

# TECHSENIOR

TECHNOLOGY FOR ASSISTING SENIORS

**Title:** Module 1: How to teach older people to use digital technology

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## Psychological aspects

### Knowledge of ageing regarding retention and cognitive abilities

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Lifelong learning is increasingly important in order to keep up with new IT technologies in society. The demand for basic IT skills has evolved following the rising number of official digital solutions in many countries. Acquiring basic IT knowledge and skills is therefore essential for older people in order to improve their independency and their ability to function in an increasingly digital society.

However, there is an obstacle to learning in a mature age. With aging follows a natural deterioration of brain function, causing a progressive weakening of concentration, memory and mental flexibility. The ability to generate new synapses between neurons in response to external stimuli, such as teaching and training, declines. Acquiring new knowledge and skills therefore becomes more and more difficult with age.

The good news is that the brain is plastic in all stages of life, making it possible to maintain the functionality of the brain to learn, even in old age. Research in neuroplasticity confirms that learning in mature age can be successful, if we engage our brain in new challenging tasks (1).

Teaching basic IT knowledge and skills to older people, it is however important to be aware of certain educational factors;

IT teaching and training programs for older people must focus on access and quality of education, aiming at digital inclusion of elders.

### Motivation

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It is highly important to keep up and promote the motivation of elders during teaching and training. Often the learning objectives are not reached at once. In order to keep up the motivation of the elders, the teacher must set intermediate objectives adapted to the progression of the learners. Progressive exercises should be followed by a positive feedback whenever the elder reach the intermediate objective. Hence, further adapted training and practice will be needed in order to develop knowledge or skills. It is important to praise the good parts of the learning process, making the learner feel motivated to work with the more difficult parts of the training.

## Active listening

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Teaching elders, the teacher should take into account the learner's priorities, motivation, previous learning experiences and competences and potential areas of development. The learning effort enhances, when oriented towards experiences connected to real life, useful in daily practice. The teacher therefore needs to be interested in the needs and problems of the learners, rather than teaching a specific content of a course, if it does not meet the needs of the elders. The teacher needs to adapt a situational approach and not a theoretical approach, when teaching elders.

## Positive feedback

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Acquiring IT skills can be a complex matter for older people, positive feedback during learning is therefore essential for learning experience and progress. The positive feedback causes a release of dopamine and acetylcholine in the brain, causing an experience of success. Positive feedback can in fact improve the mental abilities of elders, making progress of the learning process easier (1). The learner confidence can increase because of a successful experience.

## Empathetic approach

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In order to keep up the motivation, attention and curiosity of the learners, the teacher must meet the elders with an empathetic approach. It is important to connect the course content to personal needs and motives of the learner. The teacher therefore needs to take a real interest in the needs, competences and requirements of the learner. Interest, attention and positive feedback can foster the learner's confidence.

## Patience/speed

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Due to the natural deterioration of brain function, the cognitive functions, including learning, are slower with age. The teacher therefore needs to take into consideration the speed of the learning process. The course design must allow the elders to progress in a slow speed. Patience of the teacher is important, encouraging the elders to move forward step by step in their own speed. Learning is a process where time to consideration is allowed for response, discussion and getting feedback several times from other learners or the teacher and therefore it is difficult to increase the speed of learning.

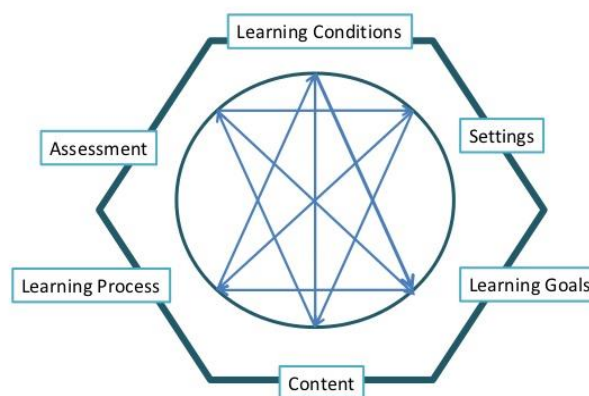
## Technical aspects

### Teacher understands different learning processes

When teaching includes the use of digital media, it demands teacher competencies based around arranging the learning process for individuals or groups, rather than competencies based around arranging subjects, as in the traditional classroom. The teacher therefore needs to be capable of planning the learner's learning process. However, in order to be able to plan a learning process, the teacher needs to be aware of competencies connected to different teaching roles, such as the responding, motivating and coaching role in teaching.

