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THE PRACTICAL GUIDE FOR EFFECTIVE COLLABORATION (PGEC)



**Enhancing Practices and Strengthening Core Competencies
in Disaster Nursing through the Learning HUB (ECoDN-HUB)**

Cooperation partnerships in higher education (KA220-HED)

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Practical guide for effective collaboration (PGEC) aims at defining the working methods of the Partnership and ensuring efficient management of the project.

1. INTRODUCTION TO ECoDN-HUB

In recent years earthquakes, floods, fires, pandemics and other disasters have revealed the unique challenges of health emergencies and the need for preparedness. The project will utilise Augmented Reality (AR)/Virtual Reality (VR) technology to support the digital transformation of healthcare education. By engaging with these innovative tools, students, educators, and nurses will enhance their digital readiness and adaptability. Participants will gain resilience in navigating and using digital resources effectively as well as gaining the skills to prepare for a technology-driven future. The project's emphasis on developing and strengthening core skills in disaster nursing demonstrates a commitment to excellence in learning and skills development.

Project title

Enhancing Practices and Strengthening Core Competencies in Disaster Nursing through the Learning HUB (ECoDN-HUB)

Coordinator organisation, project duration and budget

ECoDN-HUB is a Cooperation partnerships in higher education (KA220-HED) under the Erasmus+ Programme coordinated by Akdeniz University Nursing Faculty. ECoDN-HUB Project duration is 24 months, starting at 01/12/2024 and ending at 30/11/2026.

The aim and objectives of ECoDN-HUB

The aim of the project is to enhance the practices and strengthen core skills in disaster nursing through innovative AR/VR-based educational tools. In order to achieve this aim, the following **objectives** have been set:

- to develop core competencies by increasing the knowledge and skills of disaster nursing
- to support education by developing scenario-based AR/VR educational materials that will enable target groups to learn
- to create a learning hub in the disaster nursing field
- to increase the motivation for development of skills and acquire key competencies in disaster nursing
- to promote cooperation between academic institutions, stakeholders, and other interested groups

The project target groups

Primary target groups are nursing students, nurse educators, nursing practitioners, secondary target groups are stakeholders and universities.

Impact of the project

- This project will meet the need to improve the knowledge, skills, and qualifications of students and nurses in disaster response with innovative education tools and to increase competencies.
- In addition, the project will contribute to an in-depth understanding of disaster nursing and raise awareness of the importance of its education in higher education.
- By utilizing AR/VR-based educational tools, learners will engage in immersive simulations of disaster scenarios.
- This hands-on experience will reinforce theoretical knowledge and help participants develop practical skills required in realworld emergency situations.
- These competencies will serve as a guiding framework for educational content and assessments.

The innovative aspects of this project:

- Development of knowledge, skills, and competencies in disaster response through innovative education tools based on AR/VR
- Raise awareness about the importance and comprehensive understanding of disaster nursing
- Contribute to the development of targeted learning materials and access to safe information to better prepare the target group for future disasters
- Sharing experiences with colleagues from different countries working in disaster nursing
- Contributing to the development of educational content and curricula
- Organize a series of multiplier activities reaching beneficiaries in all stakeholder countries

CONCRETE RESULTS

CR1. Training for scenario writing and AR/VR tools development-C1

- A training will be provided to the participants in the project to **develop scenario writing (2 days)** by Abo Academi and Jihoceska Univerzita V Ceskych Budejovicich and **AR/VR tools (3 days)** by Universitatea De Vest Din Timisoara in Romania.

CR2. Development of guideline for scenario writing and AR/VR development

- A guide will be developed containing critical information about scenario writing and AR/VR development by Jihoceska Univerzita Vceskych Budejovicich and Universitatea De Vest Din Timisoara.

CR3. Development of Content and Animation About Disaster Nursing Awareness

- A content and animation about disaster nursing awareness will be developed by Akdeniz University, Koç University and Antalya Training and Research Hospital.

CR4. Development of AR/VR Scenarios

- AR/VR scenarios for eight core skills will be developed.
 - Basic life support for cardiac and pulmonary arrest and automatic external defibrillation use
 - Management of choking (airway obstruction),
 - First aid in bleeding
 - First aid in chest injury
 - First aid in abdominal injury
 - First aid in fractures
 - First aid in case of seizure
 - Infection control measures/disease management

CR5. Development of AR/VR Videos

- 6 core skills AR/VR videos will be developed for by Universitatea De Vest Din Timisoara and 2 core skills will be developed by Abo Academi.

CR6. Development of a disaster nursing handbook

- A handbook will be developed for core skills in disaster nursing such as earthquakes, floods that students, educators and nurses can use with the contributions of all partners.

CR7. Publishing an academic article in a peer reviewed academic journal

- One academic paper in a peer-reviewed academic journal: will be carried out by the coordinator. This article will reach thousands of nurses.

CR8. Organizing national seminars

- National seminars-multiplier events will be held in all partners' countries.

