MAKING SMALL THINGS GROW BIG TOGETHER – DIGITAL TRANSFORMATION AS A PRIORITY

EXPERIENCES OF ERASMUS+ PARTNERSHIPS FOR COOPERATION COORDINATED BY FINNISH ACTORS

FINNISH NATIONAL AGENCY FOR EDUCATION

Erasmus+
Enriching lives, opening minds.

Reports and surveys 2024:6c

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Reports and surveys 2024:6c

ISBN 978-952-13-6963-6 (pdf)
ISSN-L 1798-8918
ISSN 1798-8926 (pdf)

Layout: PunaMusta Oy

www.edu.fi

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SUMMARY

The Erasmus+ Programme funded by the European Union supports projects that promote internationalisation and cooperation in the field of education, training, youth and sport in Europe. The aim of the Programme is to support educational, professional and personal development in the fields of education, training, youth and sport in Europe and partner countries, to promote sustainable growth, environmental responsibility, employment, social cohesion and innovations, and to strengthen the European identity and participation in democratic society. In addition, Erasmus+ promotes high-quality education, training and competence of pupils, students, teachers and trainers, digitalisation and learning mobility. The Programme also promotes European cooperation, inclusion, excellence, creativity and innovations of organisations in the field of education.

In 2024, the Finnish National Agency for Education commissioned a report to investigate how digital transformation is realised in the partnerships for cooperation coordinated by Finnish actors The potential ideas, inclusive approaches and innovative practices of Erasmus+ partnerships for cooperation were also surveyed in the report.

The methods used in examining the possible promotion of impact by Erasmus+ KA2 partnerships for cooperation were case studies and document analysis. The examination was conducted by analysing documents in the application and reporting system of Erasmus+ KA2 partnerships for cooperation, as they contain information on the planning, implementation, results and impact of the projects. Another research method was a survey conducted by sending electronic questionnaires to the persons responsible for partnerships for cooperation. The purpose of the questionnaire was to survey beneficiaries' experiences and observations of how the project contributed to promoting the digital transformation. At the end of April, a workshop was organised in which project actors assessed the impacts of the projects by sharing innovative practices and developing potential ideas for further development together.

1. INTRODUCTION

Erasmus+ is a programme funded by the European Union to support projects promoting internationalisation in the fields of education, training, youth and sport in the different European countries. Erasmus+ KA2 partnerships for cooperation promote cooperation between organisations and institutions. The aim of the programme is to support the educational, professional and personal development in the fields of education, training, youth and sport in Europe and the partner countries, promote sustainable development, employment, social cohesion and innovations, and strengthen European identity and active citizenship.

In addition, the Erasmus+ Programme promotes high-quality education, training, competence and learning mobility of pupils, students, teachers and trainers; European cooperation, inclusion, excellence, creativity and innovations of organisations in the field of education; informal learning and active participation of young people and youth workers; cooperation, inclusion, creativity and innovations of youth organisations; learning mobility of sport coaches and sport staff; and cooperation, inclusion, creativity and innovation of sport organisations.

Indicators approved by the European Commission are used in assessing the impact of the Erasmus+ Programme. The indicators help to monitor the impacts of the projects and lay the basis for impact assessment. They make it possible to assess whether the implementation of the Programme has been successful and what kind of changes have taken place in the target group and their environment. The indicators do not only provide objective information on the effectiveness of the Programme, but also reflect the objectives that have been set and help to allocate future activities even better.

Between 2014 and 2023, several Erasmus+ KA2 partnerships for cooperation focusing on promoting the digital transformation were implemented in the Erasmus+ Programme. The objective of this report is to survey the experiences and ideas regarding meaningful approaches developed in the projects of the beneficiaries of concluded Erasmus+ KA2 projects launched between 2017 and 2021 that were coordinated by Finnish project actors and that focused on the digital transformation. The report is also aimed at obtaining information on the impact and results of the projects and identifying innovative practices and potential innovations that may possibly be utilised in future projects.

The theoretical background of the report is the application and reporting system of Erasmus+ KA2 projects, which contains information on the planning, implementation, results and impact of the projects and their final reports and evaluation feedback. The information on the results of the projects was supplemented with surveys sent to the persons responsible for the selected projects and with a workshop targeted at the project actors. In the workshop, innovative practices were shared and work on potential ideas for developing the projects further was continued.

The aim of the report is to provide authentic information on the impact and results of the completed Erasmus+ KA2 projects to actors and decision-makers who plan and implement similar projects. Furthermore, the report is aimed at encouraging new project actors to take advantage of the best practices identified in the projects and to further develop innovative solutions to enhance education, training, the field of youth and sport.

2. BACKGROUND

Erasmus+ partnerships for cooperation enable participating organisations to gain experience in international cooperation and strengthen their capacities, but also to produce high-quality innovative deliverables. The size and extent of partnerships for cooperation may vary depending on the objectives of the project, the participating organisations, expected impacts and other factors, and the activities can be adapted according to these factors. Qualitative evaluation of the projects takes into account the objectives of the cooperation and the nature of the participating organisations. Based on this logic, two types of partnerships are offered to organisations to work, learn and grow together:

- Cooperation Partnerships
- Small-scale Partnerships.

Erasmus+ Key Action 2 supports partnerships for cooperation and the following action types:

- Partnerships for Cooperation, such as Cooperation Partnerships and Small-scale Partnerships
- Partnerships for Excellence, such as Centres of Vocational Excellence and Erasmus Mundus Action
- Partnerships for Innovation, such as Alliances for Innovation and Forward-looking Projects
- Capacity Building projects in the fields of higher education, vocational education and training, youth and sport
- Not-for-profit European sport events.

The actions are expected to contribute significantly to the priorities of the programme, to bring positive and long-lasting effects on the participating organisations, on the policy systems in which such actions are framed as well as on the organisations and persons directly or indirectly involved in the organised activities. Erasmus+ partnerships for cooperation are expected to result in the development, dissemination and implementation of innovative practices at organisational, local, regional, national, European Union or global level. During the life cycle of the project, the organisations implement a variety of activities that vary from traditional ones to more creative and innovative activities. They may select a combination of activities that best promotes the achievement of the project's objectives in relation to its scope and the capacities of the partnership.

Depending on the field that the project deals with and the type of the applicant, Erasmus+ KA2 projects are managed either by the National Agencies or the European Education and Culture Executive Agency (EACEA). On a yearly basis, the European Commission sets common priorities and objectives to be pursued at the level of the Erasmus+ Programme in different fields of education, training, youth and sport. Therefore, apart from developing capacities of organisations involved in the project, partnerships for cooperation aim at contributing with their results toward achieving the priorities. Projects are requested to frame their work in relation to one or more of these priorities and to select them at application stage. When formulating project proposals, it is also recommended to consult the results produced by previously funded projects based on similar priorities, to ensure consistency and avoid duplications, as well as to progressively build on existent results and contribute to the joint development of the different fields.

In addition, to better link European priorities with the specific needs at national level, Erasmus+ National Agencies have the possibility to identify one or more of these European priorities as

particularly relevant in their national context, in order to encourage organisations to focus their contributions in these selected areas on a given year.

In 2023, partnerships for cooperation must emphasise one or more of the following priority areas:

Inclusion and diversity in all fields of education, training, youth and sports: The Programme will support projects that promote social inclusion and aim at improving the outreach to people with fewer opportunities. For example, such people include people with disabilities and people with a migrant background, as well as people living in rural and remote areas such as outermost regions, people suffering from gender inequalities, socio-economic difficulties or any other potential source of discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation. The projects will help to address the barriers faced by these people in accessing the opportunities offered by the Programme, as well as contributing to creating inclusive environments that foster equity and equality, and that are responsive to the needs of the wider community. Under this priority, the Programme will support projects that promote educational activities and facilitate the integration of people fleeing the war in Ukraine into their new learning environments.

Environment and fight against climate change: The Programme aims to support, across all sectors, awareness-raising about the green transition, environmental and climate-change challenges. Priority will be given to projects aimed at developing competences in various sustainability-relevant sectors, developing green sectorial skills strategies and methodologies, as well as future-oriented curricula that better meet the needs of individuals. The Programme will also support the testing of innovative practices to prepare learners, staff and youth workers to become true agents of change (e.g. save resources, reduce energy use and waste, compensate carbon footprint emissions, opt for sustainable food and mobility choices, etc.). Priority will also be given to projects that – through education, training, youth and sport activities - enable behavioural changes for individual preferences, consumption habits, and lifestyles. They also include projects that develop sustainability competences of educators and education leaders and support the planned approaches of the participating organisations regarding environmental sustainability.

Addressing the digital transformation through development of digital readiness, resilience and capacity: The Programme will support digital transformation plans of primary, secondary, vocational education and training (VET), higher, and adult education institutions. Priority will be given to projects aiming to increase the capacity and readiness of institutions to manage an effective shift towards digital education. The Programme will support the purposeful use of digital technologies in education, training, youth and sport for teaching, learning, assessment and engagement. This includes the development of digital pedagogy and expertise in the use of digital tools for teachers, including accessible and assistive technologies and the creation and innovative use of digital education content. Equally, it includes developing the digital skills and competences of all the population through appropriate programmes and initiatives. Particular attention will be given to promoting gender equality and addressing differences in relation to the access and use by underrepresented groups. The Programme will further support the use of the European frameworks on digital competences of educators, citizens and organisations.

Common values, civic engagement and participation: The Programme will support active citizenship and ethics in lifelong learning; it will foster the development of social and intercultural competences, critical thinking and media literacy. Priority will also be given to projects that offer opportunities for people's participation in democratic life, social and civic engagement through formal or non-formal learning activities, such as for example activities raising awareness about and promoting participation in the 2024 elections to the European Parliament. The focus will also be on raising

awareness on and understanding the European Union context, notably as regards the common EU values, the principles of unity and diversity, as well as their cultural identity, cultural awareness and their social and historical heritage. In addition to the general priorities mentioned above, the following specific priorities will be pursued in the respective sectors.

For the participating organisations, Erasmus+ partnerships for cooperation are intended to produce the following outcomes:

- innovative approaches for addressing their target groups, by providing for example: more attractive education and training programmes, in line with individual needs and expectations; use of participatory approaches and digital methodologies; new or improved processes of recognition and validation of competences; greater effectiveness of activities for the benefit of local communities; new or improved practices to cater for the needs of targets groups with fewer opportunities and to deal with differences in learning outcomes linked to the geographical and socio-economic disparities; new approaches to address social, ethnic, linguistic and cultural diversity; new approaches to better support competitiveness and employment in particular at regional and local level; recognition of excellence in language learning or teaching through the European Language Label;
- a more modern, dynamic, committed and professional environment inside the organisation: ready to integrate good practices and new methods including digital capabilities into daily activities; open to synergies with organisations active in different fields or in other socio-economic sectors; strategic planning of professional development for staff in line with individual needs and organisational objectives;
- increased capacity and professionalism to work at EU/international level: improved management competences and internationalisation strategies; reinforced cooperation with partners from other countries, other fields of education, training and youth and/or other socio-economic sectors; increased allocation of financial resources (other than EU funds) to organise EU/international projects in the field of education, training and youth; increased quality in the preparation, implementation, monitoring and follow-up of EU/international projects;
- increased knowledge and awareness regarding sport and physical activity;
- increased awareness of the role of sport in promoting social inclusion, equal opportunities and a healthy lifestyle.

The funded projects are also likely to have a positive impact on the persons directly or indirectly involved in the activities, such as:

- increased sense of initiative and entrepreneurship;
- increased competence in foreign languages;
- increased level of digital competence;
- greater understanding and responsiveness to all kinds of diversity, e.g. social, ethnic, linguistic, gender and cultural diversity as well as diverse abilities;
- improved levels of skills for employability and new business creation (including social entrepreneurship);
- more active participation in society;
- more positive attitude towards the European project and the EU values;
- better understanding and recognition of skills and qualifications in Europe and beyond;
- improved competences, linked to occupational profiles (teaching, training, youth work, sport coaching, etc.);
- better understanding of practices, policies and systems in education, training, youth and sport across countries;

- better understanding of interconnections between formal, non-formal education, vocational training, other forms of learning and labour market respectively;
- increased opportunities for professional development;
- increased motivation and satisfaction in daily work;
- increased practice of sport and physical activity.

At systemic level, they are expected to trigger modernisation and reinforce the response of education and training systems and youth policies to the main challenges of today's world: environmental sustainability, digital transformation, employment, economic stability and growth, but also the need to promote social, civic and intercultural competences, intercultural dialogue, democratic values and fundamental rights, social inclusion, mental health and well-being, non-discrimination and active citizenship, critical thinking and media literacy.

Objectives of Erasmus+ partnerships for cooperation

- increased quality of education and training, youth work and sport practices in Europe and beyond, higher levels of excellence and attractiveness with increased opportunities for all;
- education, training and youth systems that are better aligned to the needs of and opportunities offered by the labour market, and closer links to business and the community;
- improved provision and assessment of basic and transversal skills, particularly: entrepreneurship, social, civic, intercultural and language competences, critical thinking, digital skills and media literacy;
- increased synergies and links and improved transition between the different sectors of education, training and youth at national level, with improved use of European reference tools for recognition, validation and transparency of competences and qualifications;
- increased use of learning outcomes when describing and defining qualifications, parts of qualifications and curricula, in support to teaching and learning and in assessment;
- increased awareness and openness to social diversity and increased inclusiveness and accessibility of education systems and possibilities;
- new and increased inter-regional and national cooperation of public authorities in the fields of education, training and youth;
- more strategic and integrated use of ICTs and open educational resources (OER) in education, training and youth systems;
- increased motivation for language learning through innovative teaching methods or better links to practical use of language skills required by the labour market.
- reinforced interaction between practice, research and policy;
- increased level of participation in sport and physical activity as a tool for health and wellbeing;
- increased knowledge on how to tackle cross-border threats to the integrity of sport, such as doping, match fixing and violence, as well as all kinds of intolerance and discrimination, and better support of good governance in sport and dual careers of athletes;
- increased recognition of voluntary activities in sport;
- increased mobility of volunteers, coaches, managers and staff of non-profit sport organisations;
- increased social inclusion and equal opportunities in sport.

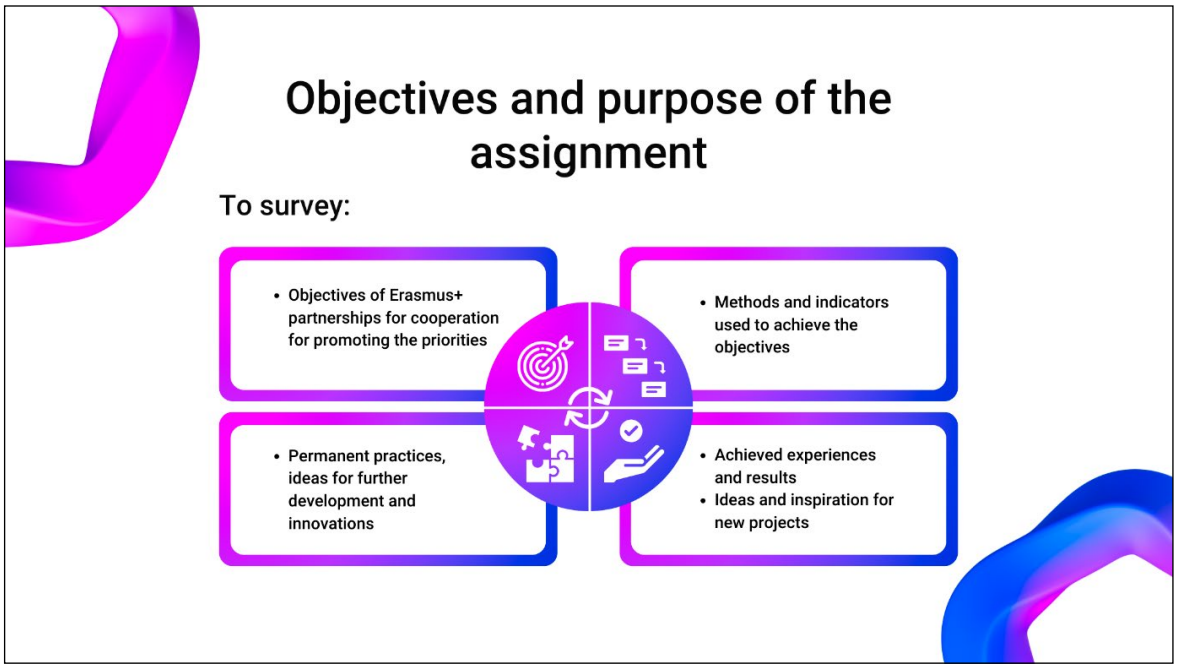
Finnish actors have been active coordinators and participants in Erasmus+ KA2 projects. In this report, we examine projects focusing on inclusion, diversity and environmental responsibility that were coordinated by Finnish beneficiaries and aimed at developing innovative practices and potential development ideas in the priorities of inclusion, diversity and environmental responsibility.

