



Digital Mindset for Carers

NATIONAL REPORT ON TECHNOLOGY'S ROLE IN CARE PROFESSIONS: DENMARK

TRAINING NEEDS, DIGITAL COMPETENCE, AND
PROVISION GAPS FOR CARE ASSISTANTS AND
HOME CARERS

SOSU Østjylland, Aarhus, DK, 19.07.2024

PROJECT INFORMATION

Project title	Digital Mindset for Carers
Project number	2022-1-AT01-KA220-VET-000085278
Funding programme	Erasmus+ KA220-VET - Cooperation partnerships in vocational education and training
Workpackage	WP2 Groundwork Paper
Linked task	National report about the role of technology in care professions and trainings needs of care workers regarding digital skills
Project coordinator	Die Berater, Austria
Project partners	ÖJAB, Austria ENAIIP, Italy SOSU, Denmark Landstede, Netherlands
Authoring partner	SOSU Østjylland; Denmark
Date of preparation	July 2024



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DiMiCare DESK RESEARCH – DENMARK – SOSU OSTJYLLAND

EXISTING PRACTICES

THE PRESENT STATE OF TECHNOLOGY USE IN LOWER QUALIFIED CARE PROFESSIONS IN ELDERLY CARE

In a Danish perspective, the education in focus for this desk research is the *Social- and healthcare helper* EQF level 3 (and the entry levels of the healthcare education, equivalent to EQF level 1 – 2), in this desk research referred to as SOSU helpers.

Several studies have highlighted the extent of digital competences among people with shorter education and training programmes in the health and social care sector.

Conceptual clarification:

"Digital competences are knowledge and understanding of relevant digital tools and the competence to use them in daily work".

A study shows that there is a big difference between SOSU helpers' self-assessment of digital competences and the employers' assessment of the same (DAMVAD 2015).

This is reflected, for example, in the fact that employers assess:

- That recent graduates have insufficient knowledge of digital tools and instruments that can be a help in everyday life.
- That the new graduates at the start of their jobs had insufficient understanding of how IT can be used to create an overview of and keep track of data.
- That at the start of their job, graduates had insufficient skills to use digital tools to document their daily work.

The results of the survey in relation to knowledge and understanding and competences for learning show that a large proportion of employers (63%) consider it very important or essential that recent graduates have knowledge of digital tools that can help them in their daily work. At the same time, they estimate that only 6% of recent graduates are experienced or experts in this area. 51 per cent of recent graduates assess themselves that they are experienced or expert in this area.

Employers and graduates were asked about their ability to use digital tools in general. This could include, for example welfare technology aids, telecommunications and telemedicine. According to the employers only 6 per cent of recent graduates are experienced/experts in this area.

On the question of being able to use digital tools for documentation, 91 per cent of employers assess that it is very important/critical that recent graduates can do this. 17 per cent of employers believe that the graduates are experienced/experts in this area. During the study's interpretation workshop, the experts confirmed that the task of documentation in the sector is new and extensive for social and health care assistants and helpers. Barriers mentioned by employers are in particular the lack of lack of time for training on new programmes and lack of financial resources (DAMVAD 2015).

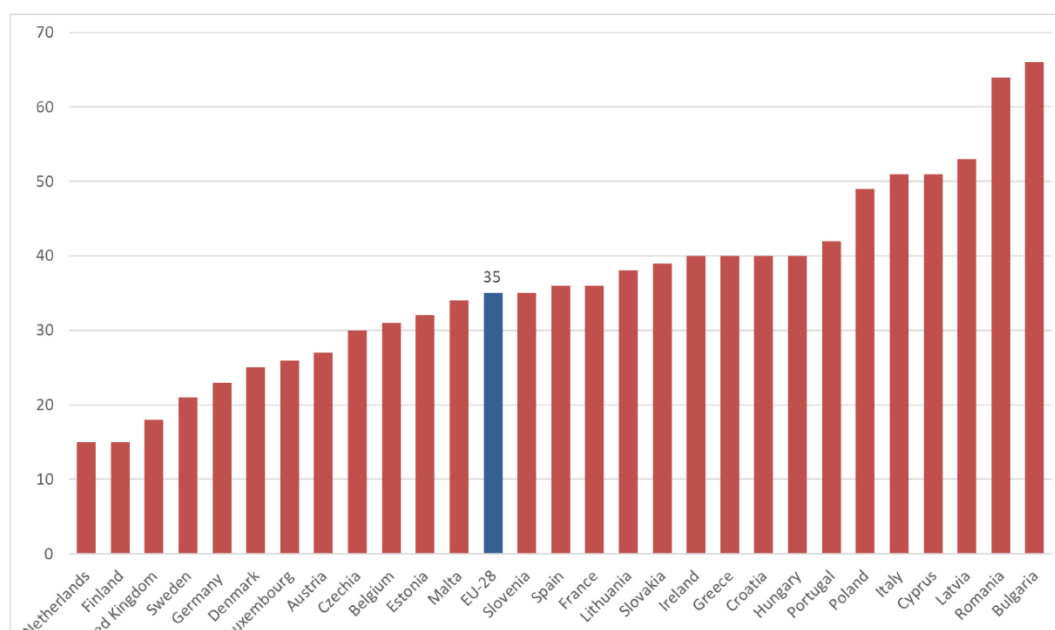
The DAMVAD study, being a bit older Danish study, however, reflects the state of affairs as they are more or less today. A 2021 EU review “*EU actions to address low digital skills*” focuses on the recent development of basic digital skills among the labour force between age 25 and 64 in the context of EU action in this area since 2010, particularly in the last 5 years. The start of the new EU programme period, 2021-2027, is considered an ideal time to draw attention to the importance of this issue.

