

How is digital transformation revolutionising the education of healthcare professionals?

for the Careum Foundation:
Priv.-Doz. Dr. Sebastian Kuhn, MME

In collaboration with Daniel Ammann, Irina Cichon, Prof. Dr Jan Ehlers,
Prof. Dr Sissel Guttormsen, Prof. Dr Manfred Hülsken-Giesler,
Dr Sylvia Kaap-Fröhlich, Prof. Dr Ilona Kickbusch, Prof. Dr Jürgen Pelikan,
Prof. Dr Karin Reiber, Dr Helmut Ritschl, Dr Ingrid Wilbacher

short
version

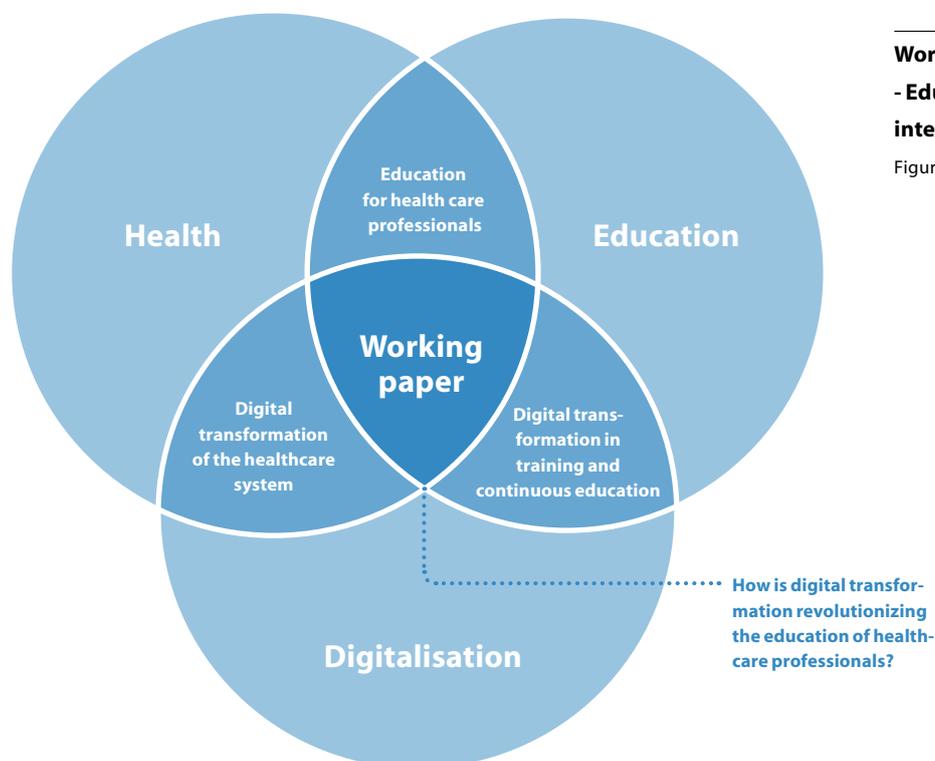


Preamble

2

The digital transformation of the healthcare system represents a fundamental process of change and innovation, which will significantly alter the roles, skills and cooperation of all healthcare professions. Through the appropriate implementation of new technologies, healthcare will be supported, relieved and connected. A fundamental trend for the future is that work in the healthcare system is becoming increasingly semi-automated and decentralised and involves intensive cooperation between "man and machine".

In a rapidly changing healthcare system, it is essential to ensure that the various health professions have the knowledge, skills and attitudes to meet the needs of today's patients while being prepared for the future. The specialists need increasingly diverse qualifications in order to meet these demands. At this stage, however, it has to be highlighted that neither the practising healthcare professionals nor the generation currently in training are adequately prepared for the digital transformation of the healthcare system. In addition, little attention has previously been paid to this qualification gap in the discussions on the digitalisation of the healthcare system. The question that arises is provocative: "We are currently investing billions in digital technologies. Shouldn't we be investing in the qualification of the healthcare professionals at the same time?"