3. OBJECTIVES AND PURPOSE OF THE REPORT

The objective of this report is to survey the experiences and ideas regarding potential innovations and meaningful approaches developed in the projects of the beneficiaries of concluded Erasmus+ KA2 projects launched between 2017 and 2021 that were coordinated by Finnish project actors and that focused on the digital transformation. The report was also aimed at obtaining information on the impact and outcomes of the projects and identifying innovative practices and potential innovations that may be used and developed further in future projects.

The aim of the report's results is to provide authentic information on the impact and outcomes of concluded Erasmus+ KA2 projects focusing on the digital transformation to those actors and decision-makers who plan and implement similar projects. Furthermore, the report is aimed at encouraging new project actors to take advantage of the best practices and participatory approaches of the projects and to develop new innovative solutions for the development of education, training, the field of youth and sport.

FIGURE 1. OBJECTIVES AND PURPOSE OF THE REPORT



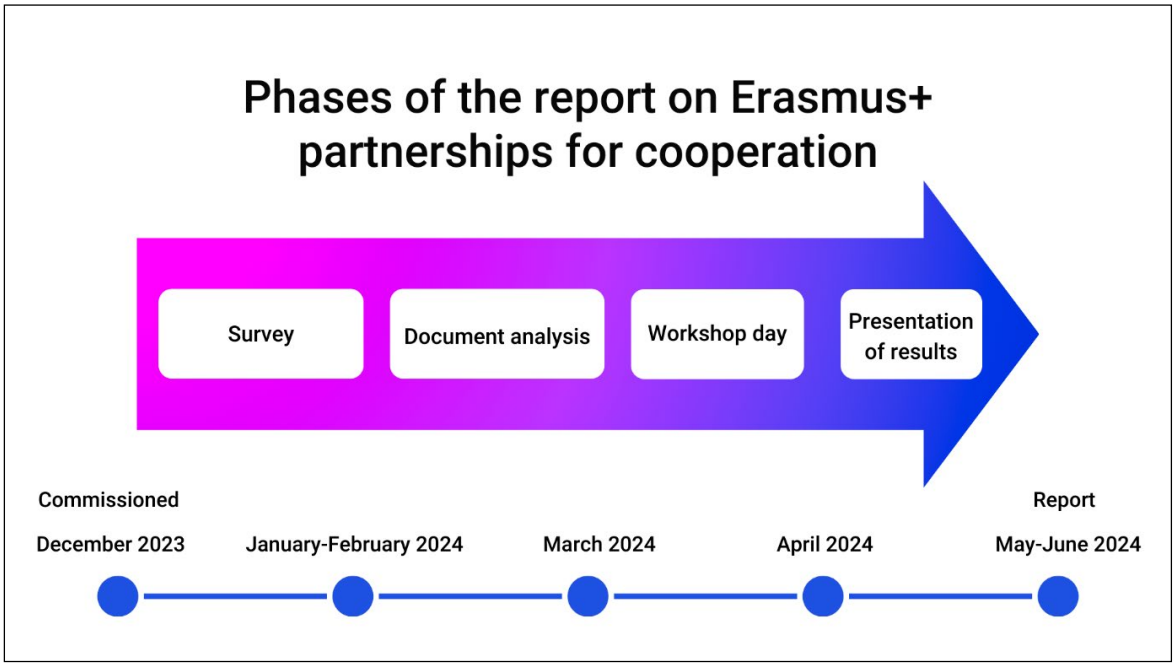
3.1 Methods

The starting point of the report is the application and reporting system of Erasmus+ KA2 projects, which contains information on the planning, implementation, results and impact of the projects. The final reports and evaluation feedback of the selected projects, including the descriptions of the project results, were also used in the report. The information concerning the results of the projects was supplemented with surveys sent to the persons responsible for the selected projects and with a workshop in which the project actors shared innovative practices and worked on potential ideas for further development. All the selected 21 projects fall under the Erasmus+ KA2 programme type (Cooperation for innovation and exchange of good practices) and cover the different fields of

education (general education, vocational education and training, adult education, higher education and the field of youth).

The case study method was used to examine how Erasmus+ KA2 projects focusing on the digital transformation may have promoted impact. The methods used also included a document analysis, in which the documents analysed were those recorded in the application and reporting system of Erasmus+ KA2 projects and contained information on the planning, implementation, results and impact of the projects. By analysing these written sources, it was possible to identify the achievement of the objectives and plans of Erasmus+ KA2 projects as well as the resources, materials, tools, innovations and permanent practices produced by the projects from the point of view of environmental responsibility. A survey was also used as a research method by sending electronic questionnaires to persons responsible for Erasmus+ KA2 projects to find out about their experiences and observations of how the project contributed to promoting the digital transformation. The survey was used to assess participants' awareness of these themes before and after the project and the beneficiaries' views about the impacts of the project. Actors from different projects assessed the impacts of the projects by sharing innovative practices and further developing potential development ideas together in the workshop organised to project actors in April 2024.

FIGURE 2. PHASES OF THE COMMISSIONED REPORT ON ERASMUS+ PARTNERSHIPS FOR COOPERATION



3.2 Structure of the report

The report has been structured as follows:

Chapter 1 is an introduction presenting the framework of Erasmus+ KA2 partnerships for cooperation.

Chapter 2 describes the background of the Erasmus+ Programme.

Chapter 3 provides a background for the objectives, methods and structure of the selected Erasmus+ KA2 partnerships for cooperation.

Chapter 4 describes the data used the report and the project-specific analysis.

Chapter 5 presents the experiences reported in the questionnaire.

Chapter 6 discusses the findings made in the report.

Chapter 7 presents the conclusions made in the report.

Appendix 1 includes short descriptions of the selected Erasmus+ KA2 partnerships for cooperation that focused on the digital transformation and were coordinated by Finnish actors.

Appendix 2 includes the questionnaire sent to the selected Erasmus+ KA2 project actors.

Appendix 3 introduces the programme, content, methods, results and the key discussion topics and aspects of the workshop day organised for Erasmus+ KA2 project actors in September 2023, and a summary of the workshops.

Appendix 4 includes a structured list of information sources.

4. SELECTION AND SURVEY OF ERASMUS+ KA2 PROJECTS COORDINATED BY FINNISH PROJECT ACTORS ON THE BASIS OF FINAL REPORTS

4.1 Viewpoints and potential impact on promoting the digital transformation of the selected Erasmus+ KA2 projects

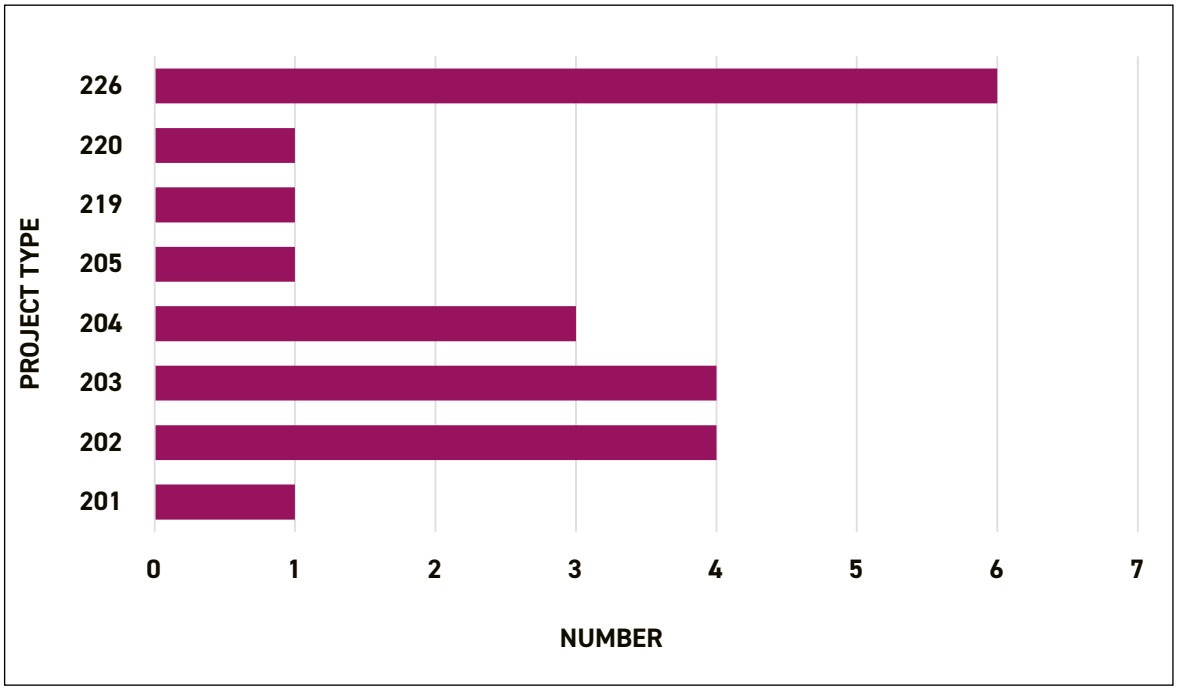
The report surveyed the potential ideas, inclusive approaches and innovative practices developed in Erasmus+ partnerships for cooperation focusing on the digital transformation that were coordinated by Finnish actors. A total of 21 Erasmus+ partnerships for cooperation focusing on the digital transformation were selected for the report.

The selection of the projects was based on the following points of view:

- Project applications showed an emphasis on the digital transformation
- The Erasmus+ KA2 projects had been launched between 2017 and 2021
- The selected projects were coordinated by Finnish actors
- Project actors were selected geographically from different parts of Finland
- Diversity of sectors (general education, vocational education and training, adult education, higher education, field of youth)

The study carried out as a result was conducted using information and data compiled from the EU's application and reporting system and from the project register, as a survey and based on information collected in the workshop. Project actors' views were mainly consulted using a questionnaire and in the small group activities of the workshop. The data and information on the projects were collected from the EPlusLink application and reporting system as well as from the project register of the European Union, which contains information on the planning, implementation, results and impact of the projects. The final reports of the projects and the evaluation feedback received by the project actors were used in the report. The surveys and the workshops focused on gaining an overview and understanding of the innovative practices of the project, potential ideas for further development, a summary of how the development of these innovations is promoted and the key aspects of this work.

DISTRIBUTION OF THE PROJECT TYPES OF THE ERASMUS+ KA2 PROJECTS EXAMINED IN THE REPORT (N=21).



KA201: Strategic partnership in the general education sector
KA202: Strategic partnership in vocational education and training
KA203: Strategic partnership in higher education
KA204: Strategic partnership in adult education
KA205: Strategic partnership in the field of youth
KA219: Strategic partnerships for schools only
KA220: Cooperation partnerships
KA226: Strategic partnerships in response of the COVID-19 situation: digital education readiness in the field of higher education

4.2 Erasmus+ KA2 partnerships for cooperation focusing on the digital transformation included in the report and their viewpoints

Erasmus+ programme promotes the use of digital technologies in teaching and learning and supports the learning of digital skills. It also supports the planning and development of digital competence, the development of the digital skills of teachers and staff, digital literacy, high-quality learning contents, user-friendly tools and secure platforms. The aim is to engage all learners, teachers and trainers, youth workers and young people in the digital transformation.

Erasmus+ helps to enhance cooperation on digital education in Europe, increase critical understanding of the opportunities provided by digital technology, and promote active citizenship. The opportunities provided by digitalisation are used increasingly in international cooperation. Online learning supplements physical mobility and the periods abroad, and information and communication technology is increasingly used in cooperation between project partners. Increasing virtual cooperation is considered important in terms of the development of methods and learning. It also makes it possible to reach an increasingly wide target group both in the European Union and outside it.

Digital transformation

Digital transformation will change the way most sectors of society operate. Digital transformation refers to both practical changes in the way an organisation operates and the evolving cultural and social norms of society. Practical applications of the digital transformation may include conversion or adaptation of traditional, non-digital and manual processes into digital ones. Digital tools can make learning and acquiring new competence more efficient. The Erasmus+ and ESC programmes support the realisation of the digital transformation through funding.

European education systems must have sufficient digital readiness to support the digital transformation in a human-centric way and provide a better response to societal challenges, including AI and disinformation. Erasmus+ can play an important role in helping people of all ages acquire the digital skills and competences they need in their daily lives and in order to study, work, exercise their rights, find information, use online services, communicate, be responsible consumers as well as create and disseminate digital education content.

The programme also supports actions aimed at improving digital skills and competences for everyone at all levels of society, including young people with fewer opportunities, students, jobseekers and workers. The objective is to promote both basic level and advanced digital skills as well as digital literacy, which has become essential in everyday life and which enables people to navigate a world full of algorithms and participate fully in the civic society and democracy. In order to achieve this goal, information and communication technology tools, a combination of physical mobility and virtual learning, and virtual cooperation can be used more in the future.

In this Chapter, the Erasmus+ KA2 projects focusing on the digital transformation that were selected for the report are examined from the following perspectives:

- Priorities of the project
- Objectives of the project
- Indicators used
- Methods used
- Project outputs
- Innovations created in the project
- Permanent practices

Experiences gained of the impacts of the digital transformation in Erasmus+ KA2 projects were examined by looking at the following aspects:

- How well did the project address the digital transformation?
- How well did the project succeed in raising participants' awareness of the digital transformation?
- To what extent have the results and practices of the project remained a permanent part of organisations and communities' activities aiming to promote the digital transformation in the future?

ERASMUS+ KA2 PARTNERSHIPS FOR COOPERATION FOCUSING ON THE DIGITAL TRANSFORMATION INCLUDED IN THE REPORT AND THEIR VIEWPOINTS

Project	Project type	Priorities	Objectives	Indicators	Methods	Outputs	Innovations	Permanent practices
From ME to WE - Networks for Empowering Teachers and Students	219							
Hand in hand libraries and adult education centres for lifelong learning	204							
Young talents creating new multicultural brands	202							
Learning ICT Supported Nursing for Self Management of Patients	203							
Digitalized Learning Path for Educational Organizations	202							
Lean for work and lean for life	202							
IDEAL Flipped Learning in Adult Education	204							
DIG IT 2: Digital Storytelling Meets the World of Work	202							
WIN on line: Women In ActioN	204							
Computational Thinking and Acting	203							
Cybersecurity Curricula Recommendations for Smart Grids	203							
Virtual reality Education & Game based Achievements in classrooms	201							
Pro Youth Empowering youth workers and youth in the protection	205							
Maritime Engine Room Simulator On Line	226							
Learn to Change Collaborative Digital Storytelling for Sustainable Change	226							
Competences for the new era of user driven digital rehabilitation	226							
European Network for Virtual lab & Interactive SImulated ONline learning 2027	226							
Sector specific skills development in Coastal and Maritime Tourism	203							
Digital Career Stories	226							
Digital and hybrid teaching and learning of practical skills in higher education	226							
Digital VET for all co existing in the digital era	220							

KA201: Strategic partnerships in the general education sector
KA202: Strategic partnerships in vocational education and training
KA203: Strategic partnerships in higher education
KA204: Strategic partnerships in adult education
KA205: Strategic partnerships in the field of youth
KA219: Strategic partnerships for schools only
KA220: Cooperation partnerships
KA226: Strategic partnerships in response of the COVID-19 situation: digital education readiness in the field of higher education

5. GAINED EXPERIENCES, POTENTIAL IDEAS AND INNOVATIVE PRACTICES

5.1 Survey on innovative project practices in Erasmus+ partnerships for cooperation focusing on the digital transformation sent to persons responsible for the projects

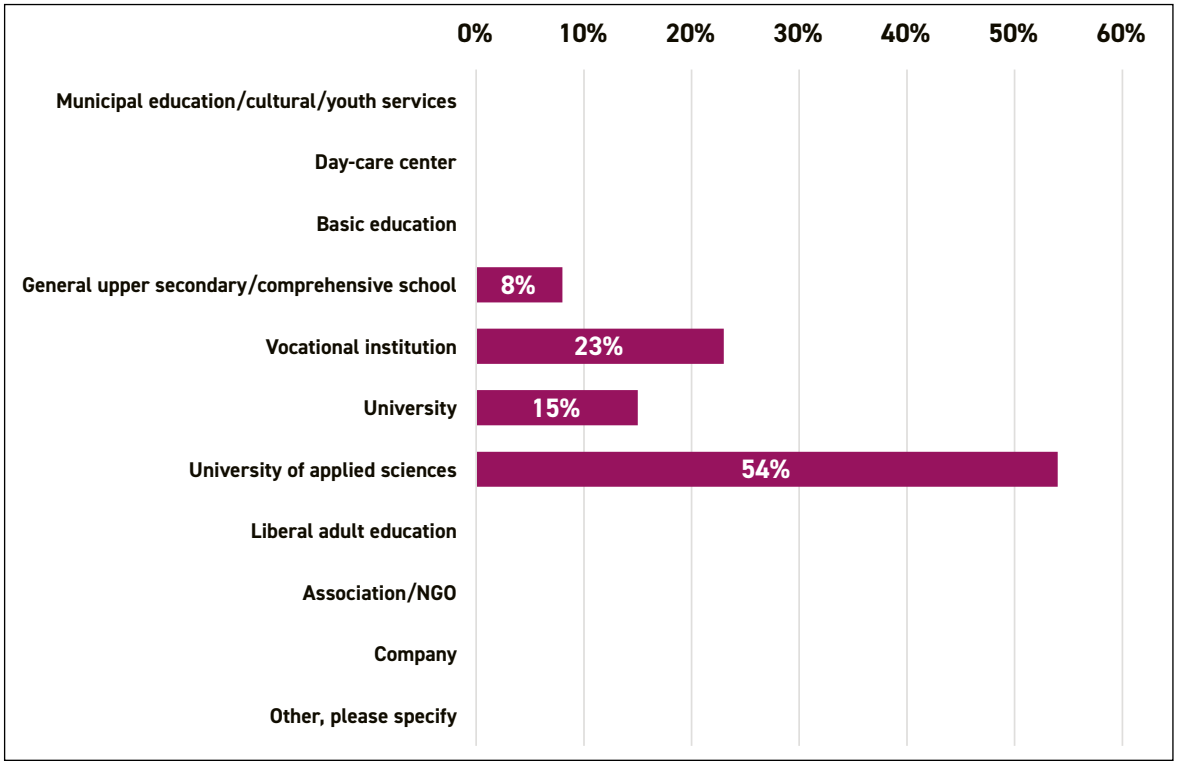
The report was aimed at surveying the thoughts and experiences of persons responsible for concluded Erasmus+ partnerships for cooperation focusing on the digital transformation about the potential ideas and innovative practices of the projects. It can be used to inspire applicants to adopt new approaches. An electronic survey as well as an advance invitation to a workshop held in April 2024 were sent in January 2024 to the persons responsible for Erasmus+ partnerships for cooperation focusing on the digital transformation.