Until 2015, EU actions did not specifically target basic digital skills for adults. Since then, actions to increase the percentage of the labour force with basic digital skills have become more prominent. The European Commission defined an internationally recognised Digital Competence Framework, supported the development of national strategies on digital skills and assisted in creating national Digital Skills and Jobs Coalitions in almost all Member States. On the other side, the Commission concluded in 2019 that the number of EU funded projects for the upskilling of low skilled adults was not sufficient (European Court of Auditors 2021).

According to the indicators used by the European Commission, there has been little progress among EU Member States as a whole with regard to basic digital skills in recent years. Although the best performing EU Member States are among the leading group of countries at worldwide level where comparable data exists, the worst-performing Member States are no better than those countries at the bottom of the non-EU scale (European Court of Auditors 2021).

In 2019, 35 % of the EU labour force – i.e. those in work or looking for work – aged between 25 and 64 years old, representing more than 75 million people, did not have at least basic digital skills. Within the EU there is considerable variation between Member States:

Figure 1 – Percentage of the active labour force without at least basic digital skills in 2019



Source: Eurostat

An OECD analysis shows that the demand for basic digital skills has increased in most countries. Many workers use ICT regularly without adequate ICT skills: on average, over 40 % of workers using office software every day do not have sufficient skills to use it effectively (Skills for a Digital World, 2016).

Being one of the countries with a lower percentage of active labour force without at least basic digital skills, is largely the result of a political priority in Denmark to digitise public administration and services. This is reflected in the adoption of Denmark's digitalisation strategy, 2022, which states: *“As one of the most digitalised countries in the world Denmark is in a strong position to seize the digital opportunities. But we need to accelerate the pace of digitalisation. The challenge is to roll out technological solutions widely so that they benefit for everyone. That is why the government's strategy covers both the public sector and the private sector.”* (Denmark's digitalisation strategy, 2022).

The Government therefore has set up a Digitalisation Partnership, which has set out the next digital steps for Denmark. In the autumn of 2021, the Digitalisation Partnership submitted 46 ambitious recommendations for the Government's further work on digitalisation. The recommendations are concrete suggestions on what we need to do right now and here to accelerate the development towards a better digital future.

ANALYSIS

NATIONAL PROJECTS AND INITIATIVES

Denmark's digitalisation strategy 2022 - Together for digital development.

The Government is in favour of a broad and binding co-operation between public and private partners, with civil society and the research community. Together we will make Denmark stronger and lay the tracks for Denmark's digital future. Since the turn of the millennium, digital development has been framed by a number of joint public digitalisation strategies targeted at the public sector, agreed between the state, municipalities and regions. In parallel, successive governments have launched initiatives and strategies to promote the digital transition of the business community and selected sectors such as health and research.

In spring 2021, the Government set up a Digitalisation Partnership, which was tasked with making recommendations for a new overall digitalisation strategy for Denmark. With the Digitalisation Partnership, the Government brought together representatives from the business community, the social partners, the research community, Local Government Denmark and Danish Regions together to set the direction for Denmark's digital development. The work of the Digitalisation Partnership resulted in 46 specific recommendations within 7 focus areas. With these recommendations, the Partnership for Digitalisation points to specific initiatives that exploit the opportunities offered by digitalisation. With this strategy, the Government is following up on the recommendations of the Digitalisation Partnership and launches 61 initiatives.

In relation to the focus of the DiMiCare project, the pronounced digitalisation of the public sector places increased demands on care staff in the care sector, in particular on those with low digital competences. This is clearly expressed in the following passage from the

Digitalisation Strategy:

“A coherent public sector requires a more data-driven public service, where data is used and exchanged to a greater extent across authorities to ensure a more coherent and personalised service to the individual.” (Denmark's digitalisation strategy, 2022).

The government seems to recognise that there are challenges for certain groups in society to engage digitally, with the following passage:

“Although the vast majority of Danes are digitally skilled, there is still a group of citizens, e.g. the elderly and the vulnerable, who find the digital world challenging. The Government will therefore strengthen efforts to promote digital inclusion by taking better care of these citizens and ensuring that they have equal access to our society. e. The right help and guidance must therefore be offered to appropriate help and guidance for digitally challenged citizens, just as alternatives must be offered to those who do not have the opportunity to use digital solutions. At the same time, better conditions must be ensured for digital support persons so that they can act as a safe link between the citizen and the public sector.” (Denmark's digitalisation strategy, 2022).

However, this perspective does not focus on the part of public sector care workers who have low digital competences. Who will help vulnerable citizens with the same digital challenges? It will typically be the care workers who are closest to the citizens in everyday life, some of whom need digital help themselves. The following passage illustrates with even greater clarity the discrepancy between what is expected digitally from care workers in the healthcare sector and the low digital competences of some workers to meet expectations:

“Therefore, the Government will continue both the close cooperation with regions and municipalities on the digitalisation of municipalities on digitalisation of the healthcare system and the strong public-private collaboration in the life science area on the development of the future digital healthcare system of the future. In this way, we can improve the quality of treatments in the healthcare system, offer citizens safer, citizen-centred and tailored healthcare pathways, support the shortage of labour in the healthcare system and create growth opportunities for Danish life science companies.” (Denmark's digitalisation strategy, 2022).