CR9. Project presentation at international/national conferences

- Two presentations for international/national conferences will be held by the coordinator

CR10. Dissemination materials

- Project website, social media accounts, infosheets, reports, newsletter, and leaflets will be used for dissemination.

2. CONSORTIUM

The partnership of project is structured three local and three European partners. Akdeniz University Nursing Faculty is coordinator organization, Koç University and Antalya Training and Research Hospital from Türkiye, Jihočeská Univerzita v Českých Budejovicích from Czech Republic, Universitatea De Vest Din Timisoara from Romania, Abo Akademi from Finland.

Akdeniz University / Türkiye the public university of Antalya, is one of the deep-rooted universities of Türkiye, which has proved itself from its foundation to the present day with its education at a universal level, scientific achievements and the service offered to the society. Akdeniz University is now taking rapid and determined steps towards becoming a world class university which is capable of making a significant contribution to the world of science with its current complement of 24 Faculties, 12 vocational schools, 7 institutes and 2 colleges and and 57 Research and Application Centres. The primary mission of Akdeniz University is to provide a high level of education which is closely integrated with the academic world; to establish high-quality programmes which support student mobility; to create scientific research and applications to a global standard; to transform its scientific projects into technologically viable products; to meet the needs of society for knowledge, technology and social solutions at the most advanced level in the fields of education.

Antalya School of Health began to nursing education in 1997. Nursing departments structured as a part of Faculty of Nursing in 2012. Primary goals are train specialized human resources to carry out scientific research to improve individual, family and public health and to contribute to the production of knowledge through postgraduate programs in addition to bachelor's education. In order to achieve goals, services are offered by experts. Postgraduate education began in 1999 and doctoral education in 2009. Faculty of Nursing has many interactive education methods (group work, case study, demonstration, concept maps, article review, portfolio, flipping, simulated patient, creative drama, case study, TBL, etc.). Web 2.0 tools (Mentimeter, Kahoot, Word Wall, blookey, Edpuzzle) are also used in many courses to ensure active participation of students. The faculty uses flipped education, technology-based education methods in theoretical courses and standardized patients and models in laboratory applications. Elective courses related to disaster nursing are carried out at the faculty. In addition, Faculty of Nursing experienced in many national (TUBİTAK, TÜSEB) and

international projects (Erasmus+ projects) such as coordinated in BestCARE project and being a partner in the VARTES project (<http://www.akdeniz.edu.tr>).

Antalya Training and Research Hospital / Türkiye provides outpatient services with 48 different branches and side branches, clinic services with 37 specialties, and inpatient treatment services with 9 intensive care units. There are 1270 beds in total. It has 58 faculty members, 13 professors, 81 associate professors, 270 assistants 10 side branch assistants, 44 chief assistants, and 1200 nurses total of 22 clinics provide assistant training. It provides services in all branches with its 4008 employees, 1270 hospital beds, 159 intensive care beds, 31 operating rooms, and imaging methods equipped with the latest technology. The hospital has responded to protocols and training programs for disaster response.

Koç University / Türkiye founded in 1993, is a non-profit private university in Istanbul, Türkiye, offering a world-class educational experience to about 9000 students from over 50 countries. Currently, 803 academic and 641 administrative personnel are employed by Koç University. KU has nursing skill laboratories, simulation center and Rahmi M. Koç Academy of Interventional Medicine, Education, and Simulation (RMK AIMES). While low-fidelity simulations are used to teach basic skills, high-fidelity simulations (e.g., manikin-based simulation) standardized patients are used to teach advanced skills such as critical thinking, problemsolving, teamwork, decision-making, and communication skills. In the simulation center, environments and situations similar to real-life clinical challenges are created for students, allowing them to make mistakes and reflect on and learn from them.

Abo Akademi University / Finland is a Swedish-language multidisciplinary academic university in Finland. The university contributes to society through general learning, education, and new scientific knowledge. With campuses in Turku and Vaasa, Åbo Akademi University offers internationally renowned research and education. Caring Science is one of the major subjects offered by the faculty in Vaasa. The Caring Science program is based on a human-science and hermeneutic approach, with basic research serving as the necessary foundation for successful and innovative applied science. Department of Health Sciences has a rapidly developing history of offering both education and research within welfare technology and new digital solutions to meet societal challenges related to social and health care.

Jihoceska Univerzita V Ceskych Budejovicich / Czech Republic as been the centre of education, research, and science in the southern part of the Czech Republic for more than

twenty-five years. It offers various study fields, including the natural sciences, economics, health and social work, education, and the humanities. With more than 2,000 students, the Faculty of Health and Social Sciences (FHSS USB) is the second largest faculty at USB. Study applicants are offered eleven bachelor and three subsequent master study disciplines. Graduates of the subsequent master studies can continue studying in two doctoral programmes: nursing and rehabilitation. The faculty also has the right to habilitate and professorial proceedings in nursing.