The questionnaire was sent to the persons responsible for the Erasmus+ partnerships for cooperation focusing on the digital transformation that were launched between 2017 and 2021 and coordinated by Finnish actors.

The results of the survey were used in a workshop organised for the persons responsible for the projects in April. The purpose of the survey and the workshop organised in the spring was to provide an opportunity for the persons responsible for the projects to share experiences and innovative practices, learn from best practices, and network with other persons responsible for similar projects. The persons responsible for Erasmus+ partnerships for cooperation focusing on active citizenship launched between 2017 and 2021 and coordinated by Finnish actors were also invited to the workshop. Thirteen beneficiaries responded to the electronic questionnaire sent to persons responsible for Erasmus+ partnerships for cooperation. The following summary presents the background details of the beneficiaries who responded to the questionnaire related to the report.

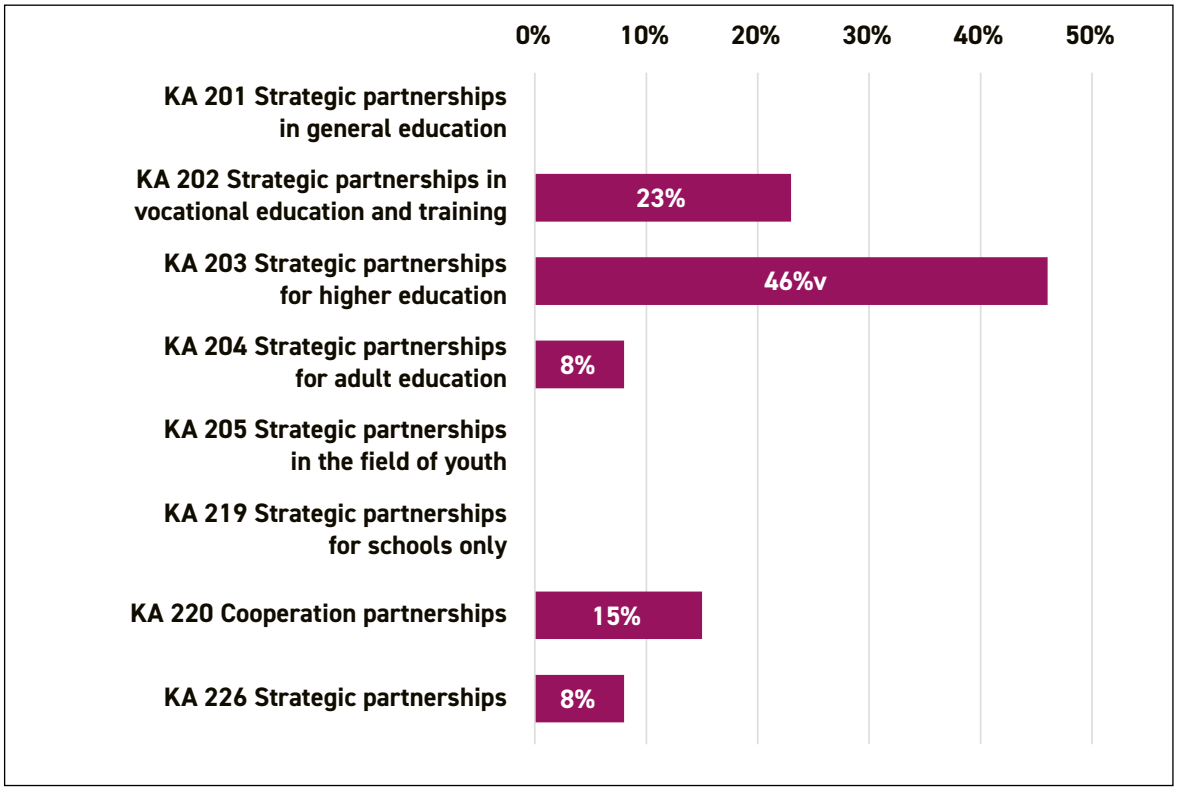
ORGANISATION TYPES REPRESENTED BY THE RESPONDENTS

Number of respondents 13



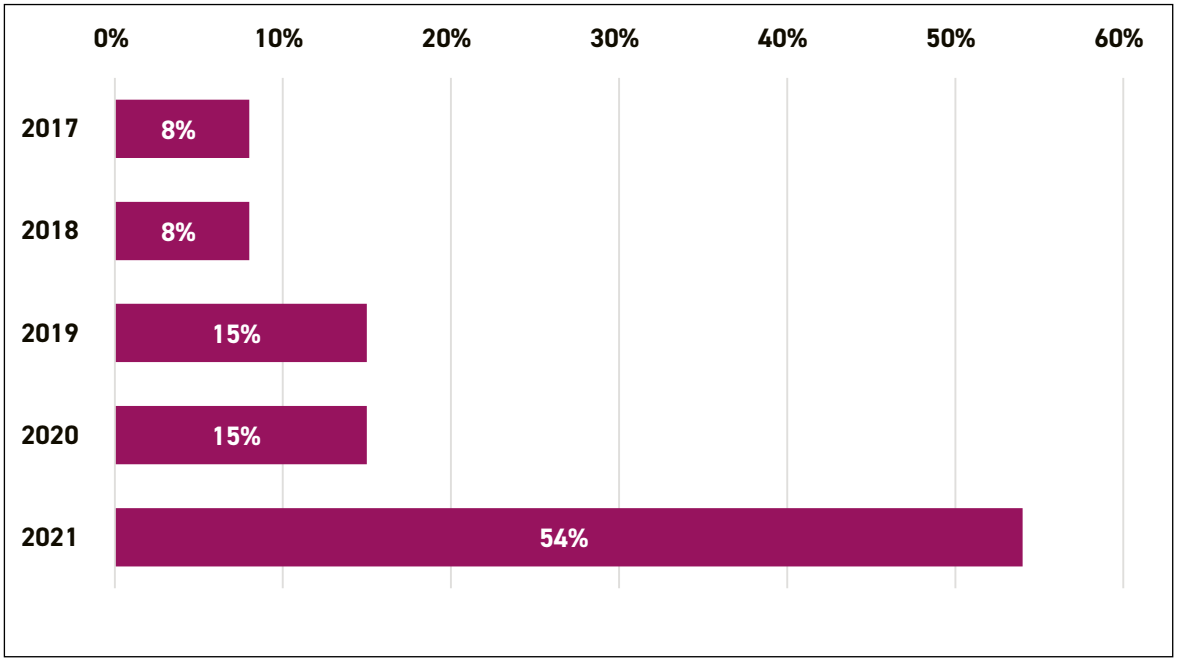
ERASMUS+ KA2 PROJECT TYPES OF ORGANISATIONS THAT RESPONDED TO THE QUESTIONNAIRE

Respondents 13



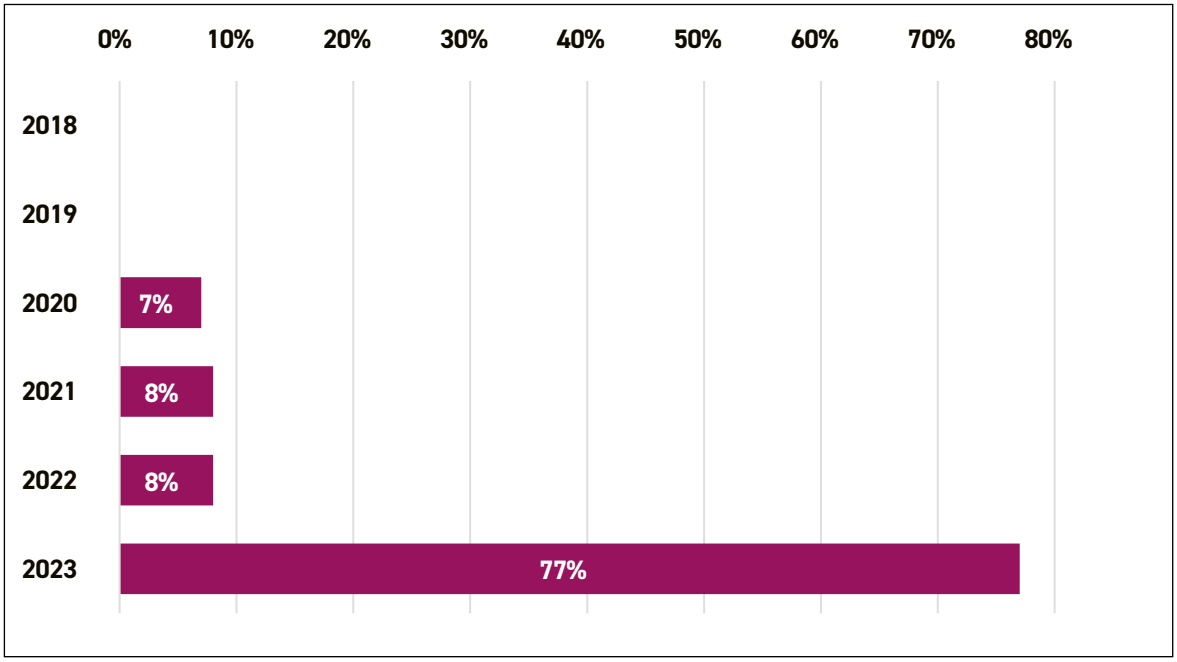
START YEAR OF PROJECT

Respondents: 13



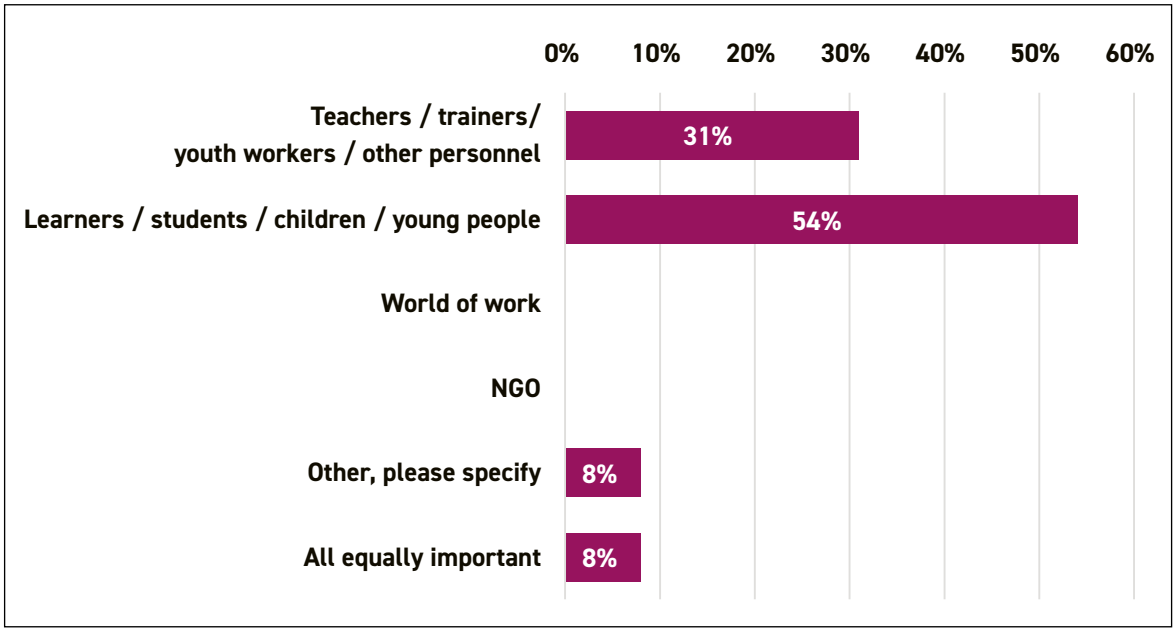
END YEAR OF PROJECT

Respondents: 13



PRIMARY TARGET GROUP OF PROJECT

Respondents 13



5.2 Survey results

What need did the project aim to respond to?

The sudden transition to distance learning necessitated by the COVID-19 pandemic highlighted the need to develop digital instruction. The objective of the projects was to provide teachers and students with support and tools for introducing and developing digital instruction. In particular, efforts were made to promote learning in a multicultural and safe digital learning environment.

The projects looked at the introduction of learning analytics in digital course modules with the aim of understanding the students' learning pathways better and improving the quality of instruction. New guidance methods for art and culture students were developed, as well as art-based methods to support professional growth and improve capabilities in the world of work. The aim of the project activities was to increase the digital competence of students and staff to meet future needs and challenges. Their objective was to increase the flexibility and diversity of vocational education and training and to improve pedagogical solutions selected by the teaching staff. The projects developed education to meet working life needs, and cooperation between companies and educational organisations was stepped up. The aim was to empower both students and teachers by offering support and training both as part of studies and during leisure time. The projects offered support for selecting and experimenting with digital tools, enabling actors to use them in ways that meet their needs. The projects examined in the report aim to respond diversely to the challenges and needs of the digital transformation in different educational and working life contexts. The projects aimed to encourage students to take responsibility for their learning. On the other hand, their objective was supporting teaching staff in developing digital instruction as well as improving their understanding of learners' learning and learning processes of digital skills by conducting a survey of existing digital education practices and problem areas.