Working paper in the "Health - Education - Digitalisation" intersection

Figure 1

Developing adequate training and continuous health education concepts and their instructional implementation is a relevant and currently under-addressed area of the digitalisation strategy. This working paper focuses on this topic, paying particular attention to Germany, Austria and Switzerland and on inter-professional cooperation. It is located at the intersection of "Health – Education – Digitalisation" and is the result of a multi-stage process involving two expert commissions. At "Careum Dialog 2019", this working paper was discussed with around 70 decision-makers in the field of healthcare, with patients and their representatives as well as experts from business, politics and society. The recommendations for action were ranked in relation to their relevance and level of agreement and were further refined in a collaborative writing process. Short and long versions of the working paper were recently published in German. This English translation of the short version provides an overview and aims to encourage further discussions on this highly relevant topic.

Postulates

4

- Digital transformation should be understood by all actors as a long-lasting disruptive process of change and innovation that will massively modify the structures, processes and cultures of the healthcare system and thereby significantly alter the roles, competencies and cooperation of healthcare professions.
- At present, the free market is the determining force. The political institutions, self-governance and various other actors of the health system follow a reactive or wait-and see approach.
- At present, neither the practising health professionals nor the generation in training are adequately prepared for the digital transformation of the health system.
- Further development in professional practice must take into account the changes brought about by digital transformation (increase in automated work, decentralised workplace, workforce with diverse qualifications. Patients and health professionals, as well as health system institutions, must be prepared to assume these new roles, tasks and functions.
- The digital transformation of the healthcare system and the resulting implications for education and training are not yet understood by a significant number of decision-makers. As a result, the necessary processes have not yet been initiated in many institutions.
- The stakeholder dialogue necessary for further development is currently not being conducted adequately. In this context, internal stakeholders are teachers, students and administrators, while external stakeholders are relevant partners who ensure a connection to the changing needs of the working environment.
- Promoting a wide acquisition of digital skills requires processes at various levels of the educational institutions: strategic processes by management, interdisciplinary processes by competence centres and individual promoters, technical processes by teachers.
- The pursuit of an interprofessional strategy as part of curriculum development makes sense given that digital transformation affects all groups of healthcare professionals and will fundamentally influence interprofessional collaboration and the division of work.
- The current structures and organizational forms (deputates, regulations of universities and educational institutions, allocation of staff to separate institutes) restrict a proactive and agile approach to curriculum development.
- Digital transformation and increasing relevance of data for healthcare require intensive training in data literacy. In this context, professional, technical, legal and ethical aspects have to be considered.
- The role of teachers is shifting from lecturers to learning facilitators. The main focus of any course of study should be on the individual learning path and on the success of students; teachers should be adequately prepared for this role.

Recommendations for action

Shaping health policy with strategic programmes

Policy-makers need to set the general conditions by creating strategic programmes and promotional measures that take account of the massive changes brought about by digital transformation. Politicians need to act more quickly and decisively to take a leading role. Stakeholder groups must be involved in the strategic development process. For this, new forms of cooperation (e.g. digital innovation hubs) should be established.

Shaping digital transformation through co-design

Current and future developments of digital transformation should be developed in cooperation with the various healthcare professions and patients (co-design) and made accessible to all parties involved. They should focus on the requirements and needs of patients and not on what is technically feasible.

Considering gender and diversity aspects

In the future development, implementation and training of digital health applications, professional, technical, ethical and legal aspects as well as gender and diversity aspects should be considered.

Promoting acceptance of quality-assured digital health applications

Digital change in the healthcare system requires critical discussion by all professional parties and the general public. Promoting the acceptance of quality-assured digital health applications is a strategic task that needs to be addressed by policy-makers. This requires a targeted approach towards citizens as well as healthcare professionals.

Developing and financing an action plan for a qualified workforce

As part of the digitisation strategy, the need for qualifications for healthcare professionals must be met urgently. On this basis, the educational institutions should develop action plans and ensure rapid implementation. Policy-makers must ensure that these action plans are financed.