Universitatea De Vest Din Timisoara / Romania as the largest higher education and research center in Western Romania. WUT has 11 faculties and a teacher training department, 85 study programmes at bachelor level, 120 study programmes at master level, and 12 doctoral schools. Out of these, over 20 bachelor, master and PhD study programmes are offered completely in English, French or German. WUT have been implemented several projects especially in areas like gamification, entrepreneurial education, corporate social responsibility, digital skills, and skill development in the encouragement of mindset towards environmental awareness and sustainable development.

3. THE PROJECT TEAM

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4. PROJECT MANAGEMENT AND IMPLEMENTATION

In this plan, how the proceeding of the project is foreseen is explained in general terms. It should be stated that, this plan is vital in comprehending the logic of the project and implementing it. Based on this plan, a calendar of project activities will be prepared so that the partners will get to know their responsibilities are a logical framework. This plan deals with the four main stages of the project, the beginning, preparation, implementation and final stages.

A) Beginning Stage: The priority of this stage is to organise a kick off meeting with the participation of all partners to ensure the effective implementation of the project. This meeting will be held online by Akdeniz University Nursing Faculty. The aim of this meeting is to decide on the way forward for the project and to inform the public through a press briefing that will be held during the meeting. All partners are expected to participate into this meeting so that they contribute to the project by expressing their opinions and recommendations for a successful implementation.

Besides, during this kick-off meeting a Project Management Committee (PMC), will be formed. This team, which will serve for coming together in case of a problem to solve it, will be composed of members from each partner. Undoubtedly, it is the responsibility of Akdeniz University to ensure the unity and continuation of this team.

After the kick off meeting, it is required to agree on a road map for the project.

B) Preparation: As mentioned before, there are four work packages within the project context. Within these packages, all the tasks to be fulfilled are stated together with the partner responsible of each of them.¹

After the road map of the project is drawn, the activities should be fulfilled. Firstly, it is necessary to prepare a website about the project, which will be an important attempt for valorisation as foreseen in work packages. The website will contain all the details about the project and also the e-learning programme, one of the ultimate outputs of the project will be published through this website.

¹ Detailed information about the work packages can be found in Annex.

C) Implementation process: Common rules, work packages, responsibilities will be distributed and submitted to each partner through this guide. Each Project activities will be discussed and explained to each partner in order to clarify the tasks in TPMs. Project's activities will be organized by project road map with the partners. This road map will include the dates and responsibilities of partners. After negotiations, all partners will make their preparations and plan according to the Project road map. PMC will meet every 3 months via online meetings. In these meetings, committee members will discuss the progress of the work packages, the status of ongoing activities, the status of national dissemination activities, and other issues related to the project, and will reach a consensus on the functioning of all processes of the project, activities, current and/or potential problems. PMC will report any problems it identifies to the project partners so that corrective action can be taken.

D) Finalization process: It is important to prepare the work plan according to the project work packages, complete the work packages, and complete the interim report and final report on time.

5. PROJECT WORK PACKAGES

This section includes work packages related to project management and implementations.

W.P.1 Project Management

- WP1.1 Project management preparation and plan development
- WP1.2 Communication strategy & plan
- WP1.3 Internal progress reports & payments
- WP1.4 Technical & financial reports

W.P.2. Creation and development of an innovative training platform through Learning Hub

- WP 2.1 Training for scenario writing and AR/VR tools development-C1
- WP 2.2 Development of guideline for scenario writing and AR/VR development
- WP 2.3 Development of content and animation about disaster nursing awareness and preperation of simulation equipments
- WP 2.4 Development of AR/VR Scenarios
- WP 2.5 Development of AR/VR Videos 1-6
- WP 2.6 Development of AR/VR Videos 7-8
- WP 2.7 Implementation of AR/VR pilot case studies for students, nurses and educators
- WP 2.8 Development of a handbook
- WP 2.9 Development a proposal of curriculum for higher education
- WP 2.10 First TPM and Kick off Meeting in Türkiye by Akdeniz University (Online)
- WP 2.11 2.TPM in Romania (Face to face)
- WP 2.12 3.TPM in Finland (Face to face)
- WP 2.13 4. TPM in Türkiye by Koç University (Online)

W.P.3. Evaluation and validation of the training

- WP3.1 Evaluation of activities
- WP3.2. Validating handbook with a guideline
- WP3.3 Development skill checklists validating competencies
- WP3.4 5. TPM in Czech Republic (Face to face)

W.P.4. Dissemination and sustainability

- WP4.1 Project logo, branding & digitalisation marketing strategy & plan
- WP4.2 Project web site set-up and update
- WP4.3 Project newsletter and leaflets
- WP4.4 6 National seminars-Multiplier Events M1
- WP4.5 2 Presentations for international/national congress
- WP4.6 Academic paper in a peer-reviewed academic journal
- WP4.7 Translation of the products
- WP4.8 6.TPM and closing in Türkiye (Face to face)

This section includes details of work packages (work packages, aim, activities, and quality and success indicators are included in detail related to the project management and implementations section. The project of all partners have assigned specific activities under different Work Packages.