What need did the project aim to respond to?
The project aimed to develop guidance skills in nursing in the context of patients with chronic illnesses in Bangladesh and Vietnam. The goal was to promote the learning of digital skills and support self-management among patients.
Teaching and testing materials and an engine room simulation were put online, allowing students to continue studying during the next pandemic.
Addressing the digital transformation by developing digital readiness, sustainability and capacity. Increasing flexibility in vocational education and training opportunities. Inclusion and diversity in all fields of education, training, youth and sport.
The on-going changes in vocational education and training require different support mechanisms for teaching staff globally. This mainly concerns new pedagogical solutions, curriculum updates and use of new technologies. In the wake of these changes, vocational teachers are often left tilting at windmills alone.
The COVID-19 pandemic forced higher education institutions to introduce emergency remote teaching, leaving no time to prepare for this transformation of digital instruction. As a result, inappropriate means were adopted in distance learning. Both students and teachers grew tired of staring at their computer screens daily (Zoom fatigue), and it appeared that achieving genuine interaction and an inspiring atmosphere of doing things together was difficult online.
For universities of applied sciences, companies and other working life organisations are also important stakeholders of teaching and learning, and engaging these external stakeholders in cooperation on the web was equally challenging. As the pandemic hit, we already had one KA2 strategic partnership project underway that involved an international network of teachers, students and companies. As we had to consider new and innovative digital instruction and interaction practices in this international network anyway, we decided to work on a KA226 project application based on this genuine need of ours.
There was a need to develop and diversify teachers', students' and companies' competence in digital interaction and tools for this, basing the online cooperation on genuine co-creation and participation. In the light of research and previous experiences, digital storytelling was selected as a key pedagogical approach to achieving inclusive innovation and interaction between stakeholders. Vast volumes of information on digital storytelling are available online – so much that using it in teaching situations is often difficult. The project formulated a clear five-step pedagogical process for digital storytelling and compact learning assignments for each step. They provide clarity and a framework for the activities, allowing learners, teachers and working life stakeholders to direct their time and energy more effectively towards creative brainstorming, co-creation and the outcomes and assessment of the actual learning.
Support was needed for using digital tools. So many digital tools, methods and platforms are openly available that each actor needs an ability to choose the specific ones that meet their needs among this selection. Our project also provided practical examples and tips for experimenting with and selecting different tools.
Higher education in the tourism sector lacked a thematic approach, and maritime tourism and its special features were not addressed in it. European higher education institutions do not develop maritime tourism skills adequately to enable the field to grow, improve its competitiveness and grasp new opportunities, even if coastal and maritime areas are the greatest attraction factor of European tourism. Maritime tourism requires sector-specific professional competence, which higher education institutions focusing on generic tourism studies do not currently offer. A low level of education is typical of the tourism sector. The sector employs many workers with a low (20.5%) and medium (50.1%) level of education. Tourism is a very large cluster of different business forms and types, and its characteristics and stakeholders vary depending on the type of destination. This is why education that takes into account the special features of maritime tourism was needed. The project developed the quality and digitalisation of maritime tourism. The project harmonises higher education in Europe, partner countries and partner institutions, addressing the needs and opportunities of the sector better.
The main objective of the project was to increase awareness and understanding of women's expectations and needs relating to technology use and, in particular, digital entrepreneurship. The project also aimed for developing and introducing new pedagogical tools and technologies for women's entrepreneurship training, taking into consideration the target group's poor digital and entrepreneurial skills. By collecting and analysing good practices, a theoretical framework was developed for offering entrepreneurship skills for women aged over 40 with poor skills and/or qualifications. A better understanding of this particular target group and its needs helped improve the training and guidance offered to them.
Overall development of the education organisation's digital capabilities. The objective of the project was to create a model for defining and developing the institution's digital capabilities as well as a model for assessing and developing the teaching staff's digital competence.
To empower and help both students and teachers in different ways in school life and leisure time alike: - we learned about soft values - we helped participants recognise their strengths and development areas - we tackled problems of school attendance, including bullying, and looked for solutions - we created networks that enabled both students and teachers to receive peer support from each other - we offered suitable training and new information for both groups of participants.

The current pandemic context, with the known difficulties and constraints generated in maintaining the classic models of learning in European higher education, has reinforced the need to integrate virtual learning environments in its plans. Limiting access to the campus learning environments, traditional and standard simulation, used in basic or continuous professional practical skills training, as a rule, implies rethinking the learning scenarios, readopting them to non-classroom or hybrid training or developing new scenarios suitable for the digital tools existing or in development. Therefore, it is crucial to produce and develop practical competence learning scenarios (pedagogical-didactic materials), suitable for virtual learning environments (hybrid learning). With this we hope to increase the digital skills of European teachers, students and health professionals and contribute to the innovation of pedagogical concepts and models to be used in this virtual learning environments. We intend that European higher education institutions, integrate these scenarios in the training of Health Sciences students and guide the teaching practice in digital support using the developed scenarios. The achievement of this objective will be possible with the development of a digital tool that aggregates and makes available the various scenarios.
The aim of the project was to develop new storified and art-based methods that draw on the design approach to guide art and culture students. In international cooperation, the project developed a set of digital career guidance methods that includes elements from the special fields of all project partners. These methods support students' professional growth and work on their identities as well as help them recognise their skills and develop their self-knowledge, resilience and professional self-esteem. This provides students with critical capabilities for coping in a world of work characterised by constant change and uncertainty.
The project was aimed at responding to the new requirements created by the COVID-19 pandemic concerning the teaching's staffs didactic competence and supporting students' learning in virtual learning environments.
For universities of applied sciences, companies and other working life organisations are also important stakeholders of teaching and learning, and engaging these external stakeholders in cooperation on the web was equally challenging. As the pandemic hit, we already had one KA2 strategic partnership project underway that involved an international network of teachers, students and companies. As we had to consider new and innovative digital instruction and interaction practices in this international network anyway, we decided to work on a KA226 project application based on this genuine need of ours.
The global COVID-19 pandemic hit many fields, and the rehabilitation sector is no exception in this respect. Due to the emergency conditions and restrictions on contacts imposed because of the pandemic, some rehabilitation processes were dropped, and rehabilitation service providers had to find new solutions to secure their livelihoods. While various digital solutions have also offered opportunities to provide rehabilitation as remote services, it has been observed that inadequate knowledge and technological skills have slowed down the use of digital solutions.
There was a need to develop and diversify teachers', students' and companies' competence in digital interaction and tools for this, basing the online cooperation on genuine co-creation and participation. In the light of research and previous experiences, digital storytelling was selected as a key pedagogical approach to achieving inclusive innovation and interaction between stakeholders. Vast volumes of information on digital storytelling are available online – so much that using it in teaching situations is often difficult. The project formulated a clear five-step pedagogical process for digital storytelling and compact learning assignments for each step. They provide clarity and a framework for the activities, allowing learners, teachers and working life stakeholders to direct their time and energy more effectively towards creative brainstorming, co-creation and the outcomes and assessment of the actual learning.
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What kind of competence related to the digital transformation was sought during the project?

The projects aimed for diverse competence related to the digital transformation that covered the needs of both teachers and students. The objective was that teachers would learn to use new digital tools and platforms to diversify instruction and improve the efficiency of studying. In particular, the projects looked at the use of virtual laboratories and virtual group work in instruction.

The aim of the projects was that students' would increasingly take responsibility for their learning as well as promoting learning together with the help of different digital tools and platforms. This included developing both independent study skills and team work skills. Especially in situations where traditional instruction in laboratories or lecture halls is not possible for safety reasons or because of resource constraints, the aim was to offer digital tools that enable students to continue learning. Teachers and learners could use virtual laboratories to achieve the learning outcomes and promote learning.

The projects also focused on developing soft skills, including team work, empathy, negotiation skills and participatory communication. The objective was that digital interaction would be inspiring, creative and collaborative, which would improve the motivation and promote the learning of all stakeholders. The projects aimed to broadly develop competences related to the digital transformation both among teachers and students, covering technical and soft skills alike.

Competence sought during the project.
In connection with the project, healthcare students' competence in learning about digital health services and supporting self-management were developed. The aim was to create a model that would facilitate students' learning related to using digital devices and technologies in the healthcare context.
Teachers also need digital competence to integrate digital solutions into instruction and to support students in acquiring digital skills. The COVID-19 pandemic affected all levels of the education system, including vocational education and training. It forced vocational institutions to speed up their digital transformation to the extreme, creating new challenges for digital sustainability and capacity.
Learning materials and an online engine room simulation. The goals were a system that is easy to use and update as well as reliable.
The objective of the project was to improve and develop the quality and efficiency of digital interaction in relation to achieving learning outcomes. By ensuring that digital interaction is inspiring, creative, collaborative and sufficiently challenging and ambitious, the enthusiasm and motivation of all stakeholders will be maintained better, learning will progress and competences will develop. Zoom fatigue will not catch up with you.
Our primary goal was to improve competence related to interpersonal interaction, learning together and sharing experiences. Of course, we also aimed for improving digital skills and digital literacy, but our priority was soft skills (team work, empathy, ethics and values, intercultural listening and negotiation, inclusive language and communication, reflecting on your personal thoughts and actions, etc.). Throughout the project, we collected research evidence on students' learning experiences of digital storytelling using learning journals. A qualitative analysis of the journals showed that the students' knowledge, skills and competences had developed in line with our goals.
During the project, rehabilitation teachers', students' and experts' competence in customer-oriented use of digital rehabilitation was developed as part of rehabilitation processes. In other words, the aim was to increase the use of digital rehabilitation by improving competence.
An ability for teachers to use new digital tools and platforms adeptly to diversify life sciences instruction and to improve the efficiency of studying. In particular, the project studied and piloted the use of virtual laboratories to complement normal laboratory teaching and virtual group work as part of the teaching of different life sciences topics.
Improving both the independent study and team work skills of learners: taking responsibility for your studies and learning through independent work on the one hand and, on the other hand, promoting learning together in a group with the help of various digital tools and platforms in a safe multidisciplinary and multicultural environment.
Offering digital tools that enable students to continue learning when teaching in a laboratory or lecture hall is not possible for safety reasons (such as during a pandemic) and/or due to resource constraints (for example, lack of expensive special equipment or biosecurity facilities) in a specific higher education institution promotes the students' learning and equality alike.
Group work is an important way of learning the meta skills that students will need in their future working life, regardless of their fields of science and curricula. In all fields of science, a digital environment enables learning together and communication between students, regardless of the students' locations and different backgrounds. Group work also included practice in giving and accepting constructive peer feedback as well as working together as a group and taking responsibility for achieving the group's goals with students from different backgrounds and curricula.
Various digital platforms and tools were used diversely in the methods developed in the project and in workshops for teachers and students. Participating teachers gained new ideas and digital tools for their work as well as pedagogical competence for delivering instruction and guidance and organising workshops etc. remotely or as hybrid implementations. Similarly, the students involved in the project acquired new digital skills and learned to use new tools as well as gained new ways of identifying their own competence and future goals as well as making their competence visible to different stakeholders (incl. digital career stories).
The aim of the project was to design a DigiCare Asia model to help healthcare students learn about how they can support and coach patients in self-management more effectively using digital devices and technologies. DigiCare Asia is a generic model that is a good fit with the culture of any local educational institution or workplace in the healthcare sector. The DigiCare Asia model contains concrete goals for learning about digital health services that support self-management, best teaching and training practices, and ways to deliver education in an authentic environment in order to develop skills and knowledge in digital nursing and coaching of self-management, as well as assessment criteria for digital skills in supporting and coaching self-care. In addition, healthcare sector teachers' competence in active teaching methods was improved.

Lab exercises are one of the most important methods of life science instruction in higher education institutions. Our aim was to complement, rather than replace, 'wet lab exercises' in order to prepare students better for the assignments completed in the laboratory and to improve the equality of students. Virtual labs enable both teachers and learners to achieve their desired learning outcomes by teaching/studying different scientific principles and techniques and by clearly understanding the stages of a laboratory experiment.
The goal was to develop teaching staff's digital pedagogy competence during the project. This involved planning and implementing online teaching.
The objective of the project was to develop female entrepreneurs' entrepreneurship competence and skills relating to electronic platforms (incl. e-commerce). The skills of female entrepreneurs aged 40 and over in e-commerce and possible internationalisation in this sector required support and competence development.
Understanding of and competence in defining, maintaining and developing an education organisation's digital capabilities. For the part of the staff, the objective was to increase understanding of the significance of digital skills and, in particular, to promote a positive attitude towards developing and maintaining digital skills. The goal was to create a model for easy competence development in daily life with small steps and as required by the participant's personal goals. The backdrop to this was the idea that the staff will have so-called digital confidence in the future, meaning that they can develop their skills independently as a natural part of their job descriptions.
The primary target group for was teachers and supervisors in higher education from six universities. Around 200 teachers from partner universities took part in workshops and competence development activities. Several student groups from each university will be actively involved in the pilot studies. The objectives were to explore and map experiences, current activities and practices of digital online technology in subject-specific practical teaching, training and learning in HE in the field of social and health care develop in collaboration new concepts and models for digital pedagogical competencies, innovative online resources and tools for teachers by sharing of resources, expertise and best practices, develop and implement guidelines and best practices of innovative hybrid and online teaching, training and learning of practical skills to support teachers´ digital pedagogical competencies and students´ learning.
We were introduced to platforms that were new for both students and teachers and used them during the project. This gave new tools for their work for teachers, for example.
The aim of the project was to work on sectoral competence development by improving digitalisation in higher education. This is why the curriculum drawn up in the project was introduced in practice as online teaching through the planning and piloting of open teaching resources. This supported higher education institutions in adopting digital tools and innovative and open pedagogies.
The objective was to find ways of learning practical skills in online teaching as this is very challenging.
An effort was made to integrate digitalisation as an elemental part into the project, also enabling those who do not use computers diversely in their daily lives to gain knowledge of and inspiration for using digital tools and platforms in a new way.

What concrete means were used to promote the digital transformation?

Digital transformation was promoted through concrete measures in Erasmus+ partnerships for cooperation by creating new opportunities for learning and instruction and supporting teachers' and students' digital competence and pedagogical practices. The project partners' joint development efforts focused on responsible and sustainable activities. Students, educators, business partners and stakeholders were offered an opportunity to learn online together while using different digital tools and methods. The projects mapped the digital competence of rehabilitation professionals and teachers and developed pedagogical models that offer practical tools and guidelines for digital education. Digital learning and the quality of instruction were promoted by supporting the development of teaching methods and the introduction of digital devices. The projects developed digital skills and leveraged educational technologies to improve the participants' digital readiness.

Concrete means of promoting the digital transformation.	Seven teaching modules and testing modules for them were built for Moodle. An online simulation of a marine research vessel's engine room was created. What made this possible was the permission given by the shipyard that built the vessel and the shipowner to use the vessel's data for teaching, as well as the fact that an engine room simulator built by the simulator manufacturer Imagesoft was made available in an online environment.
	International co-creation between different actors (online workshops, virtual exchange and virtual mobility visits in international study units, virtual project teams). The co-creation was built around authentic working life challenges related to responsible tourism, and the form of co-creation used was collaborative digital storytelling in a five-step process, using different digital interaction platforms and tools. Students, teachers and business partners learned together by engaging both in digital storytelling and creative co-development online, internationally and with a multidisciplinary approach.
	The project mapped digital competence and assessed the type of digital competence that rehabilitation professionals and teachers should have in order to use digital tools securely and appropriately as part of the rehabilitation process. In addition, an extensive literature review was completed, and key megatrends and future visions of rehabilitation in the Western countries were identified. After this, a pedagogical handbook was prepared, in which material related to mobile pedagogy was compiled, in particular. The handbook provides tools and guidelines for education in digital rehabilitation. All results of the project were compiled into a two-credit MOOC (Massive Open Online Course) published on the DigiCampus platform and made freely available to anyone interested in this theme. In addition to the MOOC, descriptions of modules adding up to ten credits in total were produced, taking into account the current state of digital competence and the development needs relating to rehabilitation identified during the project.
	During the project, the project actors' personal digital skills were developed in many different areas, and the pilots completed in the project included using digital devices and mastering competence associated with them. In addition, education technology was purchased for partner schools as part of the project.
	The partners participated in planning and writing the project application and setting goals for it together. At least one person from each partner organisation was involved in drawing up the application.
	Partner schools: a survey was addressed to them when planning the project to chart their competence and needs. Higher education institutions also surveyed the needs of businesses in their regions and countries and shared knowledge of the themes and impacts of previous development measures.
	The project produced a platform where teachers can work together and create additional content. They can also read about other users' experiences, helping them avoid possible pitfalls.
	Teachers and those working with international affairs were additionally provided with concrete means and tools for implementing blended mobility periods.
	Teaching method development was one of the most concrete ways in which methods relevant to the teaching culture were promoted. On project trips, project actors were additionally exposed to different digital innovations and focused on the perspectives of the changing culture and attitudes that digitalising/digitised teaching and nursing bring along.
	Partner institutions and their staff built up their skills in online teaching and learning, curriculum development and planning of study units. They also gained perspectives on the education offered and practices followed in European higher education institutions and increased their international cooperation, partnerships and education offered.
	The project workshops aimed at teaching staff were partly organised fully online and partly as hybrid implementations, and they used a wide range of digital platforms and tools (incl. Zoom, Teams, WeVideo and other video editing tools, Miro, Google Jamboard, Padlet) as well as creative and collaborative methods suitable for working on digital platforms. Similarly, digital tools were used diversely in pilots implemented together with students, some of which were carried out remotely with an international student group.
	The project produced an introductory study unit on maritime tourism (5 ECTS credits) and digital learning materials and tools associated with it. The study unit is freely and openly available for trainers, students and self-learners who can use and reuse it in teaching and learning. It was piloted to improve its relevance, efficiency and sustainability. The unit includes recorded lectures, videos, and various assignments that are assessed automatically. In addition, specialisation modules 1, 2 and 3 (5 ECTS credits each) were produced whose digital learning materials and tools offer degree students and professionals opportunities for more flexible digital studying in an international context. The study units were piloted to improve their relevance, efficiency and sustainability. Moodle tools were used extensively to make the learning experience more attractive and effective. The output increased teachers' digital competence and students' virtual mobility as well as promoted the development and use of open teaching resources.
	In the first phase, good practices, tools and methods for entrepreneurship education were collected and analysed, focusing on women's entrepreneurship and e-entrepreneurship. The surveys and interviews helped create a framework for the online learning platform. In the second phase, training modules and materials were developed based on the survey results. The materials were validated in teacher and instructor training. The online learning environment developed in the project was piloted in all partner countries. In the third phase of the project, a mentoring model for women's e-entrepreneurship was developed. E-entrepreneurship remains little known in Europe, which is why mentoring is needed to support women in setting up their e-businesses. Digital possibilities and customer orientation were important perspectives in the mentoring, considering the goals and needs of the project's target group. As e-entrepreneurship remains little known in Europe, information and communication are needed. Women's personal stories of their e-entrepreneurship are an effective way of achieving this. The fourth phase of the project focused on filming e-entrepreneurs' stories and disseminating the videos.