The digitalisation strategy focuses primarily on Denmark as a society in general. A direct focus on specific digitally weak employees is not addressed in the strategy. It states in more general terms that digital competences are a prerequisite for benefiting from the opportunities of digitalisation - and for developing new digital solutions to the societal challenges we face. All Danes must be able to use digital solutions and have the digital prerequisites to navigate safely and critically on social media, and most people in the labour force are constantly having to acquire new IT competences at an ever-higher level. The constant digital development means that digital competences need to be acquired, developed and updated throughout life.

However, from a trainer's perspective, the strategy does address the digital challenges of certain professional groups with the following passage:

“For example, social and health care assistants and -assistants and nurses need to be able to understand and use the technologies they interact with in the hospital, just as the carpenter and the building designer need to be able to programme the building on a computer. Some of the prerequisites for this include teachers having the right competences, and that the right learning technologies and digital platforms are available throughout the

education system." (Denmark's digitalisation strategy, 2022). This addresses the digital challenges of certain employees from a teacher's perspective, in that there is a need in education programmes to strengthen the competences and practical skills of both students and teachers in the use of digital technologies. In this way, more people will enter the labour market labour market with relevant digital competences.

This calls for efforts in the form of a stronger digital development focus for future employees in the care sector, but just as much a digital development focus on already trained care workers with low digital competences. We will describe local, regional and national initiatives for digital competence development in more detail in the next section.

MAPPING OF NATIONAL TRAINING NEEDS AND OFFERS FOR HOME HELPERS AND CARE ASSISTANTS WITH REGARD TO DIGITAL COMPETENCES

Specific and official reference to digital competence, are to be found only in the most specialized training courses (Social and Healthcare Operator or Degree in Healthcare assistant). In the other care professions or in the related training courses, there are no references to digital training.

Interviews and questionnaires, on the other hand, showed that in each Care Institution, an informal training take place on internal software for tracking deliveries and recording activities, for collecting patient assessment forms, for managing meals and for managing the devices and/or equipment used in care activities, in addition to equipment such as beds or electric lifts.

MAPPING OF NATIONAL FORMAL CARE PROFESSIONS/ NATIONAL VET SYSTEMS AND REGULATIONS OF CARE PROFESSIONS

Training needs

As part of the national digitalisation strategy, the Ministry of Health has chosen to focus on the need to develop the digital skills of healthcare professionals. The health steering group in the Central Jutland region has launched the digiS project, which was implemented in 2019 and 2020.

The purpose of digiS is to contribute to a general increase in practice-orientated, digital competences among healthcare professionals. Strengthened digital competences will support the development, implementation and dissemination of health technology solutions for the benefit of citizens.

The aim of the project is to develop differentiated competence development for all target groups. This will help healthcare professionals to master digital communication, simple technical problem solving and use digital solutions in everyday life. And that they can confidently and motivated be part of the development and implementation of new telehealth solutions.

The digiS project has uncovered the digital competences of social and healthcare assistants and carers through work camps and interviews. This has provided knowledge about their conditions, needs and wishes for skills development. Based on the many inputs in work camps and interviews, some clear commonalities emerged, personified in the project as a fictional "persona". A fictional person - a persona - puts a face on and represents the target

group. The persona is supplemented with a number of characteristics of the target group, as well as learning objectives and wishes for learning methods (digiS 2019).

In terms of digital competences, the project has provided the experience that digital competence can be divided into two main groups; one is about understanding the technology and how to operate it, while the other is about understanding how technology can facilitate changes in service delivery. The experience is that the latter is by far the most important, in the endeavour to remove the technological barriers that may exist between the technology and those who need to operate it.

In terms of how best to implement (new) digital solutions in the workplace, there are several factors at play. In order to achieve set goals and realise the expected benefits from the introduction of new digital technology, it must result in a change in service design. After the introduction of the new service or solution, you have to do things differently than you did before. If you don't have a plan for this, you can easily end up in a situation where you do the same things as before, but the (new) digital technology becomes an extra burden for the employee.

Digital competence in this respect is about management having a clear plan for how the process of changing the service should be. For the employee, it is about recognising the possibilities of the new digital solutions and how services can contribute to developing services that benefit both citizens and employees.

In the digiS project, five competence clusters have been selected and designed as benchmarks for development on the basis of a mapping exercise. The competence clusters describe in broad and general terms which digital competences are important for all healthcare professionals and which competences need to be developed.

The health professional:

- understands the use of technology and data in their practice
- reflects, takes a critical and ethical approach to the use of technology
- is adaptable, curious and open-minded
- participates in the development and implementation of technologies

In recent years, concepts such as technological understanding and digital literacy have become key focal points at all levels of education in society. In social and health education programmes, it is particularly important to be at the forefront of understanding and shaping the processes and phenomena involved in learning, especially digital welfare technology, which has increasingly become part of everyday life in the care and nursing sector.

Training offers

A completely new subject - Technological Literacy - will now help prepare care and health workers to meet the competences demanded by the labour market of the future.

The educational policy interest in technological literacy and digital literacy leaves municipalities, educational institutions and educational and healthcare professionals with a number of challenges in relation to both competence development and implementation of

the new professionalism in education programmes and subjects. Technology and increased digitalisation in society open many new doors, but with this development also comes a great responsibility to ensure that employees are properly equipped to deal with the professional and ethical aspects of using technology. The subject of technological/digital literacy plays a major role in this context. With the development of the subject of technological/digital literacy, social and health care programmes are a step ahead. Unlike many other vocational education and training programmes, there is no legal requirement to implement the subject in teaching (Videnscenterportalen.dk 2021).

The elective subject Technology Understanding has been developed by the Knowledge Centre for Welfare Technology West Denmark. The syllabus for Technology Understanding has been developed on the basis of competence areas and subject objectives from the basic subject Business Informatics, which is a new basic subject in vocational education and training programmes. It is described in more detail on Denmark's learning portal EMU. The competence areas of digital empowerment, business-oriented digital development and technological capability and computational thinking interact with the first 7 subject objectives of the subject.

