criteria for the creation of e.g. self-esteem as a significant personal and social factor have been set up. After this, good advice which can be used for the creation

of development, are seen<sup>2</sup>:

- Knowing one's own strengths. To continue developing these strengths and to sustain what one does well. Self-confidence developed in this manner will be self-perpetuating and create further development.
- Accept your own weaknesses. Although usually much can be improved, acceptance of one's own limitations and an understanding of not being able to be perfect at everything is a fact of life.
- Developing and focusing on thoughts about oneself, where there is respect for others and oneself. Think about the sentence: "I am kind, and I show consideration for other people."
- Try to visualize in positive ways. One's positive ideas will often also come true. You can practice success with daily routines as one of your first steps.
- Learn a number of cooperation and supportive approaches for solving conflicts. A supportive approach means that you will appear credible and show as well as gain respect. In a conflict, you can e.g. ask for detailed explanations or ask for causes to better understand the conflict. Creating a better understanding provides space and time for thinking.
- To always try to do the best in the given situation. Even in situations, where one has not been so lucky, what one experienced and learned may be used next time with greater success.
- Be kind. A smile can create positive situations and build up self-confidence.

These suitable recommendations are placed within the personal and social area and, from a developmental perspective, they will entail that the student can improve his/her communicative level.

Which criteria can be set up for the use of IT for this development?

To shed light on this area, Jeppe Bundsgaard's Ph.D. thesis about the "The IT didactics of Danish as a subject" has been applied. He sets up a number of well-founded communicative models aiming precisely at creating purpose and, hereby, personal and social development. In addition, "Teaching methods on the net" by S.B. Heilesen and H. B. Jensen from RUC (Roskilde University Center) and AUC (Aalborg University Center), respectively, has been used. The special aspect about this article is the very constructive e-learning models, which will be usable for development purposes with the right mediation for mentally challenged persons.

E-learning can be described based on the EU Commission's definition as: "The use of new multimedia technologies and the

<sup>2</sup> From Christoffer Knipper's newsletter vol. 5 issue 22, [www.questionnewsletter.com](http://www.questionnewsletter.com)

internet to increase the quality of lessons by facilitating the access to various resources and to the exchange of information and cooperation via information and communication technology.”<sup>3</sup>

This definition is usable but problematic in that it rather unilaterally emphasizes the technical part and does not concern itself with the users.

To get beyond the purely training-based learning methods and use reflection, innovation in relation to contents and communication is also required. To fulfill a requirement of reflexive learning, lessons and learning should be defined as the activity creating the framework for learning and making the students’ learning possible. Special teaching methods are required to do this.

Teaching methods on the internet range from the completely structurally behavioristic aspect to the workshop-oriented constructivist aspect

Behavioristic	Pedagogical method	Constructivistic
Exercises	Method execution / problem-solving	Project work
Learning of skills	Goal fulfillment / goal set-up	Reflected understanding e.g. portfolios
Individual work	Rule-based communication / social context understanding	Cooperation through the use of e.g. the net
Information search (fill-out)	Simple search criteria / search groups and an understanding of concept search	Discussion on the web
Teaching program, databases, simple applications	Simple technical understanding / advanced technical understanding	Conference systems, video conferences, complex applications
Games for fill-out	Partial element model / problem-solving model	Design of own levels, balance of power within adventure games

Based on these overall considerations and good models within e-learning and blended learning, attention is now more specifically on the instructions which can be made use of with advantage. As a conclusion of this part, there will be a recapitulation of the most relevant and developing models for the further work with

<sup>3</sup> The Commission 2001

mentally challenged persons and IT.

When there is focus on personal and social development in interaction with IT, the themes of communication, motivation, learning, the internet as a social player and competence development for precisely the personal and social area are brought into play. This requires a special approach which is didactic in character. In this context, didactics should be seen as reflection in relation to the learner in the teaching situation (learning environment). The considerations planned in connection with teachings and the evaluation as the basis for the current and the future learning situation. This active part of didactics – the communicative part can be described as an active medium – the communicative part of a program with communicative contents. This leads to seven learning principles:

- Functional learning should be sought.
- It should not be “as if” teaching – it should be as authentic as possible (realistic).
- It should be organized in accordance with clear goals.
- It should involve and accept personal relations and interplay.
- It should give the students with opportunity to show their personal and social empathic development.
- It should give the students the opportunity to work with their own potential awareness and methods for improvement of competences, e.g. through the use of mediation models (ZNU - Zone of Proximal Development).
- A special goal is to place learning in the cultural circumstances, so good manners and identity are acknowledged.

This can then mean that special themes must be addressed to promote the seven learning requirements. That an attempt is made to create themes in learning contexts. For example, it is important with realism, which means that the theme about society must be examined through visits to institutions, interviews with real persons in the environment, orientation in newspapers as well as searches for important video clips from TV bases.

So the following themes must be an integrated part of the learning principles:

- Didactics should contain considerations about the close community and the surrounding society.
- The purpose of teachings must be clearly described.
- Goals for what must be learned – hour for hour.
- Contents must be understandable in the students’ context.
- Methods and organization models – social rules for an activity. Below here, the time perspective must also be evident – is the duration of the task long or short?
- Evaluation. There are many forms of evaluation and

presentations, and they should be used and analyzed subsequently to learn from “conclusions”.

