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C@RE

augmented reality approach
for personal care



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KLAIPEDA ERNESTAS GALVANAUSKAS
VOCATIONAL TRAINING CENTRE

C@RE Augmented learning approach for personal care (C@RE)

Project No.: 2022-1-LT01-KA220-VET-000086933

CARE WORKERS NEW COMPETENCIES FRAMEWORK

BACKGROUND

1.1. - Provide the first draft of the methodological framework, collecting the feedback from partners and validating its final version with the adjustments agreed

2.1 - Provide guidelines for a homogeneous organization of local focus groups in all partners' countries

RESEARCH TEAM (LOCAL)

Each partner decides on this (preferably include persons with experience in focus groups e.g. as moderators, data analysis...).

AIM OF STUDY

The overall objective of the C@re project is to support workers in the health and social care sectors by developing a learning model that responds to the new skills required in the labour market (digital, relational/emotional, psychological, leadership), using Augmented Reality (AR) as a key learning tool.

This will be achieved by:

- developing a competency framework model;

- developing a training course;
- introducing the PR approach in their curricula;
- developing a motivational training platform consisting of training materials and augmented reality components.

STUDY DESIGN

A qualitative approach will be utilized for this study. The focus group method has been selected as a way of collecting qualitative data, but also as a technique for gaining a large amount of data regarding opinions and attitudes in the shortest amount of time. It relies on group processes and encourages interaction between group members, resulting in deeper exploration of the subject under study (Bowling 2014). Focus group, through focused discussions, enable the researchers to study a topic of interest in depth by composing teams (purposively chosen according to the study's aim) in which participants discuss similar experiences and share common characteristics. Participants are encouraged to freely express their feelings, ideas, agreements or disagreements in a non-threatening environment. Furthermore, discussions stimulate memories and facilitate the exchange of ideas and opinions, leading to a more in-depth study of the research topic.

In exceptional case, when relevant participants can't be available to attend the focus groups due to time-constraint or working-shifts, the interview method can be used to collect their inputs.

Also, in situation when recruiting groups of participants to hold in-person discussions around a table with a focus group moderator is limited, it is possible to recruit participants into an online forum such as a Zoom video conference room (or equivalent software).

PARTICIPANTS

7 focus groups will be organized, one in each country, involving at least 5 experts (35 in total).

Each partner country will be responsible to recruit the required sample according to the pre-

specified criteria and taking into consideration the local conditions (e.g. organisations, NGOs).

A convenient purposive sample of team of professionals will be invited to participate in focus group. The convenient purposive sampling technique will be used so that the desired homogeneity and heterogeneity of the groups are achieved.

All discussions will be held in the partner's local language.

DATA COLLECTION

Each partner country will be responsible of recruiting an experienced person to act as the moderator of the discussions and another experienced person as observer and note-taker. The moderator will use a semi-structured interview guide during the interviews (Appendix I). A demographic questionnaire will be distributed at the beginning of each focus group (Appendix II).

The moderator will start with a general introduction and will proceed to the use of the interview guide in order to initiate and facilitate the discussion.

A short demographic questionnaire will be distributed at the beginning of each session. Each focus group session can be audio-recorded and transcribed verbatim. Field notes will also be kept during the discussions in order to identify any nonverbal responses (e.g. waves, gestures or other body movements that may show agreement or disagreement against a statement verbally said or demonstration of being uncomfortable to a topic being discussed).

Data analysis

A preliminary analysis will be done by each partner at national level. Within each transcript, relevant themes (words, phrases) on the topic under study will be highlighted and summarized in English, together with the translation of relevant quotes.

The data analysis results will be sent to all participants and will inform the contents of Intellectual Output.

ETHICAL CONSIDERATIONS

The study's protocol will be submitted for review at the appropriate authorities according to National Law for ethical approval. Informed written consent for participation in the study will be requested and obtained from all participants. All data will be kept safely with access limited only to the members of the research team and only for the purposes of the present study. Confidentiality will be maintained during the research process and participants will have the right to withdraw at any time.