A majority of Denmark's social and health care vocational schools offer continuous education and training (C-VET) in digital competence development, targeted at the social and health care sector. The course participants are either enrolled on their own initiative by agreement with employers, or enrolled by employers as a strategic effort by the workplace in targeted digital skills development.

The content of the courses varies depending on the target group and their competences. Specific upgrading programmes in documentation platforms are often developed and operated in close cooperation with the client - typically institutions in municipalities and regions. At local level, in municipalities and regions, digital skills development and upgrading is also offered. It is often special units in municipalities and regions that are responsible for tailoring competence development programmes for their employees in specially selected areas - for example, documentation in digital medical record systems that require special digital competences from employees.

MAPPING OF NATIONAL FORMAL CARE PROFESSIONS/ NATIONAL VET SYSTEMS AND REGULATIONS OF CARE PROFESSIONS

Denmark has two officially recognised nursing and care training programmes at the level below nurse:

- Social and health care assistant (EQF 4)
Duration 3 years and 10 months (Authorised education)
- Social and health care helper (EQF 3)
Duration: 2 years and 2 months

The Danish VET system is structured as a dual system where the theoretical part takes place in schools, while the practical part takes place in the workplaces, typically municipal care institutions and regional hospitals.

In this way, schools and workplaces share responsibility for the students' vocational training.

Students are paid for most of their training and are in practice employed by an employer for the duration of the education.

Especially during the social and health care assistant programme, there is a lot of training on the legislation that regulates the social and health care sector: The Social Act and the Health Act.

As a fully trained professional, there are mandatory requirements to be able to document health care efforts in patient records in a clinically correct language – this is to minimize the risk of misunderstandings.

This healthcare documentation is continuously monitored in municipalities and regions. This evidently places demands on the digital skills of healthcare professionals.

Reporting adverse events to a national database is mandatory. Serious failures of care and adequate health documentation will lead to disciplinary proceedings and possible penalties.

In particularly serious cases, social and healthcare assistants may have their authorisation withdrawn if they are deemed to be a risk to patient safety.

The need for digital competence development therefore seems highly relevant for all employees in the Danish Healthcare sector.

MAIN FINDINGS OF INTERVIEWS

4 teachers and 3 SOSU helpers and assistants were interviewed in relation to the DiMiCare project, due to their different backgrounds and job titles, there was naturally a different focus on the use of the digital tools.

The main findings of the interviews with the teachers:

The focus of the teachers in terms of the use of the digital tools in the care sector, was how to prepare the students optimally according to their future position in the care sector from a more theoretical point of view, whereas the students in their internships had all experienced hands on use of digital tools in their everyday work life in the care sector.

The teachers are aware of the expanded use of digital tools for documenting, calculation medicine etc. and for communicating among professionals in the care sector. They know from own experience and from feedback from workplaces and the students that it is a vital part of the professional profile and work of their students. In endeavouring to accommodate this demand, they consequently consider the application of digital tools in their didactic consideration, when planning the teaching lessons for the students.

Regarding the theoretical part, the students will use their computers when working with the theoretical assignments, Virtual Reality (VR) is used as a learning methodology to promote the link between theory and practice, as well as welfare technology and digital footage is being used in simulation where students are performing clinical procedures/scenarios in a safe learning environment. The students are also being trained in documenting in a precise and objective scriptural language in class, so they are prepared for the upcoming internships. If the students do not have their own computer or Ipad, they are able to borrow one from the school, for a period of time, until they are able to buy one for themselves.

If the students do not have the necessary basic IT skills when joining the classes, IT support, both technical as well as pedagogical, is available at the school. Furthermore, the IT support have made several different IT video manuals available online as video-tutorials and/or written, for the students to access.

The range of digital skills of lower qualified caregivers are very diversified, often the young students are very qualified in the technical use of digital tools but not how to transfer this knowledge to a clinical setting, whereas the older generation of students are a little bit more apprehensive and may have certain learning barriers in the use of the digital tools, however, they are often more aware of the clinical aspect of documentation.

Digital documentation is one of the most vital parts of being professional caregiver in the Danish caregiver system, and it is therefore necessary that the students adapt to this reality of their future professional careers. The primary digital tools for documenting are computers and tablets, which is why they are trained in the use of these devices at school.

Another didactic consideration in the use of digital tools in the care sector, is the use of welfare technology when the students are at school. There is a continuous growing market for welfare technology, and the school is therefore not able to have all the different technologies offered for the students to use. The teachers are in contact with our different external stakeholders and municipalities, in order to buy the most relevant and mainly used technologies, for the students to use at school.

From the students, the teachers are told that the different digital tools and welfare technologies are well implemented in the care sector, and their use is a great part of the work life in the sector. Often when the students are at school, they all have a basic understanding and experience with the use of welfare technologies from their internships. In order to secure implementation, many of the nursing homes, hospitals etc. have designated colleagues who are experts in the use of the digital tools, in order to support their peers and colleagues in the correct use of them. Actually, students and new staff at hospitals and the municipal workplaces are not allowed to work on their own mobilising patients/persons before they have completed a mandatory course on how to correctly mobilise persons and apply welfare technology in the mobilisation.

The teachers feel equipped to teach the students the necessary use of the different digital tools, and if they need support or help, they get it from colleagues or the IT support. When the students are at their internships, they will be trained in the practical use of the tools by their supervisors.