The tables content as follows:

W.P.1. Project Management	
Activities	
WP1.1. Project management preparation and plan development	
WP1.2. Communication strategy & plan	
WP1.3. Internal progress reports & payments	
WP1.4. Technical & financial reports	
Workpackage aim	
The project management work package will contribute to monitoring the progress, quality, and success of project activities. By the quality strategy, the coordinator institution will monitor the quality strategy to ensure that the project progresses according to the determined timetable and in achieving the targets.	
Project monitoring activities	
1. Integration of collaborative methodology and partnership 2.Implementation of activities according to work packages 3. Progress of activities according to timetable and compliance with deadlines 4.Verifying and reporting/sharing results and observations, and 5. Level of dissemination effort and sustainability of results.	
Quality and success indicators	
The five activities in the project management work package will contribute to monitoring the progress, quality, and success of project activities. By the quality strategy, the coordinator institution will monitor the quality strategy to ensure that the project progresses according to the determined timetable and in achieving the targets. It is expected from the partners to spend Erasmus+ appropriate budget, to comply with the project roadmap, to comply with the project management process, to comply with quality indicators in work packages, to submit project reports on time and properly. During Online TPM in Türkiye, the timetable will be reviewed with partners and updates will be made if necessary	
<u>TPMs and online meetings</u> will prevent possible risks in project processes. Two participants from each institution will attend TPM meetings. During Online TPM in Türkiye, the timetable will be reviewed with partners and updates will be made if necessary. The quality criteria will be mentioned in TPMs.	

First TPM and Kick off Meeting in Türkiye by Akdeniz University (Online)

- All partners will attend the online meeting.
- Two participants from each institution will attend TPM meetings
- Information sharing, evaluations will be made about activities.

Second TPM in Romania (Face to face)

- Information sharing, evaluations will be made about activities.
- Two participants from each institution will attend TPM meetings

Third TPM in Finland (Face to face)

- Information sharing, evaluations will be made about activities.
- Two participants from each institution will attend TPM meetings.

Fourth TPM in Türkiye by Koc University (Online)

- Online TPM, there is no budget for online coordinators meeting.
- Information sharing, evaluations will be made about activities.

Fifth TPM in Czech Republic

- Information sharing, evaluations will be made about activities.
- Two participants from each institution will attend TPM meetings

Sixth TPM and closing in Türkiye by Antalya Training Research Hospital

- The evaluation of the activities related to the project activities will be carried out by Antalya Training Research Hospital and the project will be closed.

A practical guide for effective collaboration (PGEC) which includes detailed information about the project work packages, the consortium structure, the project collaboration team contact information, the implementation plan of the project activities, the details of the work packages and the responsibilities of the partners shared with the project partners at the first TPM.

The Project Management Committee (PMC) including one representative from each partner organization, will be established at the first TPM to monitor the quality of the results and carry out evaluations of the project activities.

- The coordinator will chair the institutional committee and carry out the secretariat processes.
- PMC will meet every 3 months via online meetings.
- In these meetings, committee members will discuss the progress of the work packages, the status of ongoing activities, the status of national dissemination activities, and other issues related to the project, and will reach a consensus on the functioning of all processes of the project, activities, current and/or potential problems.
- In these meeting, the 3-month reports sent by the partners will be discussed, corrective

measures will be taken and the meeting report will be shared with the partners.

- PMC will report any problems it detects to project partners so that corrective measures can be taken.
- Every 6 months, internal progress reports will be requested from partners.

BUDGET CONTROL

- Partners will use the project budget cost-effectively to organize a high-quality event to disseminate the project and increase the visibility of the Erasmus+ Program and EU.
- Akdeniz University will be responsible for the budget.
- Each activity will be examined in detail to maintain the overall coordination and ensure its completion on time and in accordance with the budget. Also, Akdeniz has a key person whose role is to monitor the financial operations of the project.
- PMC will control the project's budget and time management throughout the project. Hosting partners will use their technical personal resources and their own devices during the events. This will be co-financing.

Time management

- The partners will review the project timetable, which will be used to monitor progress and edit and finalize if necessary.
- Project managers will adopt a preventive approach such as informing partners about planned activities and outputs, reminders, road maps before the determined date.
- Corrective action will be requested when progress on the planned activity is deemed not to be according to plan.

Project green practices

- Less mobility for a zero-carbon future (2 online meetings). The initiative to reduce physical travel and face-to-face events will help achieve a zero-carbon future.
- During mobility, partners will strive for carbon neutrality by promoting sustainable modes of transport and more environmentally responsible behavior.
- Using less printed materials to support paperless Erasmus.
- Distribution materials will be digital to avoid unnecessary pressure among participants and target groups about sustainability, circular economy and zero waste practices, and a culture of responsibility and sustainability will be promoted within the project to reduce energy consumption, waste and damage to the environment.
- Selecting reusable, durable and repairable products during project activities.
- Encouraging participants to make informed choices and play an active role in the ecological transition. Participants will also be informed about platforms such as eTwinning and EPAL, which continue to produce.

