TUM-MED
IO7 | August / 2023

How to optimally train aspiring medical professionals to cope with the challenge of dementia?

➔ Make use of modern online-learning didactics at higher education institutions!

The STUDICODE Project (Stepping up digital competence in dementia education) is funded by the Erasmus+ programme with partners in Romania, Slovakia, Slovenia and Germany. It attempts to fill existing gaps in dementia* education in South Eastern Europe:

- insufficient knowledge and skills among lecturers on how to design and implement online courses
- poor coordination between IT departments and lecturers at higher education institutions (HEI)
- lack of competence among students in using online learning material for maximising learning outcomes

STUDICODE addresses these gaps by an educational intervention addressing multiple stakeholders simultaneously:

STUDICODE coaches	**STUDICODE connects**	**STUDICODE trains**
lecturers by jointly designing and developing an interactive online dementia learning course that is in-line with modern didactic concepts	lecturers and IT staff by raising awareness about the opportunities of online learning systems and the benefits of using open source learning materials in transnational HEI cooperation	students by promoting learning techniques to optimise students' learning outcomes in a virtual learning environment.

The STUDICODE approach

STUDICODE is using a staggered approach in order to reach its goals:

1. In a joint effort from lecturers at all project sites and with support by external experts, a coherent online learning course was designed. The course has a thematic focus on dementia which is one of the top health and societal challenge across Europe. All lecturers actively contributed to the prototyping of texts, videos and quizzes as well as were involved in creating the materials in their respective languages (RO, SK, SI, DE, EN).
2. The course materials were implemented on the partners' learning management systems in close collaboration with the respective IT departments.
3. The online course was piloted for two semesters and was evaluated by students in regards to several quality criteria.

Training workshops, opportunities for mutual exchange and consultation from experienced experts in the field accompanied the project. The online dementia course tells the story of Marija and Toni who are living with dementia as well as Ana who is a family caregiver. The course follows these characters across six chapters across topics such as the impact of dementia on the individual, diagnostic procedures, treatment options and care services. The chapters contain summaries, animated infographics, videos and games to maximise learning outcomes for students.

Effects of the STUDICODE approach on students and educators

As of August 2023, the course has been evaluated by 110 students. More than 80% of them stated that the scope and depth of information provided in the course was exactly right and that they have obtained a better understanding of collaborative dementia care through the course. In regards to the online experience, students valued the practical examples and games provided in the course which demonstrates the benefit of online learning over textbook-based learning.
Some differences were observed among the students in regards to the satisfaction with the depth of information provided – student with basic knowledge of dementia were more satisfied with the STUDICODE course. This is very important for determining the extent of knowledge that students miss or need – e.g. providing supplementary learning material to existing courses for students who like to learn more about a certain topic.

The STUDICODE lecturers have indicated an increase of their competence in designing online learning courses, thus aiming to act as mediators in their institutions for stimulating the development of other online courses. In order to quantify the increase of digital teaching skills, the Digital Competence Framework for Educators (DigCompEdu) was administered once prior to the STUDICODE intervention and once after finishing the implementation of the online course. The comparison of pre and post intervention assessment demonstrates that educators experienced a high increase of their skills in the field of "professional engagement" which relates to the efficient and appropriate use of technologies for communication and collaboration with students. Another area where educators indicated great skills advancement was in regards to using digital resources which includes the selection, creation and modification of digital educational resources.

Policy recommendations for sustaining and expanding the STUDICODE results

Based on these activities, the STUDICODE consortium is drawing conclusions for policy makers who are responsible in the planning and delivery of medical education programmes at HEI. The recommendations outlined here may support future decision-making regarding didactic concepts with a focus on dementia as an important topic:

Coach

- Make didactic trainings for lectures accessible at HEI
- Highlight the importance of online teaching
- Emphasise the importance of making use of quizzes and games

Connect

- Incorporate interprofessional shared learning at HEI level
- Strengthen the role of IT service departments in providing student education
- Complement professional training by facilitating transnational exchange of best-practices in online teaching

Train

- Involve feedback from students in order to meet changing learning needs
- Support initiatives which expand the range of open source learning materials
- Equip students with practical tools by making use of interactive online learning tools

* Dementia is a chronic and generally progressive health condition which usually affects older adults. It is one of the greatest medical and social challenges in Europe. Worldwide, 50 million people are currently living with dementia. This number is predicted to rise to 150 million by 2050 due to increasing population longevity. Dementia is one of the leading causes of death and one of the costliest health conditions, with direct and indirect costs combined exceeding the costs for cancer. Dementia is mostly caused by diseases of the brain such as Alzheimer's disease, Frontotemporal degenerations, Lewy body and Parkinson's disease, and cerebral blood vessel disease. Symptoms include memory loss, planning and organising difficulty, language problems and behavioural change. The average life expectancy after symptom onset is five years. There is currently no cure for most diseases causing dementia. Treatment is symptomatic with pharmacological approaches, non-pharmacological interventions and caregiver support being equally important.

Background papers

Materials underlining the importance of dementia

- WHO (World Health Organization): "Action Plan on the public health response to dementia 2017-2025"
- WHO's "Decade of Healthy Ageing 2020-2030"
- "Glasgow Declaration" (2014) by Alzheimer

- WHO guide “Towards a dementia plan: a WHO guide”

Policies in the European Union focusing on occupational trainings

- The EU “pillar of social rights” mentions vocational training
- ECs „Lifelong Learning“ recommendations
- EU Digital Education Action Plan (2018): “Making better use of digital technology for teaching and learning”

Policies in the European Union focusing on trainings in the healthcare sector

- “Expert panel on effective ways of investing in Health” opinion paper (2019)
- Final report of the “Study on Cross-Border Cooperation”

This document represents the Policy Recommendations of the STUDICODE project (Intellectual Output IO7).

This document is also available on the project website under the section „results“ (https://www.studicode.med.tum.de/en/results).

The STUDICODE course materials are licenced under: Creative Commons BY-SA 4.0 (share alike). Full policy here: https://creativecommons.org/licenses/by-sa/4.0/

Illustrations are part of the STUDICODE learning materials.

The STUDICODE project is co-funded by the European Union.

Disclaimer: The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.