The project partners assessed the organisation's digital capabilities (Selfie for organisations), and on the basis of the assessment results, each partner prepared a digital development path suitable for their organisation. Based on the organisation-specific paths, a common process model was put together, which enables non-participating organisations to do the same.
A Scoping review was completed to gather information about what was already known and which online and hybrid teaching and learning strategies and methods were in use (a scientific article was published). A survey (n= approx. 300) and target group interviews were conducted to find out what skills teachers have and what they will need in the future as well as to collect information on online, teaching and learning strategies and methods in use, both ones that worked and those that failed (a scientific article was published). On their basis, Best practice guidelines (open access) were developed. Seminars (LTT) were held at each partner higher education institution, and a webinar and final seminar open to all were organised.
By using an extremely wide range of platforms for completing and presenting project assignments.
Staff competence development also began with a competence assessment, for which an existing self-assessment method (DigCompEdu) was used. A path model for developing staff competence was also created, in which the learning outcomes were divided into small and easily achievable parts and in which everyone progresses along their personal paths, pursuing their own goals. The competence development activities were planned to enable everyone to develop their competence in a way that suits them (mentoring, workshops, online courses, benchlearning, independent experiments, etc.).

In your opinion, which of the methods was the most significant or the most innovative one?

Creation of simulations for an online environment opened up new opportunities for developing teaching by offering students a realistic and interactive learning experience, whenever and wherever they are. Digital storytelling provided a versatile and efficient way of integrating the digital transformation into teaching and learning and promoted interaction and joint learning between different actors. Digital career stories supported the students' career planning and preparation for the working life of the future innovatively and inclusively. Project partners gained experiences of a virtual lab and simulation technologies as well as concrete experience of new digital possibilities, which inspired them to reflect on the perspectives of digitalisation. The projects supported learning and preparation for future challenges. They also strengthened cooperation between different stakeholders and promoted the development of digital competence at many different levels. Developing path models for the organisation and staff also proved important, as it enabled a smooth transition to online teaching in the entire organisation. A collection of good practices for entrepreneurship training and coaching as well as developing patient cases also made significant contributions to innovative teaching and learning.

The method or idea used in the project and its development process

The method used in the projects was collaborative digital storytelling, the development process of which began by identifying a need and ended with the publication of completed learning assignments. This process made it possible to develop creative stories together with students, educators, the working life and stakeholders. Virtual laboratory courses were developed in the projects, and digital instruction methods were piloted. This required mapping and testing of new technologies, selecting suitable platforms, and planning course modules together with partner HEIs. Digital storytelling competence was used to develop digital career stories. The development process of this method consisted of converting digital storification workshops into online workshops, developing content-related applications, and planning assignments related to reflecting on students' personal career stories. The project also developed a set of assignments related to futures work based on design thinking and service design. These assignments helped students identify their personal future goals, the obstacles to achieving them, and the resources needed. Overall, the importance of experiments, cooperation between different actors and the use of feedback and experiences in continuous improvement were emphasised in all methods and ideas. As the project progressed, successes and challenges were shared between the participants in online workshops, webinars, seminars and publications, which promoted learning and togetherness.

The method or idea used in the project and its development process.
A clear need already existed which is why, when the call for proposals was announced, we were able to quickly convene a familiar group of experts that produced, checked and approved the teaching materials. Making the simulator available on the web required online expertise and testing, in which all partners participated enthusiastically.
The model was developed by experimenting together – different digital and blended projects were piloted, and authentic challenges of responsible tourism were resolved. Blogs, manuals and toolkits relating to best practices were produced. The successes and challenges of the cooperation were discussed at online workshops, webinars and seminars as well as in publications during and after the project.
The collaborative digital storytelling model consists of five steps: 1) research and audience insight, 2) concept design, 3) scripting and storyboarding, 4) digital production, and 5) publication and engagement. Each step has five to six compact learning assignments. The model has specific roles for teachers, students and working life stakeholders. The model and assignments clarify each party's role and provide support for the complexity, uncertainties and challenges of creative storytelling. Proven digital tools, platforms and materials are offered as additional support.
In terms of methodology, mixed-method research and scoping review were used to reliably identify the competence needs and digital rehabilitation megatrends. The Delphi method was used to define the concept. However, the guiding principle of the project was developing materials and outputs that enable HEI teachers and students as well as rehabilitation professionals to improve their competence in digital rehabilitation.
In the virtual lab, new, innovative technologies and their potential for teaching use were charted in each partner school, and their suitability for the project was considered; each partner HEI reflected on and selected suitable courses and teaching levels.
Based on joint discussions, a common platform was selected, and new teachers were recruited for the experiment. The course modules were selected, planned and piloted, and digital course modules were implemented. Common materials for shared use were then put together.
Suitable courses, digital platforms and methods were selected for virtual group work. Digital course modules were planned and implemented, and common materials were put together for use in each higher education institution.
Learning analytics methods were tested and suitable courses, digital platforms and methods were selected. On this basis, digital course modules were planned, piloted and implemented, and results were collected and analysed.
'My Professional Future' work was based on MOME's competence in design thinking and service design as well as earlier experiments of career guidance for design students. From these starting points, a set of assignments related to identifying the students' personal future goals, obstacles to achieving them and the resources needed was developed. The assignments can be applied in different education programmes, either by completing the whole set or by selecting individual assignments.
During the project, the digital career stories method was developed to a point where the entire workshop can also be implemented online. Content-related applications were additionally developed, in which digital story work was used to reflect on and share the student's career story or to examine themes that are central to the student's field (such as "Sustainability in Arts and Culture").
Because of the pandemic, teachers worked online in small groups consisting of teachers from different higher education institutions. The work was also supported by the teacher education unit of an Irish higher education institution, which was extremely useful and had a positive impact on both the quality of the outputs and the teachers' competence development.
When preparing eLearning materials, each country's competence needs were examined carefully, as well as existing curricula and key reports in the field. In addition, a large number of business interviews was conducted in each country. The information obtained was used to prepare professional profiles (ESCOs) for key maritime tourism professions. The professional profiles were used to draw up course descriptions. The course descriptions were converted into online courses.
The collection of good practices for entrepreneurship training and coaching included exchanging good practices at national and international level, experiences of organising joint learning and training activities in the workplace and in education, and good practices in keeping with sustainable development from various parts of Europe.
The idea of creating path models was that the final output is an agile and flexible model that can be applied to different organisations. The model is based on the PDCA cycle (Plan – Do – Check – Act). The PDCA cycle was selected as the basis of the work as digitalisation is constantly advancing, and the needs change. Using this flexible path model, the organisation's plan can be easily updated as necessary.
Information was collected systematically and diversely on digital/hybrid teaching and learning of practical competence in the healthcare and social services sector using both qualitative and quantitative approaches (existing research evidence/scoping review as well as surveys and target group interviews at six universities). Based on this versatile and comprehensive information, a Best Practice guideline was produced, which contained patient scenarios implemented and evaluated from the perspective of both teachers and students.
The students received peer support by sharing memories of their school years in Twinspace and commenting on each other's contributions.

Virtual teachers' lounge. The aim was to respond to needs for a teacher-friendly approach to virtual teaching and to step up cooperation between teachers at the international level. The backdrop to this was a need to support participatory digital teaching methods for all types of VET learners but also to maintain and support the well-being of VET teachers with a digital and mental health approach. While the teachers' lounge is a separate section of the DigitalVET4All platform, it also complements the created blended mobility model.
The virtual teachers' lounge consists of four parts. The Lounge Area for Wellbeing contains information, insights, best practices, exercises, videos and useful links for promoting the well-being of teachers or guidance counsellors working in online environments. The second part is the Virtual Bookshelf and learning corner, where you can read about teachers' best practices and where teachers can also share their resources after registration. The third part provides advice related to Blended Mobility. The final part is a meeting room intended for exchanging good practices, planning mobility or sharing experiences.
The result contains innovative elements as it combines different digital solutions (videos, 3D images, a virtual meeting space, e-learning). It also deals with and provides a response to the post-pandemic period as well as highlights the needs to provide more digital competence development training for teachers and gives access to the available digital tools.

The project developed the DigiCare model, which aims to create a framework for the guidance of self-management for patients with chronic diseases and position it in a societal setting. The efforts to develop the model began with literature reviews and innovative workshops. A pilot programme of the model was created, and its parts and the whole programme were tested in partner schools. Participants' feedback on the piloting was collected from teachers and students, and the model was developed further on this basis. An illustration and narrative description of the model were created and published as part of the project's final output.

How have disadvantaged persons been taken into account in the projects?

Erasmus+ partnerships for cooperation focusing on the digital transformation worked actively to address the needs of disadvantaged persons and to support their participation in the project activities and learning. The planning of the activities was based on equality, which ensured that the project actions and materials were accessible to all participants. Participants could use devices free of charge, which removed the financial barrier to participation. The participants' learning journals were treated confidentially and discussed together anonymously. This enabled open and honest discussions on factors affecting learning, which helped participants see new options for solving learning challenges. Throughout the project, efforts were made to account for the suitability of the activity for different customer groups, including those who are disadvantaged due to an illness or disability or their socio-economic situation.

Online teaching, especially using virtual lab modules, made the use of costly equipment in the teaching possible also for students whose institutions did not have access to such equipment. This diversified the students' competence and promoted equality and employment. In virtual group work, teachers ensured a safe digital course environment and the participation of all students. However, participation in digital instruction required sufficient access to a computer, which may be a challenge for the most disadvantaged persons. The diverse methods developed and applied in the project supported meeting the needs of different learners, including those with dyslexia. This diversity helped everyone find suitable and meaningful working methods for themselves.

Taking disadvantaged persons into account in the project.	The planning of the project was based on fairness. Participation was free of charge.
	Learning journals were treated confidentially and discussed together anonymously. In their journals, students could write openly and honestly about positive and negative factors that affect their learning. This made various factors that undermine learning opportunities visible to both students themselves and teachers. Personal reflection on them as such could help a student see new options and creative solutions to their learning problems. As students' reflections in their journals provided valuable insights and useful additional information, they helped teachers bring up even difficult topics in the discussions.
	The teachers who led virtual group work took care of a secure digital course environment and the inclusion of all students, but having adequate access to a computer is a precondition for participating in digital instruction.
	The virtual teachers' lounge has an accessibility widget that supports learners with different disabilities, especially visually. In addition, teachers can create and experiment together to enrich their professional activity directed at learners, support benchlearning, and find partners for educational projects. The DigitalVET4All platform and virtual teachers' lounge are available in nine languages: English, Estonian, Finnish, German, Icelandic, Polish, Portuguese, Slovenian and Swedish.
	Throughout the project, an effort was made to take into account the usability of the identified digital rehabilitation solutions for different client groups. In the context of competence development, materials related to digital accessibility and similar were also produced.
	Online teaching, especially teaching in which virtual lab modules are used, also makes it possible to teach the use of expensive equipment to students whose higher education institution does not have access to such equipment, diversifying their competence and promoting their employment.
	As the target group of the project were higher education students in the art and culture sector, its members basically were a relatively privileged and homogeneous group of young adults (with the exception of different cultural backgrounds). Women are well represented among art and culture students, and this was also visible among the participants in the pilot workshops of the project. The diversity of the developed and applied methods helped different learners (including those with dyslexia) find meaningful, relevant and natural working methods for themselves.
	The project laid a foundation for active teaching methods that can also be used in distance learning. This will facilitate everyone's participation in instruction, regardless of where they are.
	The long-term goal of the model is to create a framework for educating actors for a digitalising healthcare sector, enabling them to develop digital healthcare alternatives and service systems in the future. This will also promote the accessibility of services in sparsely populated areas and reduce the problems created by long distances for access to treatment.
	Open educational offering that is accessible to everyone takes this perspective into account.
	By offering an opportunity to participate in the project and disseminating information about the project actions.
	The definition of organisations' minimum competence started from the lowest level. Different fields of education have different needs, and different levels of digital competence are required in them. The organisation's minimum level is what each employee must know, regardless of their job description (applications and programs used by everyone). Each employee additionally builds their competence based on their personal needs and job description. Those in a disadvantaged position have been taken into consideration by deciding that, unless the job description requires particularly strong digital skills, it is acceptable that an employee remains close to the minimum level. Due to the diversity of competence development activities devised during the project, however, it is possible to provide more support for competence development for those in a disadvantaged position, such as personal guidance or small group work.
	The project took all students into account on a general level and discussed ways of taking into consideration those with poorer capabilities for online/hybrid learning, such as low-quality devices or online connections.
	All participants were equal. If they were prevented from travelling by the expenses involved, the institution helped them by paying most of the travel costs.

What kinds of methods, practical applications or competence related to the digital transformation were developed with the help of the project?

Erasmus+ partnerships for cooperation developed versatile methods, applications and competence related to the digital transformation. The projects piloted co-teaching and international co-learning in an online environment. The cooperation required flexibility and continuous development due to the partner countries' different initial levels. Digital platforms and tools were used in the activities for storytelling and art and design based methods as well as in a teaching cooperation network with a particular focus on using digital teaching tools and platforms. Digital interaction skills were improved through storytelling while emphasising respect for and understanding of cultural

diversity. Materials to support education were also offered, including MOOC materials, and methods and competence relating to multidisciplinary and intercultural virtual project and team work were developed. The projects created methods and good practices for digital team learning and assessment, and developed a well-functioning engine room simulation.

Methods, practical applications or competence developed with the help of the project
The project developed methods and workshops based on storytelling, art and design in which digital platforms and tools were applied, as well as competence in using different methods, digital platforms and tools.
The project created an effective teaching cooperation network that tapped the special expertise of each partner, in relation to not only the actual substance (different areas of life sciences, learning analytics) but also experiences of using digital teaching tools and platforms, in particular.
Developing soft skills for digital interaction by means of digital storytelling – how we can inspire and motivate ourselves and each other to achieve change while respecting and understanding each other's cultural backgrounds and values.
Material to support education and a MOOC with its materials.
To variable degrees in different organisations. For example, some have adopted a blended mobility model, while others use the virtual teachers' lounge.
We created a virtual teachers' lounge in the project where actors can explore, create and work together. We also created an operating model for blended mobility, including tips.
Methods for and competence in multidisciplinary and intercultural virtual project and team work, including research evidence related to the building, management, motivation and organisation of a virtual team, practical lessons and examples and ways of digital interaction.
Methods and good practices of digital team learning and assessment.
Creating a simple but effective engine room simulation was time-consuming but ultimately rewarding. Plenty of testing by partners, both of connections and the simulation itself, and continuous suggestions for improvements.
Four eLearning units
Teaching staff's online pedagogy competence improved.
An online mentoring model and materials for an online mentoring course of four modules.
A video was produced to attract interest in the importance of women's e-entrepreneurship.
Different competence self-assessment tools were tested during the project. Studies conducted as part of the project found that the best tool was Check-in, a self-assessment tool of digital competence linked to DigCompEdu.
Path models for competence development.
Patient scenarios for online and hybrid learning in the context of practical skills in nursing.
Information on teachers' competence development needs was also acquired
We learned about new platforms and applications that can be used both in school work and leisure time.
The project piloted co-teaching and international co-learning in an online environment. A great deal of further development was and will be needed around this challenge due to the partner countries' initial level.
Methods and workshops based on storytelling, art and design in which digital platforms and tools were applied, as well as competence in using different methods, digital platforms and tools.

Did the project generate a new idea that you think could be developed further? If it did, what was it?