W.P.2.Creation and development of an innovative training platform through Learning Hub

Activities

WP2.1	Training for scenario writing and AR/VR tools development-C1
WP2.2.	Development of guideline for scenario writing and AR/VR development
WP2.3	Development of content and animation about disaster nursing awareness and preperation of simulation equipments
WP2.4	Development of AR/VR Scenarios
WP2.5	Development of AR/VR Videos 1-6
WP2.6	Development of AR/VR Videos 7-8
WP2.7	Implementation of AR/VR pilot case studies for students, nurses and educators
WP2. 8	Development of a handbook
WP2. 9	Development a proposal of curriculum for higher education
WP2.10	First TPM and Kick off Meeting in Türkiye by Akdeniz University (Online)
WP2.11	2.TPM in Romania (Face to face)
WP2.12	3.TPM in Finland (Face to face)
WP2.13	4. TPM in Türkiye by Koç University (Online)

Work package aim

To prepare innovative scenario-based AR/VR-based training materials that can be used in training to develop core knowledge, skills and competencies related to disaster nursing, to test training materials by conducting a pilot application for students, faculty members and nurses, to prepare a handbook that can be used in the field containing core skills for disaster covering as earthquake, flood and fire and to develop a curriculum to create a common language throughout the country.

Quality and success indicators

- 1) A satisfaction survey to write scenarios and develop AR/VR tools for the training goals.
2. About the scenario writing and AR/VR development guide, the opinions on the usability of the guide.
- 3.After AR/VR scenarios and developing AR/VR videos, feedback from the partners regarding their suitability in TPM.
4. AR/VR videos will be tested for students, nurses and educators. Evaluations will be carried out with quantitative and qualitative questions with pre-test and post-test surveys afterwards. Additionally, a satisfaction survey will be applied to evaluate the level of achievement of training goals for AR/VR-based training.
- 5.Expert opinion and the opinions of the teachers who provide the curriculum will be taken to evaluate information quality of the handbook developed for core skills related to disaster nursing.
6. Other indicators will include TPMs and, the number of participants in pilot studies.

This section provides details of the activities to be carried out within the scope of WP2.

Training for scenario writing and AR/VR tools development-C1

- Training will be provided to the participants in the project to **develop scenario writing (2 days)** by Abo Academi and Jihoceska Univerzita V Ceskych Budejovicich and **AR/VR tools (3 days)** by Universitatea De Vest Din Timisoara in Romania.
- 4 participants from Akdeniz University and 2 participants from other partners will attend the training.
- People working in faculties and/or institutions who are interested in nursing education, nursing practice and disaster nursing, have five years of experience in the field and have digital literacy can participate in this training.

Development of guideline for scenario writing and AR/VR development

- A guide will be developed containing critical information about scenario writing and AR/VR development by Jihoceska Univerzita Vceskych Budejovicich and Universitatea De Vest Din Timisoara.

Development of content and animation about disaster nursing awareness and preperation of simulation equipments

- The necessary preparations for the AR/VR simulation equipment required for the simulation will be completed by Akdeniz University, Koç University and Antalya Training and Research Hospital.
- Content and animation about disaster nursing awareness will be developed.
- It covers the supply of AR/VR glasses required for the application of AR/VR videos in pilot applications.
- The AR/VR glasses for simulation will be carried out from the leadership of Akdeniz University.

Development of AR/VR Scenarios

- After this training, AR/VR scenarios will be developed for eight core skills for disaster nursing by Koç University and other partners will contribute except Romania.
- These skills:
 - Basic life support for cardiac and pulmonary arrest and automatic external defibrillation use,
 - Management of choking (airway obstruction),
 - First aid in bleeding
 - First aid in chest injury

- First aid in abdominal injury
- First aid in fractures
- First aid in case of seizure
- Infection control measures/disease management.

Development of AR/VR Videos 1-6/7-8:

- Six of the AR/VR core skills videos will be developed by Universitatea De Vest Din Timisoara
- The two core skills AR/VR videos will be developed by Abo Academi.

Implementation of AR/VR pilot case studies for students, nurses and educators

- Implementation of AR/VR pilot case studies for students, nurses and educators will be carried out by all five partners, except Universitatea De Vest Din Timisoara.
- 50 students-2 lecturers from Akdeniz University, 35 students - 2 lecturers from Koç University, 10 nurses from Antalya Training and Research Hospital, 20 students - 2 lecturers from Czech Republic, and 20- 2 students - 2 lecturers from Abo Academi.
- AR/VR pilot application will be carried out for student and faculty nurses.

Development of a handbook

- A handbook will be developed for core skills in disaster nursing such as earthquakes, floods that students, educators and nurses can use with the contributions of all partners.

