

# The Demonstration of a Tool for Self-Estimating Digital Competence

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**Abstract.** This study presents the results from a demonstration of a tool for self-estimation of digital competence for nurses and assistant nurses. The data was gathered from twelve participants working as leaders of older care homes. The results show that digital competence is of importance in health and social care, that the dimension of motivation is of utmost importance and that the presentation of the survey results should be flexible.

**Keywords.** Digital competence, health and social care, tool, demonstration

## 1. Introduction

An increasingly large part of public organizations' work tasks requires digital knowledge, such as nurses signing a patient's medical file while giving them their prescriptions. Because digital competence is fundamental for working [1], it should be understood and developed with the co-workers. One part of the development is to understand the status of a co-worker's digital competence and how to develop it. Therefore, the aim of this study is to demonstrate a tool for self-estimation of co-workers' digital competence in public organizations.

Schiefloe [2] emphasizes digital transformation as organizational changes initiated and shaped when digital technology is introduced and builds the Pentagon model on five dimensions: (1) formal structure, (2) technology and infrastructure, (3) social relations and networks, (4) interaction and (5) culture and competence. The *formal structure* describes how responsibility and accountability within an organization are distributed based on departments and work roles. *Technology and infrastructure* refer to the equipment the organization's members use to perform their tasks. *Culture and competence* can be summarized as the values, language, attitudes, working methods and ways of making decisions in the organization. *Interaction* means how the organization's employees relate to each other, especially in work processes, to achieve common goals. Interaction can be divided into cooperation/collaboration, communication, coordination and management. *Social relationships and networks* are divided into informal relationships that exist internally and externally and are used to optimize the organization's results. Added to the Pentagon model's dimensions is motivation, which is viewed as the individual's ability and willingness to change [3].

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## 2. Methods

The method used here is a part of Design Science Research (DSR), namely the demonstration step. The case for the study is the VålTel2.0 project [1]; a project including cities and the region in Mid Sweden and Trøndelag in Norway. The demonstration was done via two half-day workshops and had discussed the use of digital tools, the view of the dimensions, and the survey results presentation. The twelve participants all held a leading function in various elder care homes. The workshops were recorded and transcribed, and analyzed according to the described themes.

## 3. Results and Conclusions

All respondents declared that digital tools in health and social care are used for everyday work assignments like digital signing for medications, record keeping, scheduling, and email and therefore digital competence is of high interest for the organization. For the *dimension Formal Structure* the respondents emphasized that the internal organization must prepare and adapt work processes and guidance to be applicable to their specific user group. In the *dimension Technology and Infrastructure* was the user interface and the number of systems employees needed to use; respondents described how these affected the efficiency of their work. The respondents emphasized the *dimension Culture and Competence* as important and viewed the organization's culture as significant for influencing ongoing learning about digital tools. Knowledge exchange about digital tools often took place directly between employees, for example, during work or coffee breaks. The *dimension Interaction* in the form of communication and information was viewed as an essential part of the organization. One sign that internal interaction is essential is that one is aware of communication preferences, for example, via Teams or Outlook. The *dimension Social Relations and Networks* was viewed as less important in healthcare since the demand for building social relationships and networks with the help of digital tools is not necessary. Therefore, this dimension can be removed while self-estimating digital competence. The *dimension Motivation* was viewed as essential while developing digital competence. It is seen as so necessary that those with high motivation are often asked if they want to be digital ambassadors and participate in, for example, implementation. The presentation of the results from the survey must be flexible and adaptable to the recipient group. Visualizations and descriptive statistics, such as spider diagrams, traffic lights, and mean value, are essential and should be easy to use. Based on the results, the respondents highlighted the importance of targeted training resources to purchase training. Synthesizing the results show that the dimensions were all viewed as essential, besides the dimension of Social relations and networks, due to its irrelevance to the health and social care context. The self-estimation of the individual's motivation was judged to be of utmost importance during the evaluation, even so vital that it could mean new tasks for the co-workers.

## References

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