We intend to use the project results to develop further ideas, especially to integrate guidance competence into education and nursing competence. In addition, partner networks are planning to prepare new Erasmus+ applications focusing on the use of digital tools and creative methods to engage local communities in the context of cultural heritage.

Project partners have sought to continue using new technologies in teaching and have developed ideas for new funding applications to develop digital instruction. Rapid technological advancement

makes it necessary to continuously update teaching tools and platforms to keep them up to date with students' requirements and expectations.

The projects have also laid the foundation for new partnerships for cooperation and ideas in different countries and continents. For example, cooperation with East Africa has given rise to a new CBHE project, and several other projects are being planned or already underway, underpinned by ideas generated during the project. The projects related to the digital transformation have attracted interest in different fields, including trade and marine research, and created opportunities for new development projects and innovations. In addition, simulation technology related to data from marine research vessels can be developed further to examine different cargo situations and evaluate their stability.

A new idea suitable for further development.	A follow-up project for using the results of the initial project is being planned, and on this basis, an additional project will be developed, taking into account guidance competence and how it can be integrated better into the education and nursing competence.
	The partner network of the DICO project has already developed further ideas based on the project as well as produced and submitted a new Erasmus+ application with the aim of developing practices for using digital tools and creative methods for engaging local communities in the context of cultural heritage and improving art and culture students' skills in participatory work as well as in using digital tools and creative methods for this purpose.
	The project partners will strive to continue using new technologies and promoting their application and development for teaching use in higher education institutions. New ideas (for new funding applications) have been created for continued development of digital instruction based on the results of this project.
	The project partners will strive to continue using new technologies and promoting their application and development for teaching use in higher education institutions. New ideas (for new funding applications) have been created for continued development of digital instruction based on the results of this project.
	Technological advancement is extremely rapid, and an increasing number of companies offer virtual (laboratory) modules suitable for higher education and other tools and platforms suitable for digital teaching. As students are in any case adopting new technologies all the time, it is important that higher education also strives to use the tools brought along by this development.
	Technological advancement is extremely rapid, and an increasing number of companies offer virtual laboratory modules suitable for higher education and other tools and platforms suitable for digital teaching. As students are in any case adopting new technologies all the time, it is important that higher education also strives to use the tools brought along by this development.
	Persons from different East African countries also participated in some of the project events. This cooperation laid the foundation for the CBHE project, for which funding was granted in summer 2022. The partners have worked further on the ideas created during the project, and funding has already been applied for, or applications are about to be submitted, for several of them.
	In the future, higher education institutions will have an opportunity to offer themed courses in this field, which will hopefully attract students' interest in working in maritime tourism, promote their employment, and increase their awareness of career opportunities in the field.
	The planned exercises and their templates can also be adapted for use in other courses.
	Yes: an application has been submitted concerning a project on developing digital communities and education and training related to their development for the trade sector.
	Simulation of other data from a marine research vessel, such as the vessel's stability analysis with different cargo situations, could be developed further.
	The project developed the online teaching offered by institutions. .
	The actions and results of the project were directly integrated into the organisations' activities. After the project, project workers involved in it have acted as digital mentors or similar in their organisations; in other words, their competence and competence development improved during the project and now benefits the entire organisation.
	The patient scenarios were used in teaching in all partner institutions.
	The information about teachers' competence development needs was used when planning seminars and also when assessing the need for further studies in different higher education institutions.
	Teachers used what they had learned, for example positive pedagogy lessons or Answergarden, in their lessons.
	The guidance competence training created in the project was integrated into the partner schools' curricula and the actors' personal work.

Outputs of the project weeks were displayed on school walls. A photo exhibition also toured the schools during the project.
For example, some students and teachers also used a phone application that examines their emotional states after the project week.
The participating institutions are planning so-called micro-credentials and minor subjects based on the study units developed in the project. The study units also increase their offer of English-language courses, and they can meet the needs of exchange students better. They can draw on the courses offered in their optional studies and the materials developed in the project in many ways.

Have any permanent operating methods and innovative practices that support the digital transformation been created? If any have, what are they like?

Instructions for virtual group work and questions that help create good practices and evaluate the success of group work have been created for teachers and students. In addition, open research findings and reports which provide valuable information on the usability and application of virtual labs, group work and learning analytics have been published to support the development of digital teaching. Project results have been integrated into the partner institutions' curricula, and they are also being widely used in various degree programmes, such as the Master's degree in Digital Rehabilitation (UAS). The collaborative digital storytelling model and international virtual mobility visits will additionally be continued to promote studies. An engine room simulation and training in patient guidance skills in an online environment have provided new opportunities for education, and the use of digital tools and methods has been increased and diversified in partner higher education institutions' degree programmes.

The project produced a 'teacher's checklist' for creating a good digital course, a list of questions for collecting student feedback as the basis for course evaluations, and instructions for what to take into consideration and include in the context of good virtual group work: Instructions and questions of virtual group work for teachers and students: 1.Teamwork guidelines to teachers: Checklist for good group meetings 2.Teamwork guidelines to teachers: Checklist for good online teamwork practices 3.Teamwork guidelines: Group contract 4.Teamwork evaluation: Questions to students 5.Teamwork evaluation: Questions to teachers 6.Teamwork peer evaluation: Questions to students.
Virtual laboratory course questions for students and reflection for teachers: 1. Validated questions for digital laboratory users (students; questionnaires to students for course evaluation), as well as 2. The publication Digital Labs as a Complement to Practical Laboratory Training for Bachelor and Master Biomedicine Students (https://ceur-ws.org/Vol-3393/), Louisa Cheung, Leena Strauss, Per Antonson, Sanna Soini, Matthew Kirkham, Rachel M Fisher.
We published the results of our project in Open Access series, and based on the results we obtained, we considered the usability and application of virtual labs (IO3), group work (IO4) and learning analytics (IO5) in digital teaching.
The themes of digital rehabilitation have been partly integrated into the partner institutions' curricula. The outputs of the project will also be a major part of the Master's degree in Digital Rehabilitation programme launched in 2022.
The model of collaborative digital storytelling is being used in study units at our higher education institutions, and we develop it annually together with the help of blended intensive programme (BIP) implementations. International virtual mobility visits between study units continue.
The engine room simulation works in all partner countries and beyond.
Training in patient guidance skills in an online environment that was unprecedented in the partner countries before this project.
The use of digital tools and methods has increased/diversified in the degree programmes of the participating higher education institutions. In Master's degree programmes at Turku University of Applied Sciences, for instance, creation of digital career stories and use of futures work methods with digital tools have been integrated into the instruction.
The process used to develop online study units proved effective. Involving a teacher education department as a partner in the project was extremely important, as this significantly improved the standard of the activities.

	The research part of the project and the professional profiles developed on its basis supported the preparation of study unit contents.
	The institution continues strong development of digital learning environments and materials.
	The path models resulted in a permanent operating model for developing the organisation's and its staff's digital skills. They make it easy to keep up with the development and respond to continuous change in digitalisation.
	While the teaching and practising of concrete skills should preferably take place in a physical IRL environment, hybrid methods are used, and also different ways of preparing digitally for practical exercises before teaching in the higher education institution's exercise and simulation classes.
	Positive pedagogy lessons and strength-based pedagogy as well as some applications proven good, such as Answergarden, remained in use at our school.
	Training in patient guidance skills in an online environment that was unprecedented in the partner countries before this project.

Impacts of the project on everyday work, competence and professional development

The teaching materials developed in the project have improved the quality and versatility of instruction and staff training, and the use of a simulator in teaching has lent concrete support for applying theoretical studies in practice. The new competence and courage generated by the project have brought the use of digital tools and digital stakeholder cooperation up to a new level. This has laid a solid foundation for digital development and education. The digital skills and online teaching skills of students and teachers have improved.

The material created during the project has been a useful resource for the day-to-day and weekly work. In addition, the international teaching cooperation network has contributed new ideas and competence to digital teaching and strengthened teachers' professional identity. The practices for planning and evaluating digital teaching developed in the project are still in use.

All teachers involved in the project have adopted and started using new digital tools and creative teaching methods, and they have shared the practices developed in the project within their own organisations and with other stakeholders. This has helped to modernise the education content and teaching methods as well as significantly changed attitudes towards supporting competence.

Impacts on everyday work, competence and professional development.	The teaching materials developed in the project have been widely used in teaching and staff training. The engine room simulator supports the application of theoretical learning to practice.
	Compared to the pre-pandemic period, the use of digital tools and digital stakeholder cooperation have reached a completely new level. We gained new competence and new courage to engage in multidisciplinary cooperation both amongst us and with companies and higher education institutions.
	According to the teaching staff, the most important impact was their improved online teaching and learning skills. They said they had learned a lot about digital pedagogy and teaching in general. In the project, they were able to experiment with online pedagogy differently from what they usually do in their own organisations. They gained tools for online teaching and learning as well as an opportunity to reflect on their teaching content and methods and compare them with those of other teachers and higher education institutions. In turn, this gave them ideas for developing these aspects in their home institutions.
	International competence and Erasmus+ project competence increased, as well as understanding of the impacts of cultural differences.
	The staff's digital skills and digital confidence improved, enabling more versatile instruction of a higher quality and also making it possible for the teaching staff to support students better on their competence development paths.
	This was the first Erasmus+ project for many teachers, which meant that they also learned about actual project work. Some of them were also at the beginning of their careers, and they felt they had learned many essential things about planning study units: how they should be planned and put together. Many of them also said that the project had increased their understanding of self-directed online teaching and learning, as this was a new format for them.
	A huge amount of positive experiences that we still keep talking about. Learning from other cultures and networking are important. This was probably the most important benefit, even if engaging in project work was also essential. Both students and teachers keep up their contacts around Europe, even if the project has ended.

	Joint discussions also increased understanding of education offered in different countries. Teachers said that they have learned new ways of planning assignments and using online platforms in their instruction. They also learned to widen their perspectives and take other viewpoints into account, and improved their negotiating and multicultural team work skills.
	The project itself and the international teaching cooperation network it created brought along new ideas and new competence in (digital) teaching as well as strengthened higher education teachers' identities. We still use the practices created together in the project for planning a good digital course, collecting student-teacher feedback and evaluating courses.
	All participating teachers have introduced new digital tools and creative methods enabled by them in teaching and guidance as well as shared information about the practices developed in the project within their own organisations and with other stakeholders.
	Education contents and methods have been modernised, and attitudes to supporting competence in nursing and the patient's self-management skills have changed significantly.

What kind of additional value did international cooperation provide to the project and the organisation?

The expanding networks have opened up new opportunities and created new project ideas. International networks, in which many different fields of arts and culture are represented, have made it possible to share competence and develop new methods together. Students have benefited from international interaction in online or hybrid workshops.

International cooperation has been a key factor in the success of the project. It has enabled broader use and sharing of substance competence and digital teaching skills, which has enriched the offer of courses and improved the reliability of the results obtained. In addition, the international perspective has helped to identify opportunities and limitations associated with the digital transformation in different countries, which is important in such field as rehabilitation, where different cultural and legislative factors can influence the use of solutions.

The international cooperation carried out in the projects has resulted in new partnerships and networks, which have been a springboard for new projects, studies and publications. The students have learned to work in international virtual teams, which is a valuable working life skill, and companies have benefited from cooperation in developing innovations. International cooperation has created significant added value for the manufacture, experimentation with, testing and deployment of materials and been a key factor in the success of the project and in achieving a lasting impact.

Added value of international cooperation for the project and organisation	Our networks in Asia grew and our cooperation potential increased, and new project ideas came up during the project.
	In an international network representing many different fields of arts and culture, we benefited greatly from each other's strengths and competences. We learned about new methods and tools from our partners, we brainstormed and developed their application together, and our organisation's familiar methods were developed into new kinds of applications in our partners' pilots. Students also benefited from international interaction in online or hybrid workshops.
	International cooperation was essential for the success of the project and the achievement of its objectives. Cooperation between higher education teachers enabled more extensive use and sharing of substance competence and digital teaching skills. It also made it possible to use a considerably wider range of different courses in piloting, which increased the reliability and general applicability of the results obtained.
	International cooperation has made it possible to disseminate the outputs and results of the project faster and more efficiently. In addition, the international network made it easier to scale the actions.
	More versatile responses from more countries were received to the survey addressed to higher education teachers at the beginning of the project, which improved understanding of the current state of digital education.
	The project made it possible to involve a much wider group of students with more diverse backgrounds and competences in the project pilots, which was directly visible as more versatile student feedback and course evaluations.
	The project improved teachers' digital skills in all partner organisations more extensively (than among the project actors alone).

Digital transformation is to a great extent a global phenomenon. This is why the possibility to examine digital rehabilitation in cooperation between five European countries was highly important. It enabled us to identify the potential and restrictions related to digital rehabilitation, which may arise from different cultures or service systems in various countries or similar. In some situations, national legislation could even prevent the use of digital solutions as part of rehabilitation. The educational institution had already completed several national projects related to remote rehabilitation, which is why it was a natural step to start expanding our competence and understanding related to digital rehabilitation to Europe and partly also Africa.
The project resulted in a very large number of different international partners and networks with which new project, research, publication and mobility cooperation has been launched. Students learned to work in international virtual teams, which is an important working life skill. Students, teachers and companies learned to engage in cooperation using digital platforms and tools and managed to combine their strengths and competences in innovating responsible tourism solutions.
Huge added value for the manufacturing, testing and deployment of materials and contribution of the views of different countries to the project.
We gained new networks and understanding of cultural differences as well as of their effects on entrepreneurship, among other things.
The initial situation of each project partner was different, which 'forced' the project network to consider what type of a model would be as suitable as possible for all organisations. This helped us produce a sufficiently clear and flexible model that can be applied to different organisations. Additionally, the fact that each country's organisations were in very different situations helped us think about the whole theme more extensively and from new perspectives. If only Finnish organisations had been involved in the project, the initial situations and parties exerting external influence would have been so similar that the gains of the project would have been more limited.
Six higher education institutions from different European regions were involved in the project, which produced a lot of added value and a broader picture of education and training. We noticed that some of the challenges were the same while others were different.
Knowledge and experience, the sense of a common Europe – a feeling that we forgot about during the pandemic years and that is now reflected as an unstable Europe.
The Danish partner involved in the project was/is a pioneer in digital capabilities, and our colleagues served as experts by experience in the project. The other partners learned a great deal from them.

How could the opportunities provided by Erasmus+ be used better to promote the digital transformation?

In project actors' view, decision-makers should be persuaded to participate in the projects to achieve greater potential for mainstreaming the results in the promotion of the digital transformation. This could open up new opportunities and strengthen commitment to digital development. The spread of digital teaching one teacher at a time stresses the importance of peer support and example set by colleagues. The additional funding provided by Erasmus+ has been a crucial factor in creating materials and achieving results, underlining the importance of the programme in supporting the digital transformation.

Erasmus+ partnerships for cooperation play an essential role in creating new cooperation networks and innovating new practices. They can help disseminate digital teaching competence and promote development in the field. The networking opportunities offered by Erasmus+ could be exploited better by extending the implementation period of projects. This would allow more time for disseminating the results and working together with other projects, which would contribute to the wider impact of the digital transformation.

Taking the target groups, such as rehabilitation professionals and rehabilitees, into account in the programmes could also provide more opportunities for promoting the digital transformation. Supporting dialogue between projects and the achievement of common goals as well as enabling joint meeting forums could inspire and promote the attainment of common goals.

Opportunities provided by Erasmus+.	A precondition for using the Strand 3 option is decision-makers' involvement as partners. This creates a completely different potential for mainstreaming the results, and using it is an enormous opportunity to promote the digital transformation.
	Digital teaching is making headway one teacher at a time, passed on from teacher to teacher, and colleagues' encouraging examples and peer support are the key. Without the additional funding from Erasmus+, the materials created in the project would not have been produced, and the results would not have been achieved.
	Such additional funding programmes as KA2 are of paramount importance as enablers of new cooperation networks and innovation of new practices as well as in spreading digital teaching skills.
	The project made it clear that online pedagogical competences vary greatly across European countries. This competence should be harmonised by means of the programme.
	The two-year project was very busy. There was no time to use the wider networking opportunities offered by the Erasmus+ programme. To this end, we would like to see more inputs in extending the implementation period of projects, which would also have allowed us to disseminate our results more extensively.
	I believe your imagination is the limit here as the programme offers quite a lot of opportunities, as long as you know how to take advantage of them. As far as the target groups are concerned, both rehabilitation professionals and the rehabilitees themselves are quite essential in digital rehabilitation. Perhaps paying more attention to these target groups in the programmes could provide more opportunities for promoting the digital transformation.
	More dialogue on methodology, results and, in particular, the achievement of common horizontal priorities and objectives between the projects. A single project is a small player but together, projects can advance common goals and gain strength and energy from each other. Sometimes when you are busy doing things, you lose faith in your own possibilities. Having discussions across a broader front is inspiring and drives you forward.
	The digital transformation enables learning, and we also discovered its benefits in this project. Digital natives are starting to enter the world of work and they have excellent skills to use it.
	The project made it clear that online pedagogical competences vary greatly across European countries. This competence should be harmonised by means of the programme.
	Co-creation projects and sharing of good practices are needed.
	Alongside of this, there could perhaps be room for smaller and more agile possibilities, digital development happens so fast that if we start coming up with ideas for a project application today, it will already be out of date before the call for proposals even opens. A new Erasmus model for small projects with a continuous call for proposals and quick decisions :)
	The rules of the Erasmus+ programme could lend better support for digital forms of cooperation between higher education institutions, with flexible rules regarding the length of exchanges. Support is also needed for entirely virtual forms of cooperation.
	By granting funding, providing training, and coming up with new ideas that could be introduced in projects.
	A project on exchanging good practices (or a preparatory project), in other words a cooperation model where nothing is actually developed (no outputs) but during which you could, for example, visit a future project partner and write the application together.
	The current project models are well suited for this, and mobility periods allow you to familiarise yourself with different organisations.