Focus Group Results

The focus groups, conducted in all partner countries, gathered insights from over 40 professionals in the care and social work sectors. Participants included social workers, caregivers, nurses, psychologists, and educators from both urban and rural settings.

Key findings revealed that while basic digital tools (phones, email, Zoom) are commonly used, there is limited experience with telecare systems, digital platforms, and virtually no use of AR/VR technologies. Data safety awareness varied, and paper-based systems remain widespread. Participants expressed a strong need for training in digital communication, data management, and use of care technologies.

On the emotional-relational side, empathy, emotional resilience, and collaboration were consistently identified as crucial. Workers frequently operate in stressful environments with limited formal emotional support. Coping strategies include peer mentoring, teamwork, and informal self-care practices. Collaboration with families and professionals was seen as essential but often hindered by fragmented systems and unclear communication procedures.

The focus groups validated the need for the project's targeted competencies and highlighted a strong demand for structured, modernised training pathways.

National Situation Analysis Results

The national reports from France, Greece, Italy, Lithuania, Romania, and Croatia provided a comprehensive overview of the care sector's legal frameworks, demographic challenges, training systems, and technological integration.

All countries are experiencing rapid demographic ageing, with rising demand for long-term care and increasing pressure on the workforce. Care workers often face low wages, emotional strain, and limited recognition, especially those working in informal or uncertified roles. While legal training structures exist in most countries, qualification standards and enforcement vary, with significant gaps in continuing professional development and digital readiness.

Only a few countries (e.g., France, Lithuania) show consistent progress in integrating innovative technologies into care training. In others, such as Croatia and Greece, training remains traditional, and digital competencies are rarely addressed.

The analyses confirmed a critical need for upskilling, particularly in digital communication, telecare, and relational/emotional management. These insights directly informed the creation of the C@RE Competence Framework and reinforced the project's focus on innovation and inclusion in care education.

Summary of Research Findings and the Development of the Competence Framework

The development of the C@RE Competence Framework was the result of an integrated research process combining national situation analyses and qualitative data collection through focus groups. These activities aimed to uncover the real needs of care and social workers across six European countries and to translate those needs into a structured, relevant, and future-oriented set of competencies.

National Situation Analysis: Identifying Systemic Gaps

Each partner country conducted an in-depth national situation analysis exploring key aspects of the care sector, including demographic trends, legislative frameworks, training systems, and the use of technology in professional development. The findings revealed a shared set of structural challenges across countries:

All participating countries are undergoing rapid demographic ageing, creating growing demand for long-term care.

There is a shortage of qualified care workers, with many employed in precarious or

informal roles lacking professional recognition.

Although formal training structures exist, enforcement and quality vary, and there are significant gaps in the provision of continuing professional development.

Digital competencies are inconsistently addressed in training curricula, particularly in countries such as Croatia and Greece, where care education remains traditional and technologically underdeveloped.

These findings highlighted the urgent need for upskilling care workers in both technical and personal competencies to meet evolving sector demands and support modern, person-centred care delivery.

Focus Groups: Validating Needs from the Field

In parallel with the national reports, seven focus groups were conducted involving over 40 professionals including caregivers, nurses, social workers, and psychologists. Participants were drawn from diverse work environments across urban and rural areas, offering a wide range of insights.

The discussions confirmed several consistent themes:

Basic digital tools such as email, messaging apps, and video conferencing are commonly used, but telecare systems and AR/VR technologies are virtually absent from day-to-day practice.

Workers expressed a strong need for structured digital skills training, especially in safe data management, telecare integration, and digital communication.

Emotional resilience and interpersonal skills are vital due to the stressful, emotionally demanding nature of care work. Participants often rely on informal self-care and peer support, as formal emotional training and psychological resources are lacking.

Collaboration across teams and with families is essential but often limited by fragmented communication systems and lack of institutional support.

These insights validated the key themes identified in the desk research and grounded the Competence Framework in lived professional experience.

Creation of the Competence Framework

The combined results of the national situation analysis and focus groups directly informed the structure and content of the C@RE Competence Framework, which consists of two main domains and six subdomains, each linked to real-world skill gaps.