The main findings of the interviews with the SOSU helpers and assistants:

The most important part of the job for most SOSU helpers and assistants, was the feeling of making a difference in someone else's life, to be able to make their day a little bit better and to assist them in their daily life with care, practical help and medicine if needed. They didn't find it especially rewarding being able to document digitally or to use the welfare technology unless it had a specific purpose to increase the quality of life for the resident in nursing homes or the patient.

They didn't mind the use of digital tools in the care sector, but perceived it as a necessary tool that they need to use. They all felt equipped to use the digital tools available, and knew who to contact if they were in doubts about the use.

The digital tools they used were computers and tablets and a range of different welfare technologies. Some of the participants felt very well introduced to the different welfare technologies, whereas other participants felt it depended on which colleagues they were working with, and how available they were on their shift. Especially if they had evening or night shifts, it could be challenging to find a colleague to ask for assistance or help with the digital tools.

They felt it was important to be able to document in precise and objective terms, as well as knowing the documentation system well enough to know where to find the different information about the residents at nursing homes at nursing homes or patients. Complex documentation systems are a common challenge in the care sector and require thorough training for proper use.

For all of the SOSU helpers and assistants, the official documentation regulations by the authorities regarding professional care are valid. They know the necessity of documenting in order to achieve early detection of any potential illness, loneliness, grief, decrease in daily activity level etc. Sometimes though, it may be difficult to meet the requirements of both documenting and reading previous documentation due to lack of time, illness among colleagues, unforeseen events with patients and residents at nursing homes at nursing homes and/or just a tight schedule.

Most of the SOSU helpers and assistants feels capable with their digital skills, a few, especially if they are recently graduated, sometimes feel the lack of digital skills, but all emphasises on the help from

other colleagues when they have doubts or questions regarding the digital tools. A few of the helpers and assistants have a different native language than Danish which can also be challenging at times.

When it comes to proposing relevant digital tools to the residents at nursing homes at nursing homes or patients, they all feel confident because the main procedure in the Danish care sector is that professionals will always discuss this with other relevant colleagues before they suggest a change in digital tools to patients, in order to make sure you take all pros and cons into consideration. If the digital tool however, is of an everyday character, such as using a mobile device, a computer etc. they can handle that themselves.

The biggest challenges in applying digital technology in professional care, is the constant change in systems and guidelines. You have to be flexible and constantly keep up with the newest development and sometimes the change seems more political/legislation determined instead of what makes sense as a care giver. Furthermore, it can be a challenge to keep up with the newest development in welfare technology as well as being able to purchase it for the patients and residents at nursing homes at nursing homes. It has to be within the department budget, and from the companies with the contract of sale and purchase of the particular department.

Though it may be challenging at times, all participants find it useful to use digital tools in their work life, either as a benefit for their work; they are able to document on the spot e.g. if they are at a person's own house, it helps them avoid physical trauma to their body, they can communicate with other specialised teams if needed, they are able to look up previous documentation on the person or patient on the spot and if they have doubts about the different methods and practices they can look that up as well (in tutorials).

Furthermore, they see benefits for the residents at nursing homes at nursing homes and patients as well in the use of digital tools, they are able to contact their doctor, read their medical journal, have digital social connections, feel safe in their own home despite any disabilities they may have and over all the digital tools can help them achieve continuously and in some cases a more independent quality of life.

MAIN FINDINGS OF QUESTIONNAIRE

4 teachers and 15 students responded to the questionnaire

The main findings of the questionnaire from the teachers:

According to the response on the questionnaire from teachers, they feel the digital tools and welfare technology is necessary in the care sector. The use of digital tools increases the security of both patients, residents at nursing homes and care takers. Furthermore, it has great possibilities in increasing the quality of life for the residents at nursing homes by increasing the possibility of being active socially, physically and mentally, as well as giving them a role in society and thereby increasing their self-worth and identity, despite being older and more dependent on receiving help.

From the teachers' point of view, digital tools and welfare technology are very accessible at their workplace, and thereby increasing the interest of it as well as the use of these tools in teaching. Primarily computers and mobile devices are used for documentation, whereas different welfare technologies such as *carando-chair*, *sarasteady*, VR, high fidelity mannequins *picoglasses* and the *snoezelroom* are used when teaching the students.

These digital tools are part of creating the digital competences that students (SOSU helpers and assistants) need in their future work. These digital competences are; knowledge of different digital technologies as well of knowledge of different welfare technologies. They have to be able to access

the documentation on their resident at nursing homes or patient, including being able to document themselves. Furthermore, it is important that they are able to analyse which welfare technologies might be relevant to the different individuals, as well as planning and executing the implementation of them, including evaluating the ethical aspect in using these technologies.

The biggest challenge for the students in implementing the technology, are often the unspoken culture and values at their workplace. Students tell the teachers that especially the older colleagues at their internships are more rigid in implementing new technologies, so they often need the back up from management in order to optimise the implementation of the new technologies.

The teachers all feel competent in teaching and implementing different digital tools in their lessons, but are well aware of the necessity of constant curiosity regarding new development. Overall there seems to be an attitude of; *I certainly can't do it all and keep up with everything, but I can be competent to relate to it professionally, and know where I can get support and help.*

In their teaching, the teachers focus on the 21st century skills as well as welfare technology, trying to reflect practice as well as possible, in order to maximize relevance and transfer for the students. A lot of the lessons are based on “hands on” experiences for the students in order to expand their understanding and use of digital tools as well as welfare technology, this includes VR scenarios and simulation scenarios.

The skills the teachers are trying to facilitate for the students are openness, curiosity, daring to try, ability to analyse and assess and knowledge of implementation.