Achieving qualifications for existing professionals and developing new professions

In addition to further qualifications for existing professionals, the development of new professions for digital health and their integration into the health system has to be examined.

Creating framework conditions in educational institutions

In order to enable the successful implementation of educational concepts, educational institutions should demand and create the organisational, personnel and financial measures and the necessary framework conditions. Policy-makers must ensure that financial resources are made available and that equal access to the digital infrastructure is available throughout the country.

Promoting and recognising digital literacy in health professions

The acquisition of digital literacy in healthcare professions should be made visible, promoted, recognised and incentivised.

Strengthening digital health literacy

The digital health literacy of citizens should be addressed through a lifelong learning programme. All population groups and age groups must be considered and addressed. It must be ensured that an equivalent quality of healthcare is maintained for vulnerable groups.

Developing a multi-professional core curriculum for digital competencies

A multi-professional core curriculum for digital competencies should be developed with all relevant stakeholders. The core of the curriculum is interprofessional. New digital competencies, innovative teaching and learning formats and an interdisciplinary composition of teaching staff should be taken into account

Regulating the curricular implementation of digital competencies

The curricular implementation of digital competencies should be a constitutive component of future accreditation and certification frameworks for the initial, further and advanced training of health professions. The specifications for digital competencies are to be integrated as an interdisciplinary curricular topic and implemented at module level.

Developing curricula using agile methods

In the digital age, the high speed of change needs to be taken into account when developing curricula. Within the curricular framework, flexibility needs to be created to allow for curricular adaptation. For quality assurance and accreditation, digital competencies should be reviewed.

Establishing professorships for digital transformation

In order to strengthen both teaching and research aspects of the digital transformation of the healthcare system, professorships with a corresponding profile should be established.

Creating digital spaces for experimentation and discourse

Virtual and real spaces for experimentation and discourse should be created in order to promote dialogue between all stakeholders of the education system of healthcare professions (learners, students, patients, relatives, teachers, curriculum developers, etc.).

Qualifying multipliers

Teachers should be prepared for their role in teaching digital competencies and implementing digital teaching/learning formats. This needs to be implemented in their own education, training, and continuous professional development. Therefore, the first step is to “train the trainer”.

Promoting intrapreneurship for active innovation

Universities and educational institutions should create structures and incentive systems to promote entrepreneurial thinking and innovation. Incubators and promoters facilitate dialogue with stakeholders to collaboratively promote digital change.

Promoting the formation of expert communities ("community of practice")

Developing ecosystems is a purposeful measure to ensure co-innovation by different actors. Explicit and implicit knowledge is brought together and “out-of-the-box” thinking is actively supported. This makes it possible to drive innovation forward, transfer it into cross-institutional knowledge and make extensive use of it. An open educational network for Austria, Germany and Switzerland, in the sense of a “community of practice”, should promote decentralised initiatives and exchange.

Legal notice

Publisher/Concept

Careum Stiftung, 2019

Design

AGENTUR FRONTAL AG, Willisau

Print

Somedia Production, Chur

Production

Careum Publishing

Cover photo

© iconimage – Fotolia.com

Please cite as:

Kuhn, S., Ammann, D., Cichon, I., Ehlers, J., Guttormsen, S.,
Hülksen-Giesler, M., Kaap-Fröhlich, S., Kickbusch, I., Pelikan,
J., Reiber, K., Ritschl, H. and Wilbacher, I. (2019)

Careum working paper 8 – short version:

**“How is digital transformation revolutionising the
education of healthcare professionals?”**

URL: www.careum.ch/workingpaper8-short

Further information at www.careum.ch/dialog19



Careum
Pestalozzistrasse 3
CH-8032 Zurich
Tel. +41 (0)43 222 50 00
Fax. +41 (0)43 222 50 05
info@careum.ch
www.careum.ch



ISBN 978-3-03787-973-3