Development a proposal of curriculum for higher education

- A curriculum proposal for disaster nursing will be made to the higher education in order to create a common language in education by Akdeniz University, Koç University and Antalya Training and Research Hospital

Concrete results of this work package;

- AR/VR scenarios, AR/VR videos
- A content and animation about disaster nursing awareness
- Guideline for scenario writing and AR/VR development
- Preparation of simulation equipments
- Implementation of AR/VR pilot case studies for students, nurses and educators,
- A proposal of curriculum for higher education

- Disaster nursing handbook
- Translating products into partners' languages

W.P.3.Evaluation and validation of the training	
Activities	
WP3.1	Evaluation of activities
WP3.2.	Validating handbook with a guideline
WP3.3	Development skill checklists validating competencies
WP3.4	5. TPM in Czech Republic
Work package aim	
To evaluate all training processes in developing knowledge, skills and competencies for disaster nursing and determining whether the training provided and the prepared guide and handbook meet the expected standards.	
Quality and success indicators	
1) After the training, a satisfaction survey will be administered to the participants in the project to write scenarios and develop AR/VR tools, regarding the level of achievement of the training goals. 2) After developing the guide, which includes critical information about scenario writing and AR/VR development, participants will be asked for their opinions on the usability of the guide. 3) After creating AR/VR scenarios for core skills and developing AR/VR videos, feedback will be received from the project partners regarding their suitability in TPM. 4) AR/VR videos will be piloted for students, nurses and educators. Evaluations will be carried out with quantitative and qualitative questions with a pre-test and a post-test surveys. Additionally, a satisfaction survey will be applied to evaluate the level of achievement of training goals for AR/VR-based training. 5) Expert opinion and the opinions of the teachers who provide the curriculum will be taken to evaluate the reliability and information quality of the handbook developed for core skills related to disaster nursing. In addition, the opinions of people who use the handbook will be asked. 6) Other indicators will include TPMs and post-training meeting reports, the number of participants in pilot studies, and the analysis results of pre-test and post-test surveys.	

Evaluation of activities

- After the training is completed, a **satisfaction survey** will be administered by Akdeniz University to the participants in the project to develop scenario writing and AR/VR tools, regarding the level of achievement of the training goals.
- After the development of the guide, which includes critical information about scenario writing and AR/VR development, opinions will be sought from all participants regarding the usability of the guide.
- After creating AR/VR scenarios for core skills and developing AR/VR videos, **feedback** regarding their suitability will be received from the project partners at the TPM to be held in Finland.
- **Evaluations** will be carried out with quantitative and qualitative questions with a pre-test before the training and a post-test after the training. Feedback from project partners regarding training activities (AR/VR scenarios, AR/VR videos, Scenario and AR/VR tools guideline, Handbook) will be received and reported in TPMs
- Piloting AR/VR videos for students, nurses and educators will be implemented by all partners except Romania.
- **Pre-test** and **post-test**, as well as quantitative and qualitative questions, evaluations and satisfaction surveys will be made by all partners who carry out the training.

Validating handbook with a guideline

- **Expert opinions** on the evaluation of the reliability and information quality of the handbook developed for core skills related to disaster nursing, as well as the opinions of the instructors who provide the curriculum and the opinions of the people who use the handbook, will be taken under the leadership of Akdeniz University, with the participation of Koç University, Antalya Training and Research Hospital and Finland partners.

Development skill checklists validating competencies

- Eight core skills for disaster nursing will be created for students, nurses and educators before the implementation of AR/VR video pilot studies, and the level of development of core skills will be evaluated during the AR/VR pilot application.
- Development skill checklists verifying pre-training competencies will be created by Akdeniz University, Koç University and Antalya Training and Research Hospital and will be implemented by all partners during the training to assess the level of achievement of training goals for AR/VR-based training.

- Skills checklists verifying core competencies for disaster nursing will be administered to all training participants.

Concrete results of this work package

- Reports containing feedback on training activities
- After creating AR/VR scenarios for core skills and developing AR/VR videos, feedback will be received from the project partners regarding their suitability in TPM
- Satisfaction surveys and analysis results for training, pre-test and post-test surveys and evaluations with quantitative and qualitative questions,
- Expert opinion and the opinions of the teachers who provide the curriculum will be taken to evaluate the reliability and information quality of the handbook developed for core skills related to disaster nursing opinions of people who use the handbook
- Evaluation of core skills with AR/VR during implementation.
- TPMs and post-training meeting reports, the number of participants in pilot studies
- Analyzes of skill lists will be included to evaluate the level of development

WP 4. Dissemination and sustainability

Activities

WP4.1	Project logo, branding & digitalisation marketing strategy & plan
WP4.2	Project web site set-up and update
WP4.3	Project newsletter and leaflets
WP4.4	6 National seminars-Multiplier Events M1
WP4.5	2 Presentations for international/national congress
WP4.6	Academic paper in a peer-reviewed academic journal
WP4.7	Translation of the products
WP4.8	TPM in Türkiye (6.TPM and closing)

Work package aim

To develop a comprehensive dissemination and exploitation plan, create dissemination materials and resources, implement dissemination activities, engage stakeholders and partners in dissemination efforts: and monitor and evaluate dissemination effectiveness.