The teachers generally experience great awareness of the topics and ethical considerations from the students, and if they do not know much about the topics - primarily new students – they are perceived as being open and curious.

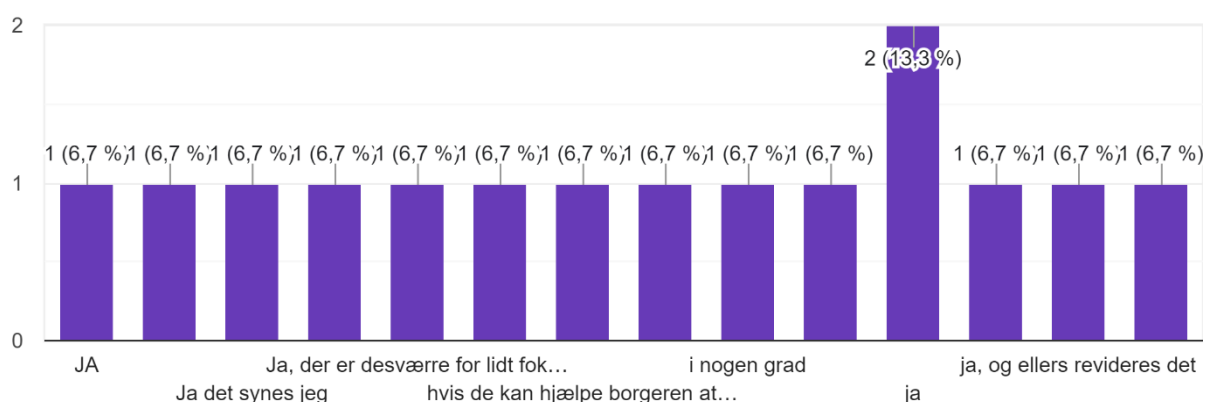
The main findings of the questionnaire from the students:

According to the questionnaire responses from the students, the most important aspects of their work as helpers and assistants is to make a difference for the people they are caring for and help them achieve quality of life despite their situation. It is therefore also very important for the students to have the necessary timeframe in their work in order to create a relationship with the resident at nursing homes or patient and provide a holistic approach to their care, focusing on creating a sense of security by a rehabilitative approach to enhance quality of life, trust, equality, self-care and support our welfare society.

Their attitude towards the use of digital tools and welfare technologies are predominantly positive. They are very much in favour of welfare technology, it can alleviate problems and ensure a good working environment in a busy daily life. However, they are aware that the technology must have its justification and must not replace the personal contact between people. It should make sense in terms of saving time and resources (including paper) - and if it is secured optimally in relation to private policies. It is important that there is good and concrete training in the systems.

Do you think that the different technologies selected for your citizen/patient make sense to use in everyday life?

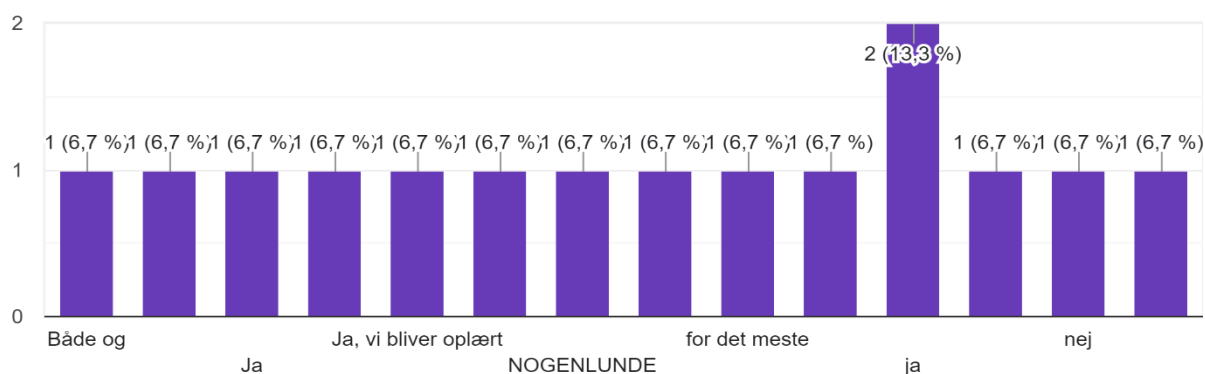
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They mostly agree that there are many digital tools and welfare technologies available in their work, but at the same time express a desire for additional welfare technology logos as the development of these changes. The most common welfare technologies are different lifts, electronic beds, tablets, tools for eating, dressing, use of medicine etc. They generally feel competent in the use of these different tools; However, they still express a certain amount of uncertainty about using welfare technology in new and unfamiliar situations if it is unfamiliar technologies that have been introduced in the workplace, just as a majority of the participants want further training in the form of courses, introduction and supervision when they are to use these welfare technologies.

Do you feel qualified to use the different technologies and digital tools with citizens or patients?