Bearing this in mind, one can look at the student’s special communicative competences. Especially, the communicative part can be a barrier, if no particularly positive environments for communicative development are created. Here a number of preconditions to handle the technological world are required – a duality. To know professional contents and, at the same time, having basic knowledge of technological possibilities. This knowledge stretches from the use of mobiles, TVs and PCs, and all the technical units, which we surround ourselves with, require special learning conditions like reading a manual. So a number of competences are required to master the conversion of knowledge through communication. Having knowledge, understanding a text or speech, creating meaning as well as cognitive skills within a number of specific areas. You must be able to act in relation to a number of partial aspects like:

- Analyzing text and placing oneself in other people’s shoes – understanding internal and external plans in language (the consumptive competence).
- Expressing oneself with the use of technology (the productive competence).
- Searching information (the information competence).
- Understanding grounds and motives, mastering analyses in the communicative situation (the critical communicative competence).
- Discussing, participating constructively in social relations and creating relevant rules and structures (the democratic competence).
- Participating directly in cooperation, interplay and networks (the network competence).
- Reporting one’s own experiences and connection in the near outer world (the narrative competence).

To use the many competence layers for personal and social development, a basis through motivation can be created with advantage. Motivation is based on narrative and creation aspects. Each time meaning and joy can be created through given tasks, there will be growth – personal and social growth and development.

Through activity and action at the above-mentioned competence levels, the student’s context can be the point of departure and, based on that, new experiences can be gained.

- Developing motivation and, through that, personal development
- A belief that trust through communication can lead to change, so in reality improvements are created in practice.
  - That you can participate in communication which others have planned with the same trust.
  - That others are constructive, positive and honest in their communication.
  - That it makes sense to be a participant.
  - That insight and joy are created in the communicative process.

In summary, this means that the surroundings must take the communication seriously and answer honestly. That they must attempt to achieve this jointly, and that this can be achieved through social interplay. This requires that you are a person with knowledge, who can contribute and try to express yourself e.g. through the use of "Skriv med Symboler" ("Writing with Symbols")<sup>4</sup>.

### How can mentally challenged students create a development basis for their own personal and social growth?

Here a number of pedagogues and teachers with direct work in the area have been involved. There is good correspondence between the requirements set up from the three studies and the requirements, which will be set up subsequently, to which competent practitioners also contribute. This is a reality based on studies and tested in practice on mentally challenged students. A number of requirements to the technological user interface can be set up, which will create the motivating basis for the student's growth:

- That all information can be handled in simple text.
- That information is supported by images.
- That there are speech and pictures for all texts.
- That relevant learning programmes are created – i.e. with themes in which mentally challenged persons can see a purpose:
  - o My daily life: What am I going to do today?<sup>5</sup>
  - o My life, my friends<sup>6</sup>
  - o My pets, my spare time
  - o Education and jobs for me
  - o My favorite dishes, food and drinks in my everyday life and at parties

<sup>4</sup> See Widgit-design: "Skriv med Symboler".

<sup>5</sup> See the program "herbor".

<sup>6</sup> [www.on-line-on.eu](http://www.on-line-on.eu)

## Self assessment tasks



- Funny experiences, trips, family parties, birthdays
- That themes can be rediscovered, e.g. by use of Mind Map systems in text, image and speech recognition.
- That an educational book and a job book are developed with relevant requirements to levels, to which the student can compare himself/herself. And then guidance must be provided in the steps required to reach the level desired.
- That screenplays are developed, which focus on personal development helping the student to improve self-insight, e.g. which clothes to wear to fit into different situations.

### Questions for independent study

Where do you see your own competences in relation to the use of the web and other IT-based media?

- How do you use these competences in relation to the students?
- Where do you see your own potential, and can you describe in which direction you want to develop?
- What help do you require to develop further as a user and a teacher in relation to blended learning?
- Describe barriers to the use of IT.
- You should be able to exemplify the pedagogical examples based on your own students and, at the same time, come up with more themes which ought to be developed for the group of mentally challenged students.
- How many program packages can you mention, and what knowledge do you have at user level of the programs mentioned?
  - How do you think the best program should be designed for a mentally challenged user group? (See [www.on-line-on.eu](http://www.on-line-on.eu)).

### Links for further work

[www.europa.eu.int/eur-lex/da/com/cnc/2001/com2001\\_0172sa01.pdf](http://www.europa.eu.int/eur-lex/da/com/cnc/2001/com2001_0172sa01.pdf)

[www.on-line-on.eu](http://www.on-line-on.eu) (A program for creating one's own development)

[www.munkholm.cc](http://www.munkholm.cc) (Here are many articles for the further work)

"Danskfagets IT-didaktik" by Jeppe Bundsgård. See

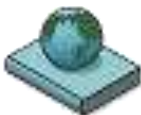
<http://www.did2.bundsgaard.net/top/forord/Bidragtildanskfagetsitdidaktik.pdf>

"Undervisningsformer på nettet" by S.B. Heilesen & H. B.

Jensen, RUC (Roskilde Universitets Center) & AUC (Aalborg

Universitets Center). See [www.forskningsnettet.dk/lom01](http://www.forskningsnettet.dk/lom01).

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