Quality and success indicators

1. Feedback and Surveys: Feedback will be collected from stakeholders, including participants in dissemination activities, partners and target Audiences.

2. Stakeholder Engagement: Active participation of stakeholders in dissemination activities and collaborative initiatives will be evaluated.
3. Reach, Audience Metrics and Website Analytics: Website traffic, social media participation, number of people reached through dissemination channels will be measured and website analyzes will be conducted including details of page views.
4. Engagement Metrics: Metrics such as click-through rates, download rates, and session duration will be tracked to assess the level of engagement in dissemination materials and resources. Followers, likes, shares, and comments will be monitored to measure the impact of social media dissemination efforts.
5. Survey Responses: Survey responses and feedback from participants will be received to measure satisfaction levels, understandability and quality of dissemination efforts.
6. Impact on Knowledge and Behavior Change: Pre-test post-test evaluations will be conducted to measure changes in knowledge, skills and behaviors related to disaster nursing education.

Project logo, branding & digitalisation marketing strategy & plan

- Project logo, branding & digitalization marketing strategy & plan will be carried out by Antalya Training and Research Hospital.

Project web site set-up and update

- Project website set-up and update will be done by the coordinator institution.

Project newsletter and leaflets

- Project newsletter and leaflets: It will be carried out under the leadership of Koç University. Since the project newsletter and leaflets are online, no budget will be allocated.

National seminars-Multiplier Events M1

- National seminars-Multiplier Events will be held in all partners' countries.
- The number of participants in national seminars,
- National seminars, that is, Multiplier Events, will be held in each country.

Multiplier Events	Name	Work Package Leader
1. National Seminar in Türkiye (Akdeniz University)		Akdeniz University
2. National Seminar in Türkiye (Antalya Training and Research Hospital)		ATRH
3. National Seminar in Türkiye (Koç University)		KU
4. National Seminar in Finland		ABO
5. National Seminar in in Czech Republic		USB
6. National Seminar in Romania		WUT

Profile of the participants:

- Students who want to develop basic skills and raise awareness about disaster nursing, nurse educators, nurses who want to gain knowledge and core skills.
- People working in relevant stakeholders such as associations working for nurses, chambers working for nurses, foundations working for nurses.
- Professionals in the health sector, policy makers in the health sector, policy makers in education, youth and economy.
- Media that can bring greater visibility and awareness to the issue.

Presentations for international/national congress

- Presentations for international/national conferences will be held by the coordinator.

Academic paper in a peer-reviewed academic journal

- One academic paper in a peer-reviewed academic journal: will be carried out by the coordinator.

Translation of the products

- Translation of the products: Project-related materials will be translated into the languages of all partners.

Concrete results of this work package

- Comprehensive dissemination plan outlining strategies and activities for disseminating project results and educational resources to target audiences.
- Dissemination materials and resources: Project web site set-up, social media, project newsletter and leaflets, academic paper in a peer-reviewed academic journal, translation of the project products.
- Implemented dissemination activities: 6 National Seminars as multiplier events in all project partner country.
- Dissemination platforms: Project logo, branding & digitalisation marketing strategy & plan, 2 Presentations for international/national conference, TPM in Türkiye and closing.
- Participants in seminars, and online learning activities will acquire enhanced knowledge and practical skills in disaster nursing, particularly through the use of AR/VR-based educational materials.
- Healthcare professionals, including nurses, will be better prepared to respond effectively in disaster situations, with a heightened ability to apply evidence-based care and core competencies.
- Knowledge and best practices in disaster nursing education will be actively shared among stakeholders, contributing to a collaborative and informed approach to disaster preparedness.
- The dissemination activities will promote innovative teaching and learning methods, emphasizing the integration of technology (AR/VR) in healthcare education for enhanced disaster response training.
- The project and participating organizations will gain increased visibility and recognition in the field of disaster nursing education, both within the partnership and in the wider public.
- The plan developed through the dissemination activities will ensure that the project's outcomes continue to benefit the target audience and stakeholders beyond the project's conclusion.

6. VALORISATION PLAN

a) Website: A web site will be established within the project duration under the Akdeniz University. Web site will be prepared in Turkish, English and other partners language ((Finnish, Romanian, Czech) linked to partners' web sites. Web site will serve as a bridge to create awareness and inform all stakeholders of the project. Besides, an e-forum will be set under the web-site which will allow fruitful communication of partners on project related monitoring and discussion.

b) CT Centers and All Partners mailing list: Applicant organization will also do this procedure for EU level including all the other Europe countries. These contacts then will receive the bulletins of the project periodically.

c) Printing multipliers: Brochures and posters will be printed in all partner languages so that all the partners disseminate the project efficiently at national level. The logo of the project will be printed on stickers and will be distributed to the participants of the dissemination meetings.