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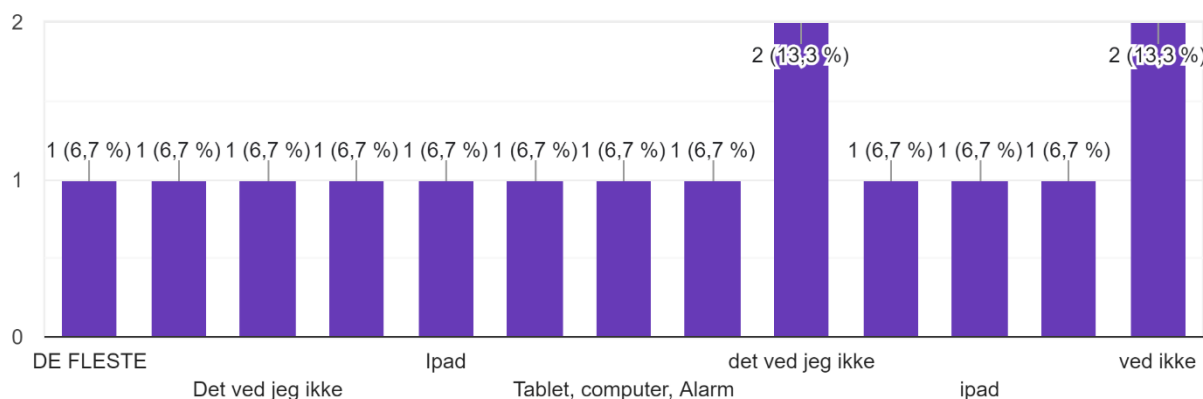
The experience of the students from their internships is that the challenges of implementing digital tools as well as welfare technology often depends on the staff and the culture of the workplace. Some of the difficulties are lack of time which can also affect lack of introduction to the technologies.

The main digital tools used at the student's workplaces are iPad, other types of tablets, computers and different types of technological alarm systems. They are not sure however if the digital support is available apart from the one from peers and colleagues, if needed.

However, the main part of the participating students feel equipped and competent in using the different digital tools, which might be the reason of the uncertainty of available support.

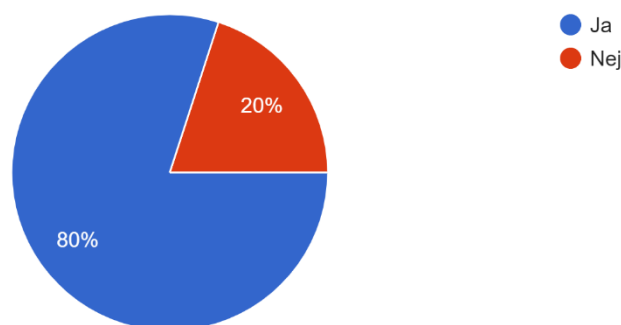
What digital support options are available in your workplace?

15 svar



Do you have the necessary digital and technological skills to use digital tools and welfare technology in your workplace?

15 svar

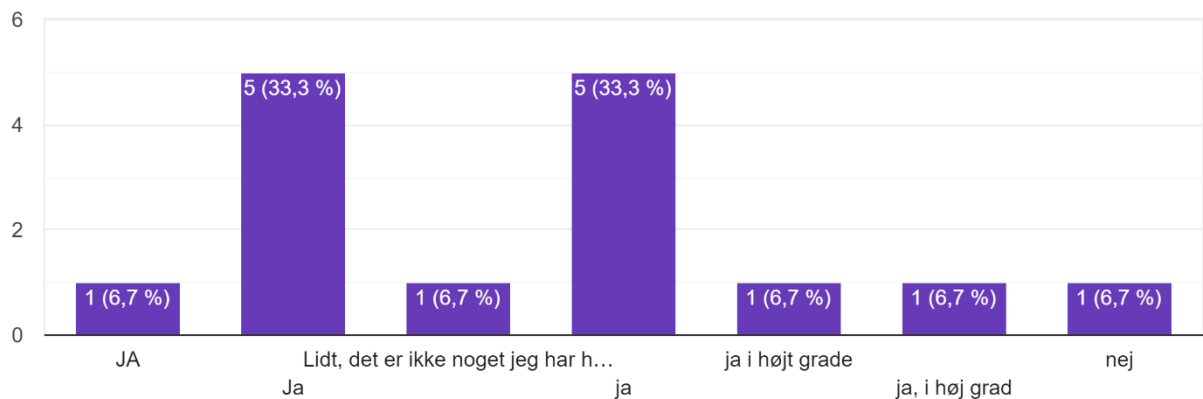


The students are very aware of the ethical dilemmas that can arise in the use of welfare technologies. It is a big part of their everyday life and is included in the professional assessment of the appropriate use of welfare technologies for the individual resident in nursing homes and patients.

Are you aware of data protection (GDPR) and possible ethical dilemmas in the use of digital technologies with citizens and patients?

Er du bevidst om data beskyttelse (GDPR) og eventuelle etiske dilemmaer i brugen af digitale teknologier hos din borger/patient?

15 svar



Conclusion:

Both interviews and questionnaires show that the students are predominantly positive about the use of digital tools and welfare technology, but that they do not consider it their most important competence to be able to use them - on the contrary, they are more concerned with the soft skills and values such as making a difference, ethical considerations, increasing the citizen's quality of life and providing a holistic approach. Despite this, they recognise the necessity and relevance of using digital tools and welfare technology.

The teachers are very committed to the theoretical school part and transfer of knowledge, reflecting practice and the possibility of facilitating transfer to clinical situations for the students.

They feel competent in teaching and supporting the students' use of digital tools and welfare technologies and are aware of where they can seek help and support if they need it.

They experience that the digital tools and welfare technologies and the use of these, consume a lot of time in the teaching, and that it increases the quality and the didactic possibilities positively, for example the use of VR and simulation scenarios.

In addition, both students and teachers experience that the use of welfare technologies increases safety and provides a better physical and psychological working environment for both students, teachers and citizens/patients.