Domain 1: New Digital Skills

Data Communication: Effective digital content design, communication strategies, and data organisation.

Data Literacy and Safety: Secure handling of client data, digital filtering, and cloud technology use.

E-skills in Social and Care Environments: Integration of telecare, AR/VR tools, and remote monitoring systems tailored to client needs.

Domain 2: Relational & Emotional Management Skills

Environmental Management: Handling stress and crises, risk mitigation, and behaviour management.

Emotional Management: Self-awareness, empathy, professional emotional boundaries, and dementia care.

Collaboration: Digital teamwork, care planning with families, cross-institutional networking, and appropriate digital communication etiquette.

Each subdomain includes concrete, measurable learning outcomes that form the foundation for curriculum development and future training initiatives. These outcomes are designed to empower care workers with the tools they need to deliver high-quality, person-centred care

in increasingly digital and emotionally complex environments.

Conclusion

The Competence Framework is a research-driven, validated, and practice-oriented tool that addresses pressing gaps in care worker training across Europe. By translating research findings into clear competence statements, the C@RE project ensures that vocational education can respond to evolving care needs and prepare workers to meet the challenges of the 21st-century care landscape with confidence, empathy, and digital fluency.

CARE WORKERS NEW COMPETENCIES FRAMEWORK

Domain 1: NEW DIGITAL SKILLS	
1.1. DATA COMMUNICATION	1.1.1. To Demonstrate the ability to creatively design digital content that engages and informs their target group effectively. 1.1.2. To organize and manage data storage systems effectively.
1.2 DATA LITERACY AND SAFETY	1.2.1. To conduct thorough searches and effectively filter data, information, and digital content to access relevant and reliable resources. 1.2.2. To demonstrate the ability to safeguard sensitive client data and confidential information. 1.2.3. To effectively use, manage, and leverage cloud technology in their practice. 1.2.4. to use precise professional vocabulary to communicate effectively.
1.3 E-SKILLS IN SOCIAL AND CARE ENVIRONMENT	1.3.1. To manage integrated digital platforms and excel in remote care, monitoring, and systems. 1.3.2. To use appropriate digital communication tools and methods based on individual client needs, preferences, and abilities. 1.3.3. To apply appropriate telecare technologies based on client's health conditions, preferences, and needs. 1.3.4. To integrate creatively Augmented Reality (AR) or Virtual Reality (VR) technologies into their practice to enhance client engagement and intervention.
Domain 2: NEW RELATIONAL & EMOTIONAL MANAGEMENT SKILLS for SOCIAL AND CARE WORKERS	
2.1 ENVIRONMENTAL MANAGEMENT:	2.1.1. To effectively manage stressful situations encountered in their practice and assist clients in developing resilience. 2.1.2. To utilize a range of problem-solving techniques tailored to the unique circumstances and preferences of each family.

	2.1.3. To develop and implement preventive measures and strategies to mitigate environmental risks. 2.1.4. To utilize and integrate evidence-based practices and innovations into negative pressure resistance training programs. 2.1.5. To implement strategies for managing challenging behaviors of elderly individuals affected by cognitive conditions.
2.2 EMOTIONAL MANAGEMENT	2.2.1. To develop a high level of self-awareness to recognize one's own emotions ensuring that personal emotions and experiences do not infringe on the client's space or privacy. 2.2.2. To apply active listening skills and create collaborative dialogue and mutually beneficial solutions during interactions with clients, colleagues, or individuals. 2.2.3. To analyse practice experiences, interventions, and outcomes to identify strengths and areas for improvement. 2.2.4. To demonstrate expertise and proficiency in specialized dementia care to prevent and de-escalate challenging situations.
2.3 COLLABORATION	2.3.1. To use updated technologies and tools to enhance digital interactions with remote colleagues or team members through digital platforms. 2.3.2. To develop comprehensive care plans with family members that align with the client's goals and preferences. 2.3.3. To demonstrate proficiency in networking with other institutions, fostering collaboration, resource-sharing, and mutual support. 2.3.4. To apply appropriate netiquette when engaging in online communication