d) Three monthly e-bulletins: 3 monthly e-bulletins announcing the project activities and even the news on the transport sector both at national and international levels will be prepared during the project, under the coordination of the applicant organization. The e-bulletin will be published on the project web site and sent to all related organizations in Europe CT Centers and Nursing Faculty mailing list.

e) Dissemination of the project results: The project results and outputs will be translated in to all partner countries' languages and published on project' website in order to foster the dissemination and visibility of the project. Moreover, during the TPMs all partners are going to organize press meeting in their own countries to raise the awareness on project. The valorisation activities will increase the exploitation of the project and thus facilitate the recognition of project results not only in partner countries but also across the Europe. Social media accounts will be used in order to disseminate the Project through social media and to enhance the Project visibility. Each partner is responsible to organize a press conference in their countries on national level. For nurses in health units at public and private hospitals,

workshops and training activities will be organized. Educational materials, and curriculum that will be prepared within the project will be disseminated to Nursing Faculties and Board of Higher Education. Project results, outputs and ongoing activities will be published on health journals in order to disseminate project both at national and EU level.

e) ITEC Certification System: Common certificates which will be given to the successful participants (nurses, educators, and nursing students) will be recognized by all the partners. That will also contribute to the valorisation activities. The certifications will be prepared in English and published in all languages for use in future trainings and distribution to project partners.

7. EVALUATION & MEASUREMENT

Akdeniz University Nursing Faculty will be responsible from this work. Nursing Faculty and other related partners will monitor all the process of the project with different tools that they are going to develop. The variety in these tools will improve the quality of evaluation therefore transfer. Evaluation process approach will be on two sides:

- 1- Process Based Approach: Akdeniz University Nursing Faculty will follow up all the progress of the project and intervene, give feedback when the activities need to be improved. AKDÜ will focus on the process in this approach as assessing regarding the time table, feedbacks, and satisfaction of the partners.
- 2- Outcome Based Approach: AKDÜ will focus on the products not the process and will analyze the products, their adaptation quality, their content and appropriateness for the target group in detailed.

Work Package Reports: The leaders of the work packages will prepare the work package reports at the end of each work package. These evaluation reports will have a detailed format of the each single activity in the work package. AKDÜ will make use of the work package reports in order to evaluate the project. Akdeniz University will prepare the format of these work package reports so that after the completion of each work package, the responsible partner will prepare one and sent it to all partners.

Evaluation Reports: All partners will be responsible to prepare evaluation reports based on the results of the questionnaires and to share it with the partners and to give feedback according to the results if necessary. The partners can prepare evaluation reports, both interim and final, where they express their opinions on the project. It should be stated that these reports will be informal and aim at strengthening the dialogue and cooperation between the partners and at putting forward the problems that might occur during the implementation of the project. The format of these reports will be developed. Akdeniz University will develop tools for an efficient monitoring evaluation plan continuously will also allow information flow between partners and beneficiaries. Akdeniz University is also responsible for ensuring the quality-oriented transfer of outputs and methods. The methodology of the monitoring and evaluation consists of three parts:



GANTT CHART

		LEADER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
W.P.1 Project Management		AKDÜ																								
WP1.1	Project management preparation and plan development	AKDÜ																								
WP1.2	Communication strategy & plan	AKDÜ																								
WP1.3	Internal progress reports & payments	ALL																								
WP1.4	Technical & financial reports	ALL																								
W.P.2. Creation and development of an innovative training platform through Learning Hub		AKDÜ																								
WP2.1	Training for scenario writing and AR/VR tools development-C1	WUT																								
WP2.2.	Development of guideline for scenario writing and AR/VR development	USB																								
WP2.3	Development of content and animation about disaster nursing awareness and preparation of simulation equipments	AKDÜ																								
WP2.4	Development of AR/VR Scenarios	KU																								
WP2.5	Development of AR/VR Videos 1-6	WUT																								
WP2.6	Development of AR/VR Videos 7-8	ABO																								
WP2.7	Implementation of AR/VR pilot case studies for students, nurses and educators	AKDÜ																								
WP2.8	Development of a handbook	AKDÜ																								
WP2.9	Development a proposal of curriculum for higher education	KU																								
WP2.10	1.TPM and Kick off in Türkiye (online)	AKDÜ																								
WP2.11	2. TPM in Romania (face to face)	WUT																								
WP2.12	3. TPM in Finland (face to face)	ABO																								
WP2.13	4. Online TPM in Türkiye (İstanbul) (online)	KU																								
W.P.3. Evaluation and validation of the training		KU																								
WP3.1	Evaluation of activities	AKDÜ																								
WP3.2.	Validating handbook with a guideline	AKDÜ																								
WP3.3	Development skill checklists validating competencies	AKDÜ																								
WP3.4	5. TPM in Czech Republic (online)	USB																								
W.P.4. Dissemination and sustainability		ATRH																								
WP4.1	Project logo, branding & digitalisation marketing strategy & plan	ATRH																								
WP4.2	Project web site set-up and update	AKDÜ																								