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Annex 1- List of interviewees and agenda

Name and Surname	Position	Date of the Interview
Anja Schneidermann	Digitech Manager/VET trainer	20/2 2023
Rikke Krogsgaard	Digitech Manager/VET Trainer	20/2 2023
Lene Gravgaard Rytter	VET Trainer	20/2 2023
Hanne Hviid	VET Trainer	20/2 2023
Sanne Pilegaard	Caregiver currently attending entry level	21/2 2023
Aya Mohammed Ali	Caregiver currently attending entry level	21/2 2023
Daniela Lopez	Caregiver currently attending entry level	21/2 2023

Annex 2- Interview guides in Danish (translated to EN)

DiMiCare Interview Guides

2 Interview Guides:

1 for teachers/trainers, Digitech managers in the field

1 for care helpers and assistants – entry level (EQF level 1, 2)

Setting the scene:

Digital transformation is taking place in elderly care as in most other sectors. High end Technological solutions are rapidly developing. This change creates a strong need of new competences of professional care givers. They need sound basic digital competence as well as job-related digital competence.

The aims of the DiMiCare project are to enhance professional digital competences of lower qualified caregivers to digital transformation. To increase the attractiveness of care professions in order to better understand and apply digital care technologies and raise awareness about the rapidly growing role of technology in care professions. The stakeholder interviews will inform the partnership what training support the target group needs.

Interview Guide: **Teachers/trainers/stakeholders**

Open questions:
What do you think of the use of digital tools in the care sector?
How well equipped is your workplace digitally?
Which digital technologies are applied? <ul style="list-style-type: none"> • For the implementation of care (physical support, monitoring, social or emotional support) • For organisation and reflection of care (care planning, documentation, administrative tasks...)
What kind of digital tools are used for documenting care and for route planning?
Which basic digital competences do you consider necessary for home helpers and care assistants?
Do you consider that digital tools in the care sector are well implemented?
What kind of digital support systems do you have knowledge of in the care sector?
What other digital aspects do you consider important in the care sector?
Do you think lower qualified caregivers have the digital skills for operating and implementing the digital tools at their workplace? What skills are they mostly lacking?
What kind of digital training elements would you as a trainer include in the training curriculum for home helpers/ care assistants?
In your experience, what are the biggest challenges applying digital technology in professional care?
Do you feel competent and capable to propose relevant digital tools to your students/employees?
Do you feel qualified applying digital tools as part of your work as a teacher/trainer in care education?

What do you think the target groups needs to learn in terms of digital skills in order for them to feel more competent?
How do you consider the awareness of home helpers/ care assistants on data protection/ethical issues regarding digital data?

Setting the scene:

Digital transformation is taking place in elderly care as in most other sectors. High end Technological solutions are rapidly developing. This change creates a strong need of new competences of professional care givers. They need sound basic digital competence as well as job-related digital competence.

The aims of the DiMiCare project are to enhance professional digital competences of caregivers to digital transformation. To increase the attractiveness of care professions in order to better understand and apply digital care technologies and raise awareness about the rapidly growing role of technology in care professions. The stakeholder interviews will inform the partnership what training support the target group needs.

Interview Guide: **Helpers and assistants**

Open questions:
What means the most to you in your job as a caregiver?
What do you think of the use of digital tools in the care sector?
How well equipped is your workplace digitally (if you work in a care home)?
Which digital tools do your clients use (e.g. health Apps, speech assistants like Alexa, wearables, tablet, fall detectors, other sensors, lifting aids) ? Do they sometimes need support with their digital devices?
Which basic digital competences do you consider necessary in your care profession?
Do you consider that digital tools in your work place are well implemented?
What kind of digital support systems are available in your workplace?
What other digital aspects do you consider important in the care sector?
Do you have the digital skills for operating and implementing the digital tools at your workplace? Which skills are you lacking? What would you like to learn in this context?
In your experience, what are the biggest challenges applying digital technology in professional care?
Do you consider digital tools selected for your clients/patients useful?
Do you feel qualified applying digital tools as part of your work in the care sector?
Are you aware on data protection/ethical issues regarding digital data of your clients/patients?

Annex 3 - Quantitative survey questions in Danish

Hvilken uddannelse er du i gang med?

Hvad betyder mest for dig i dit arbejde som omsorgsperson?

Hvad er din holdning til brugen af digitale teknologier/velfærdsteknologi på din arbejdsplads?

I hvor høj grad har du adgang til velfærdsteknologi og digitale redskaber på din arbejdsplads?

Hvilke digitale redskaber og velfærdsteknologi anvender du samt dine borgere/patienter (f.eks. lift, skylle/tørre toilet, plejeseng, tablet/iPad osv.)?

Hvilke basale digitale kompetencer mener du er nødvendige på din arbejdsplads?

Oplever du at digital teknologi /velfærdsteknologi er vel-implementeret på din arbejdsplads?

Hvilke digitale støtte-muligheder er til rådighed på din arbejdsplads?

Er der andre digitale aspekter i dit arbejde udover f.eks. velfærdsteknologi, som du synes er vigtige (f.eks. evnen til at dokumentere el.lign)?

Har du de nødvendige digitale og teknologiske færdigheder til at bruge de digitale værktøjer og velfærdsteknologi på dit arbejde?

Hvis nej,

Hvilke færdigheder mangler du?

Hvilke færdigheder vil du gerne opøve?

Ud fra din erfaring, hvad er de største udfordringer i implementeringen af velfærdsteknologi på din arbejdsplads?

Synes du at de forskellige teknologier udvalgt til din borger/patient giver mening at anvende i hverdagen?

Føler du dig kvalificeret til at bruge de forskellige teknologier og digitale værktøjer inde hos hver enkelt borger/patient?

Er du bevidst om data beskyttelse (GDPR) og eventuelle etiske dilemmaer i brugen af digitale teknologier hos din borger/patient?