6. OPPORTUNITIES PROVIDED BY ERASMUS+ PROGRAMME TO PROMOTE THE DIGITAL TRANSFORMATION IN PARTNERSHIPS FOR COOPERATION

6.1 Practices promoting project activities in Erasmus+ partnerships for cooperation

The importance of coordination and communication, especially between different organisations and when faced with various setbacks or challenges, was emphasised in project activities. Compliance with the project plan was identified as a key factor in the progress and success of the project. The challenges posed by the pandemic and other setbacks highlighted the need for flexibility and perseverance in carrying out the project. The project actors mentioned that a climate of trust was important during the project and felt that, when launching a project, it was extremely important to ensure that all project partners understand and are committed to the common goals and concepts. Clear terminology and a shared vision played a key role in the quality of the project. In addition, personal relationships with project partners and building trust were important factors in ensuring successful cooperation.

Challenges were encountered while implementing the projects, including differences between the school cultures and teaching methods in various countries, difficulties in establishing personal relationships with new partners, and such unexpected events as the pandemic, the war in Ukraine and the earthquake in Türkiye, which affected the arrangements for meetings. Several projects focusing on the digital transformation were carried out during the pandemic. In order to cope with the setbacks and challenges, project actors focused on open communication, defining common terminology, and collecting continuous feedback.

Project actors noted that new actors and partners can contribute valuable perspectives to the project, whereas collaboration with familiar partners may be easier. In the planning phase of the project, investing in very close cooperation was considered useful, as it enabled all parties to influence the project plan and ensured their better commitment to the common goals. The projects started with a joint meeting that allowed the project partners to understand each other's situations and needs better. The actors prepared in advance for possible replacements of persons involved in the project, and sufficient personnel resources were secured. When planning the project's budgets and schedule, it was important to bear in mind the importance of being realistic about the available resources. Project actors felt that preparing a schedule for the project in advance and monitoring it regularly ensured that the project kept to the schedule and waste of time was avoided.

Open communication between the project partners as well as adaptation and cooperation in changing situations played a key role in coping with the challenges and completing the project successfully. Support provided by the organisations' management was perceived as a significant factor that promoted the project activities.

6.2 Project actors' recommendations for promoting the digital transformation

Simulations, virtual laboratories and team work platforms developed in projects focusing on the digital transformation were useful learning tools and aids. They could be used during the pandemic, in particular. With the digital tools and methods developed in the project, sustainable development ideas could also be made visible in the daily life of education. During the pandemic, digital tools and remote work were used as situations changed and so required. The infrastructure and contents of digital learning environments should be developed to meet today's and tomorrow's needs, including consideration of learning difficulties and the diversity in terms of multilingualism and multiculturalism.

Digital tools, such as youthcard.eu, were developed during the projects. The tools developed in the projects have been used directly to help young people and learners. In project actors' view, learners should be encouraged to see opportunities and potential in situations of change and development. The focus of education should be shifted from mere threat scenarios towards more solution-oriented and innovative thinking.

6.3 Permanent impacts and meaningful approaches in Erasmus+ partnerships for cooperation

During the project, cooperation and networks were strengthened, and project partners shared their competence effectively. The cooperation has continued after the project, and new follow-up projects are being planned. Cooperation with the project partners was considered effective, and it is being developed further. The models developed for project administration are still in use, also in other projects and everyday activities. In project actors' view, the project had a significant impact on both the participants and the wider community, and its outputs are still part of life in the organisations involved in the project.

Technology was used to develop several new digital and other working methods during the project. Project partners' different cultural backgrounds had a significant impact on the implementation of the project. The challenges created by the pandemic underlined the importance of digital skills and forced actors to adapt their plans flexibly. In project actors' experience, a precondition for responding to future challenges is a change in the education system towards more flexible and individualised structures. In project work, it is important to keep in mind strategic continuity, continuous improvement of activities, and sharing of success stories as well as to build open and communal forums for cooperation between different sectors.

Permanent impacts, relevant approaches and results of the projects:

The report found that the digital transformation has been promoted in many ways by means of and as a result of Erasmus+ partnerships for cooperation:

Improving the quality of teaching and developing and usings digital tools in teaching

The projects developed digital tools, including simulations and virtual laboratories, which proved useful especially during the pandemic. New tools helped to make sustainability ideas visible in

education. The projects developed diverse competence related to the digital transformation that covered the needs of both teachers and students. The objective was that teachers would learn to use new digital tools and platforms to diversify instruction and improve the efficiency of studying.

Identifying future competence needs and responding to them

As a result of the projects, future competence needs were identified, including digital skills, media literacy, active citizenship and benchlearning. In teaching, the need for new approaches that respond to changing needs was stressed.

Strengthening international and cultural cooperation and creating networks

During the projects, cooperation and networks were strengthened, and the planning of new follow-up projects was launched. Participants have acquired new skills that are useful in working life by being involved in international virtual teams, and companies have benefited from the cooperation in creating innovations. International cooperation has brought significant added value to the manufacture, experimentation with, testing and deployment of materials and been a key factor in completing the project successfully and achieving a permanent impact. Competence was shared effectively between project partners, and the cooperation will be continued once the project ends.

Continuous development and strategic planning

The importance of strategic continuity and continuous improvement of organisations was highlighted in the projects. It was felt that impact and togetherness will be emphasised in project work in the future.

7. CONCLUSIONS

The digital transformation creates many new challenges relating to future competence needs. Technological advancement, and especially that of artificial intelligence, will bring requirements of managing human-machine interfaces and using technologies in different areas of society. The digital meaning society will emphasise production of meanings and citizens' inclusion. The risks brought about by disinformation and inaccurate information increase the need to improve digital literacy and develop means for tackling distorted information.

Future competence needs cover many different dimensions, including vocational core competence, technological competence, time-related skills, environmental competence, system competence and competence related to meanings. In addition, personal future strategies and foresight competence will become key factors in preparation for a changing society and world of work. A digital meaning society will change people's interaction with technologies and the way meanings are built in society, which will require strong competence relating to meanings and digital literacy. Future competence needs are strongly linked to technology use, producing meanings and participating in societal decision-making.

Recognising and changing the course of declining learning outcomes and levelling out differences in knowledge and skills between different pupils and students will be important. To achieve this, more individualised and flexible instruction and early intervention in learning difficulties through technology and digital tools may be required.

Cooperation between education providers, teachers and other stakeholders must be multidisciplinary and flexible in order to respond to rapidly changing needs and to enable innovative pedagogical solutions. Futures research should be included in curricula, ensuring that students learn to perceive and analyse future trends and challenges. Learning must support pupils' and students' ability to change and adapt to changing situations. Identifying and responding to needs for change brought about by the digital transformation require extensive cooperation between different stakeholders and continuous development work. Boldness and transparency in experimenting with new pedagogical approaches and using technology in instruction are needed.

Project actors identified new requirements in future competence needs. The ageing of the population drives a need for an age-friendly society, while the challenges associated with digitalisation, such as a need for digital skills and the peripheral phenomena of digitalisation, raise questions. The development of AI and robotics as well as continuous learning require a new approach to teaching. Future skills and capabilities, such as digital skills, active citizenship and benchlearning, are central from the perspective of learning. In addition, the importance of general knowledge and ability and its redefinition as well as the tools young people need to process the transformation are emphasised. The needs for change in the education system include smaller and more agile study units as well as a cross-professional and multidisciplinary approach.

In future project work, the importance of strategic continuity and impact as well forums for togetherness and cooperation between sectors will be stressed. It will also be important to take different future development paths into consideration in international cooperation.

Erasmus+ partnerships for cooperation have promoted digital skills, pedagogical innovations, and international and intercultural cooperation. The partnerships have served as an important source for promoting the digital transformation while strengthening diversity, inclusion and active citizenship. The results of and lessons learned from the projects have made permanent impacts on organisations and communities, creating a solid foundation for future development work and education.

APPENDICES

APPENDIX 1. Selected Erasmus+ KA2 projects coordinated by Finnish actors

From ME to WE – Networks for Empowering Teachers and Students
2017–1-FI01-KA219-034712 Strategic partnership for schools only

Priorities: Soft values, including empowerment, networking and focus on positiveness, as well as bringing about a change in society and school communities were at the centre of the project.

Objectives: The project promoted the mobility of learners, staff, volunteers, youth workers and young people. The project made possible learners' and teachers' visits to different countries and the versatile learning they enabled. The aim was to strengthen learners' self-esteem and cultural knowledge as well as to develop their soft skills, including public speaking, problem-solving and organisation skills, digital competence, language proficiency as well as critical and creative thinking skills.

Indicators: Stronger capabilities, especially English proficiency, ICT skills, problem-solving skills and critical thinking. Learners' improved self-esteem and confidence. Establishing and maintaining international friendships. Development of solidarity and responsibility. Surveys addressed to learners and parents were conducted.

Methods: Visits to partner schools in different European countries. Interactive learning through the social dimension. Participation in a planned visit to the European Parliament. A photography project in which students drew attention to each other's unique features. 'Against bullying' stop-motion videos to prevent bullying. A charity project in cooperation with local companies.

Results: Learners' improved language proficiency, ICT skills, problem-solving ability and critical thinking. Learners assumed more responsibility and their self-esteem and self-confidence improved. International educational cooperation, friendships and closeness between families. A sense of solidarity and responsibility across national borders. Learners became more diverse actors. The school atmosphere improved and cooperation increased at all levels.

Innovations: Unforced learning and emphasis on the social dimension. Promoting cultural diversity and solidarity. European friendships and their importance for learners' development. The project developed new pedagogical approaches to combat bullying, including a photography project and stop-motion videos.

Permanent practices: Permanent international networks and connections. Learners' and teachers' international visits will continue even if the Erasmus+ partnership for cooperation has ended. Continued cooperation with partners in Barcelona, Spain. The school has introduced new practices, including celebrating the Europe Day and fostering international friendships.

Project website: Erasmus+ Project: From Me to We – Networks empowering Teachers and Students (wordpress.com)

Hand in hand - libraries and adult education centres for lifelong learning
2017–1-FI01-KA204-034768 Strategic partnership in adult education

Priorities: Re-evaluation of the roles, methods and services of adult education organisations and libraries in developing lifelong learning services and learning environments. Increasing cooperation across organisational boundaries to improve seamless provision of services and guidance.

Objectives: Exchanging practices and learning to offer better and more accessible services to customers. Exploring how libraries and adult education organisations can turn into multi-purpose learning centres. Creating synergies for providing services to the public. Developing services and learning environments for lifelong learning. Increasing cooperation between service centres. Acquiring an international vision, sharing experiences and reflecting on cooperation in a broader context. Increasing active civic engagement by involving customers.

Indicators: Electronic customer surveys and discussions/interviews with residents to find out about their views, expectations, ideas and wishes. Discussions based on the survey results and using them to define common themes. Planning small steps together and taking measures aiming to develop services according to customers' expectations.

Methods: Customers' views were used for planning and designing the activities. Activities were developed based on customers' ideas, needs, wishes, study trips and personal experiences. International meetings and workshops in different countries. Joint and group activities. Surveys and discussions with residents to understand their needs.

Results: Residents' wishes were taken into account when planning services. Peer guidance and sharing of marketing channels. Benchlearning, especially in technology use, launch of reading circles and film clubs, and informal sharing of knowledge. The library and the centre for lifelong learning provide an open space for people to access and share information and develop their skills. An advanced service platform for both formal and informal learning. Multigenerational events and facilities where families can do things together. Facilities where you can relax and participate in various activities.

Innovations: The importance of local and international cooperation in developing lifelong learning services. The new practices and operating models are based on residents' needs and expectations. Residents' involvement in planning and the impact of planning joint measures on the diversity of local services and residents' needs. The importance of open and communal learning as well as emphasising residents' active role in planning services. Developing benchlearning and services as required by customer needs. Learning Circle teaching method and versatile learning centre practices. Use of memory capsules in services for older persons. Networking at local, regional and national levels.

Permanent practices: Cooperation between service centres continues, and the activities are planned to respond to residents' needs. Interaction between staff members is strengthened, and new practices are mainstreamed in organisations. The library and centre for lifelong learning offer an open, public space for diverse learning, self-directed learning and togetherness. Residents participate actively in planning and producing activities. Promotion of benchlearning, openness, transparency, trust and equality. Growing interest in health and well-being topics. An international perspective at local level. International sharing of experiences and ideas.

Project home page: http://handinhandlibraries.wordpress.com

Young talents creating new multicultural brands
2017–1 FI01 KA202 034774 Strategic partnership in vocational education and training

Priorities: Challenges of vocational education and training, including dropping out early and reduced employment opportunities for recent graduates. Developing pedagogical methods to increase students' internal motivation.

Objectives: Developing students' vocational and lifelong learning skills and improving the brand of vocational education and training in Europe. Coaching related to brands provided by companies in a multidisciplinary module based on entrepreneurship. Companies come up with a support-based coaching model for students as well as receive support and benefit from new brands created by students. Building a new alternative curriculum that is competitive and learning-centred. Teachers learn a new pedagogical model and the attitude of a supportive coach. Students graduate on time, have good skills and find jobs.

Indicators: Entrepreneurship studies

Methods: Teachers use a new pedagogical model and act as supportive coaches. Cooperation with companies in VET development.

Results: Creation of the YOUNG TALENTS learning model. Establishment of international companies. Publication of Vocational Skills and Entrepreneurship learning material. The students have sold products in three countries and online. Entrepreneurs' support and new products for schools' use. New digital pedagogical tools for schools. Development of students' skills through multidisciplinary entrepreneurship studies. A better learning environment. An opportunity for educational institutions to reallocate financial resources to new pedagogical priorities.

Innovations: Teachers adopt an attitude of supportive coaches. Possibility to spread the Young Talents learning model and coach new teachers using the Young Talents Coach Academy model. Spreading the model to other schools through successful information activities.

Permanent practices: Students can establish, brand and run companies in international markets. Cooperation with companies will continue and increase. Reallocation of educational institutions' financial resources.

Project home page: YOUNG TALENTS - CREATING NEW MULTICULTURAL BRANDS - European Commission (europa.eu)

Learning ICT Supported Nursing for Self-Management of Patients
2017–1 FI01 KA203 034761 KA 203 Strategic partnership in higher education

Priorities: Curriculum development. The backdrop to the project was a growing need to support patients' self-management as Europe ages.

Objective: The key objective of the project was to develop the DigiNurse model for education in nursing.

Indicators: Concrete goals for students' digital skills needed for coaching patients in self-management. Also educational goals related to using the model for teachers and students. Monitoring and evaluation of a quality plan. Evaluation of the project's best practices for digital nursing education, digital coaching, coaching techniques, support for self-management and experimental research on healthcare technologies. A student survey to assess digital skills. The questions were based on the conceptual models used, including the Technology Acceptance Model and pedagogical models. The results supported the conceptual basis of the DigiNurse model.

The project participants selected the pedagogical criteria, defined the key concepts for the DigiNurse model, determined the digital learning outcomes and prepared experimental plans. The pilots involving students started at the national and later the international level, and feedback was collected orally and through surveys.

Methods: A concept with a formal structure that included the learning of digital skills on a nursing course, with concrete goals for the students' digital skills needed for coaching patients in self-management. Also educational goals related to using the model for teachers and students. A quality plan was drawn up for the project.