The didactic theory created by Hilde Hiim and Else Hippe (2) relates the six most important aspects of planning a course or learning process. All six aspects are mutually dependent; changes in one feature have consequences for the other features.

### The Didactic Relationship Model



The Didactical Relationship Model (Hiim & Hippe, 1998)

The learning conditions of the learner is an important aspect, regarding understanding different learning processes. The learners can have different learning conditions and this may mean that the learners have to work with a range of different approaches that accommodate their own ways of learning to get the optimal results.

Questions to ask about the learning conditions of the learner include:

- What professional or other relevant skills does the learner have?
- What communication skills does the learner have?

- What collaborative skills does the learner have?
- Is the learner motivated to pursue the subject?
- Does the learner have any special problems or need for resources related to the course?
- How does the learner learn?

Both in planning and in contact with the learners it is necessary to consider the above questions.

### Memory retention

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As mentioned earlier, with age follows a natural deterioration of brain function, causing a progressive weakening of concentration, memory and mental flexibility. The teacher needs to take these factors into consideration when planning the course. Aspects such as pace, repetition and simple steps are important in the learning process, regarding memory retention.

### Repeating

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Repeating different steps in the learning process is essential, when teaching older people. In order to fully understand and develop different skills, the older learner may need instructions repeated more than once. Developing a certain technical skill also may require several attempts of practice, with or without help from the teacher. When planning the learning process, the teacher needs to consider the best way to provide instruction and feedback, allowing time for the learner's repetition.

### Simple steps

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Teaching older people the teacher may find the KISS rule (Keep It Simple, Stupid) helpful. The teacher needs to keep the instruction and feedback at the level of the learner. Attaining basic IT knowledge requires simple steps. Otherwise the learner will get frustrated by demands that are above their level of ability. It is important to respond to the learner at their own level of expertise. The KISS rule helps the teacher remember, that we always must take the level of the learner into consideration when teaching.

Teachers have to meet learners at their own level and motivate them to perform to their best. The teacher can use open questions and instructions in order to make the older people reach for a higher level of knowledge or skill, by finding the answers themselves. Open questions with more (simple) possibilities for solving the task also motivate the learner to seek more information.

## Avoiding IT-slang

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The digital vocabulary is a challenge for many older people. If possible, the use of IT-slang should be kept at a minimum in order to enhance the learning process. If the older person is having trouble understanding certain IT expressions, they may find it difficult to follow even simple instructions related to the expression.

Some expressions may need to be explained or “translated” at the beginning of the course, as basic IT knowledge required for following the course.

## Ethics of privacy

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### Setting boundaries

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Teaching and training IT skills, especially when it comes to digital services, requires awareness of ethics of privacy. Setting boundaries, in terms of what kind of information is accessible or visible for the teacher or others, is important. Teaching how to use digital services such as home banking, requires careful consideration in order not to gain access to personal information of the learner during the training. The boundaries should be made clear to the learners at the beginning of the course, as the learners involuntarily could also share personal information.

### Ethics

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The teacher needs to be aware, that within the teaching role is a responsibility for applying good ethics in teaching. Good ethics regarding digital services could be a helpful attitude with advice of how to create secure passwords, but NOT to gain knowledge of new passwords or passwords already made. Ethics of privacy varies depending on the relation between the teacher and the learner. Professional care workers and volunteers should be very aware of their responsibility regarding access to personal information, which is usually very restricted. Regardless if the learner has no problem sharing the information it is the responsibility of the care workers or volunteers to protect the privacy of the learner.

### Privacy protection

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Care workers and volunteers have an obligation to observe secrecy in contact with the learner's private affairs. Teaching different IT skills, the teacher get access to various information of which he or she is obliged to observe secrecy. That means that the teacher cannot share any private information of the learner with others, nor use any private information of the learner to his or hers own gain. Even though it is sometimes necessary to share some private information learning digital skills, it is important that the learner feels secure that private information stays private.



## Litterature

1. [https://www.openeducationeuropa.eu/sites/default/files/legacy\\_files/asset/In-depth\\_29\\_2.pdf](https://www.openeducationeuropa.eu/sites/default/files/legacy_files/asset/In-depth_29_2.pdf), 5/9-2017
2. <http://www.odlexpert.net/iaml3/getstart/chapter5.pdf>, 5/9-2017

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