Results: A DigiNurse model was created in the project. The number of students trained was N=552, and the number of trained teachers, mentors and scientists was N=165. The DigiNurse model was supported by the DigiNurse community consisting of nursing teachers and instructors which operated as a platform for new ideas and digital innovations in the nursing sector. Instructions that provide online information about applying the model and teaching methods in digital nursing education. An e-book was published which contained best practices for using the model, practical advice for applying it, and instructions for integrating it into the curriculum. Information on the project was disseminated widely, and several communication events were organised.

Innovations: The model offers an effective way to learn and teach digital coaching of patients.

Permanent impacts: The number of DigiNurse community members increased, which supports the sustainability of the project. The community will continue training students and teachers for many years, also through such new projects as DigiCare and SmartNurse. This will support long-term sustainability of the project.

Project home page: Learning ICT Supported Nursing for Self-Management of Patients - Diginurse | Tampereen korkeakouluyhteisö (tuni.fi)

Digitalized Learning Path for Educational Organizations
2018 1 FI01 KA202 047312 Strategic partnership in vocational education and training

Priorities: The partnership for cooperation focuses on creating three digital competence development paths: the organisation's path, the trainer's path and the partners' path.

Objectives: Ensuring all staff members' commitment to the organisation's strategic goals. Training the staff with the aim of achieving at least a minimum level of digital skills determined by the organisation.

Indicators: A survey measuring competence levels on the DigCompEdu scale of A1 to C2. The Check-In Tool provides individuals with feedback and tips on how to track their progress.

Methods: During the project, an analysis of the current state of digital competence based on the Selfie tool was launched for the management, trainers and students. More detailed development areas were defined, and minimum competence requirements for the staff were set. Participants developed their digital skills with the aim of exceeding the minimum level set by the organisation. The Check-In Tool reflection tool was used to develop individual digital skills. Each trainer created their own path and set their development goals. Project workers pointed the way and set examples for modelling personal paths. International cooperation contributed new perspectives to the work and enabled the sharing of good practices. The building of organisation-specific paths was promoted in cooperation. The competence analysis was based on using the Selfie tool. The Check-In Tool was used to develop trainers.

Results: Development targets and minimum skills requirements were defined for the organisation's path. On the trainer's path, each trainer created their own development path leading towards the organisation's goals.

Innovations: Project workers also included managers of organisations, who ensured progress in keeping with the strategy. The strength of the project lies in inspiring people and experiences of success that support the development of digital skills in the organisation. Mentoring and sharing of experiences have proven highly useful tools for supporting and motivating colleagues in developing their digital skills.

Permanent practices and innovations: Training in Office 365 basics is part of the organisation's path. Digital mentoring activities and sharing of experiences are an established part of the organisation's internal development.

Project home page: Learning Path - Digitalized Learning Path for Educational Organizations - vucudvikling.dk

IDEAL Flipped Learning in Adult Education
2018 1 FI01 KA204 047283 Strategic partnership in adult education

Priorities: The project focused on pedagogy based on the Flipped Learning method and finding ways to use it with target groups studying basic skills for adults. Introduction of the Flipped Leaning model with adult students for whom little or no teaching materials were available.

Indicators: The project created and tested a system of open competence badges. Participants' skills were assessed, after which open badges were awarded to teachers and students as an acknowledgement of their learning.

Objectives: The objective of the project was to enrich traditional pedagogical strategies with technology as well as to promote the use of individual methods in adult education and create motivating and accessible content for adult students with poor digital and/or basic skills. In addition, the project aimed to create and test a system of open badges.

Methods: In the Flipped Learning model, technology provided individualised content tailored to students' personal needs, motivating them. The project produced open learning materials for teachers of adults. The model aimed for in-depth learning and promoting the development of critical thinking skills by using face-to-face classroom time for discussions and integration of new concepts into previous knowledge. The teacher used technology to make traditional classroom studies, including lectures, reflection assignments, videos and digital materials available outside the classroom. In Flipped Learning, technology was used to improve the accessibility of classroom content and participation potential. Adult students received guidance in basic skills of Flipped Learning. Clear learning outcomes were defined for the instruction and communicated to the students. Short videos and free online resources were used in the instruction. Motivating activities, team work and benchlearning were used in contact teaching. The teacher gave the students immediate feedback on questions, maintaining their commitment to studying.

Results: Integrating Flipped Learning into the classroom teaching improved interaction between students and the teacher as well as students' learning outcomes. During the project, practical tools were developed for using and applying Flipped Learning methods not only to building the competence of adult education teachers but also to instruction of basic skills to adults. Adults' basic skills, especially literacy, digital skills and independent learning skills, improved. Sharing of experiences of Flipped Learning practices in the project with European adult education partners. Instructions for planning, implementing and awarding open competence badges were created.

Innovations: Strategic and integrated use of ICT and use of virtual learning environments increased in adult education.

Permanent practices: After the project, 27 trained adult educators continued their learning and piloted what they had learned in practical teaching work. Project participants also organised internal training sessions in each partner organisation to guide their colleagues in flipped learning. Networking and sharing of experiences with adult education partners continued.

Project home page: Flipped Learning in Adult Education | FLIP-IDEAL (flipideal.org)

Lean for work and lean for life
2018–1-FI01-KA202-047210 Strategic partnership in vocational education and training

Priorities: The project focused on improving the professional competence of VET teachers and instructors using innovative Lean thinking and on developing key competences for lifelong learning as part of building capabilities.

Objective: The objective was to provide teachers with capabilities for guiding their colleagues and students in adopting Lean skills through an interactive, experiential and inclusive approach. An additional aim was building up the organisations' Lean competence, increasing its capacity for international work, stepping up cooperation with employers, and developing participating teachers' key competences for lifelong learning.

Indicators: Electronic surveys.

Methods: Lean skills have been defined as 'meta skills' because they represent a way of knowing. The Lean method was used to develop Lean processes. Building up teachers'/coaches' capabilities for and confidence in teaching Lean skills in an innovative way. Developing a high-quality training package. The training package was tested by VET teachers in each partner organisation. Each partner country was responsible for one work package, and everyone participated in all work packages. All materials are available on the project's website in Finnish, Swedish, Dutch, Spanish and Portuguese.

Results: Four international face-to-face meetings were held during the project, one in each partner country. While the LTT trial event and final meeting took place online due to the pandemic, this did not affect the results of the project. The project concluded with a European webinar at which the results were presented. The project was part of the European VET Skills Week. Each participating organisation now has six teachers and project participants who can use the training materials and train others. A ready-made Lean course for VET staff and students is available, together with exercises, games and 360 virtual environments that support learning. Project participants master the prestigious Lean skills and are attractive employees in the labour market, and European industry has access to high-quality and productive workforce it needs to compete in the global marketplace.

Innovations: During the pilot experiments, it was noted that the course and several exercises can also be delivered online. A new Erasmus project, Train2Sustain, was launched, which combines sustainability, the circular economy and Lean thinking. The new project is a continuation of the Lean for Work and Lean for Life project.

Permanent practices: The project content has been and will also be used in other Erasmus-funded projects. Interest in the introduction of Lean methods and inclusion of Lean skills in VET spreads through the results and dissemination of the project, and the materials are also used by other parties.

Project home page: LEAN FOR WORK AND LEAN FOR LIFE

DIG IT 2: Digital Storytelling Meets the World of Work
2019–1-FI01-KA202-060859 Strategic partnership in vocational education and training

Priorities: The project focuses on preventing dropping out of school early and on working life themes, youth unemployment, learning about entrepreneurship, and integration of digital tools and social media into education and training.

Objectives: The objective of the project was to improve the working life skills of students of different ages, make connections with working life, and to strengthen students' professional identity through digital storytelling. The aims also included supporting students in making genuine contacts with the world of work with emphasis on the importance of dialogue and reflection, improving working life skills, bringing the learning experience closer to the realities of the working environment, strengthening the entrepreneurial skills of students and teachers, and increasing knowledge about the labour market.

Indicators: Evaluation and monitoring of the project's progress at project meetings.

Methods: Workplace visits and introduction to entrepreneurship were organised for students in small innovative companies where the students encountered entrepreneurs personally and received advice on how to succeed in working life. A key method of the project was digital storytelling, which was used for reflecting on, documenting and sharing experiences of workplace visits. The most important objective of video workshops was to give students opportunities to reflect on their experiences and to bring out their hidden competence. Team coaching, career guidance and entrepreneurship were used in the project.

The project organised several workshops, online get-togethers and international meetings where students and teaching staff worked together. Teachers received training, and elements of team coaching were used in project activities. Career coaching prepared students for working life by giving them practice in real-life job interview skills and writing of CVs and job applications as well as by providing them with personal coaching to support their employment. Using digital storytelling, students documented and shared their experiences of workplace visits.

The project paid particular attention to multilingual team work between students of different ages. Participants did not need to master a specific language, and those who had difficulty attaching to studies were also included.

Results: The project improved students' soft skills, advanced the integration of new digital technologies and tools into learning processes, and promoted the use of the social media by students in marketing themselves and improving their job prospects. The project reduced dropping out early and offered career coaching and team coaching to teachers.

Innovations: The project created new networks between career advisers, entrepreneurs and teachers. Successful project work requires skilled delegation, transparency and open communication.

Permanent practices: DIG IT 2 continues on the previous DIG IT project and aims to promote the adoption of shared values, equality and non-discrimination through innovative and integrated approaches. Project work has been a learning experience for teachers and given them an additional lift in their daily lives.

Project home page: https://erasmus-plus.ec.europa.eu/projects/search/details/2019-1-FI01-KA202-060859

WIN on line: Women In ActioN
2019–1-FI01-KA204 060743 Strategic partnership in adult education

Priorities: The objective of the project was supporting the re-employment and entrepreneurship of under-skilled and/or low-skilled women aged over 40 by means of digital online business.

Objectives: The key objective of the project was to respond to the challenges faced by women aged over 40 in the European labour market, in particular due to prejudices related to gender, age and prolonged unemployment, and to understand better the expectations and needs of these women relating to new technologies and e-entrepreneurship in a learning environment as well as to offer a broad support network for their paths to entrepreneurship.

Indicators: Monitoring and evaluation of the achievement of project objectives at project meetings.

Methods: A key activity of the project was providing mentoring and creating networks to enable the target group to improve their digital skills and start or develop an online business. The target group was required to have better than basic literacy, writing and numerical skills. The project developed new technologies and pedagogical models and piloted new methods for digital and entrepreneurship competence training. As the target group was identified a diverse group of adult students, to whom training is provided as indicated by their needs. The backdrop to the WinOnLine project was concerns over the under-representation of women as entrepreneurs, especially among women aged over 40. The project responded to this challenge by providing training and support measures to improve the possibilities of women aged over 40 to find employment and succeed as entrepreneurs. The participating organisations exchanged good practices.

Results: The project produced research evidence, teaching materials, coaching packages, mentor networks and a digital online platform for sharing information. Training was organised to meet the needs of the target group. The project created a theoretical basis for delivering training in digitalisation and entrepreneurial skills in re-training and courses for women aged over 40. During the project, training methods and tools were developed to promote women's digital entrepreneurship. The tools developed in the project have been integrated into the organisations' working culture, and they have been used to implement new strategic actions to strengthen women's e-entrepreneurship.

Innovations: A digital online platform where organisations can share information, best practices, tools and methods and communicate about the results they have achieved. The project turned out new European entrepreneurs and increased the level of e-business competence.

Permanent practices: The training methods and tools are available on the website and can be used, replicated or adapted to new formats, and they can consequently reach a large number of participants. The project network also offers a forum where organisations can share good practices, tools, methods and results. This is expected to promote togetherness and information sharing.

Project home page: WIN on-line: Women In ActioN - Eurosuccess Consulting (eurosc.eu)

Computational Thinking and Acting
2019–1-FI01-KA203-060877 Strategic partnership in higher education

Priorities: Supporting teachers in using the concept of virtual thinking in instruction across Europe.

Objectives: The objective was influencing the instruction of digital thinking in schools. The idea was to use this approach in two ways: 1) Small robots and other equipment were used to create experiences that can be sensed, and 2) information and communication technology was linked to physical, practical activities of life to prevent computer use from remaining a passive and sedentary activity. Investigating obstacles to digital and virtual thinking in instruction at partner countries' comprehensive schools.

Indicators: Stakeholder interviews in participating countries. Interviews with teachers and experts and feedback received in group discussions on the competence framework. Analysis of stakeholder needs (COTA stakeholder needs analysis report), competence framework (Pedagogical and Competency Framework report), learning scenarios in five languages, pilot and evaluation experiences that led to a list of good practices for teaching computational thinking at comprehensive schools (validation report).

Methods: Creating and translating into five languages (mother tongues and English) 120 learning scenarios for digital thinking that were piloted in comprehensive schools in partner countries. More than 1,000 teachers and students participated in the pilot phase. The COTA project also created a competence framework for digital thinking, which is linked to the curriculum of comprehensive schools in four countries. Based on stakeholder interviews, key viewpoints were identified on how digital and virtual thinking can be brought to schools. In addition, digital thinking competences were analysed in the context of four countries' curricula, and a competence framework was prepared based on feedback from teachers across Europe. The project tested 120 learning scenarios for digital thinking with more than 1,000 teachers and students in Europe. The project created two scenarios in Ukrainian and organised two online workshops for Ukrainian teachers in spring 2022.

Innovations: Developing learners' digital skills and thinking through problem-solving, algorithmic thinking, media literacy, and ICT program use.

Permanent practices: Introduction of learning scenarios for digital thinking and a competence framework.

Project home page: LUOT0073 Computational thinking and 21st century skills in teaching and learning | Opinto-opas 2022-2024 (utu.fi)

Cybersecurity Curricula Recommendations for Smart Grids
2020–1-FI01-KA203 066624 Strategic partnership in higher education

Priorities: The Erasmus+ partnership for cooperation titled Cybersecurity Curricula Recommendations for Smart Grids examines the paradigm shift in the energy sector that has been crucial in recent years.

Objective: The objective of the project was to analyse the challenges faced by the industry in the area of cybersecurity for smart grids, to develop international guidelines for education in the cybersecurity of smart grids, and to issue recommendations and guidelines for relevant stakeholders on how to educate the current and future workforce in smart grid cybersecurity. The project sought to facilitate the adaptation of European further education programmes to include learning outcomes related to information security in order to produce a workforce trained in a field combining power systems and ICT and to promote cybersecurity.

Methods: To carry out the project, literature reviews were used to identify knowledge gaps. Workshops and seminars were also organised to understand better the practical needs, intellectual outputs related to the cybersecurity of smart grids were developed together, and the results were disseminated. Changes were put into practice in a reliable network as they involve almost real-time information exchanges for regulating the network.

Results: The project produced four reports, three of which dealt with the state of cybersecurity in smart grids, application of learning theories to the teaching content, and adaptation of teaching programmes on smart grids from the perspective of cybersecurity, whereas the fourth one was a teachers' manual for implementing a Massive Open Online Course (MOOC) in real-time physical cybersecurity.

Innovations: Teaching methods and curricula supporting the integration of cybersecurity into smart grid education programmes. Creating an observatory at universities and continuous monitoring of new research results. Creating an expert and researcher database for the purposes of cooperation and planning of instruction. Creating Joint Masters programmes, harmonising European accreditation systems, combining the infrastructure of universities and research institutes, creating a register of course modules, and strengthening the role of legal proceedings. Promoting cooperation between stakeholders aiming to set up a forum for high-level dialogue that meets regularly. Organising large events in educational institutions with the support of industry, enabling students to get to know the field and choose a career path in cybersecurity. Training of professionals through practical exercises, acquisition of certificates, and continuous competence development. The important role of legislators in broader issues, including the GDPR and the NIS Directive, as well as the use of common standards and protocols between Member States.

Permanent practices: Information sharing and cooperation forums that promote continuous dialogue between stakeholders.

Project home page: Cybersecurity Curricula Recommendations for Smart Grids (CCRSG) – A research project (uwasa.fi)

Virtual reality Education & Game based Achievements in classrooms
2020–1-FI01-KA201-066641 Strategic partnership in the general education sector

Priorities: The project focused on the challenge faced by teachers in captivating students' interest and securing their participation at different levels of education and regardless of the subjects to be taught.

Objective: The objective was to use instruction based on computer and mobile games as well as virtual and augmented reality applications to respond to this challenge and to facilitate learners' learning process, taking into account their cognitive, social and cultural backgrounds while meeting curriculum requirements.

Indicators: Analysis and studies of virtual reality resources in education. A study on computer games and software applications for educational purposes. The studies showed that, despite some risks and dangers, the use of virtual reality technology in schools has numerous advantages.

Methods: The European Schoolnet conducted a study on the use of games in schools, encouraging teachers to study gamified learning extensively in the curriculum. Teachers were not sure of how games and digital applications should be integrated into the instruction and found it difficult to find high-quality games and applications that are a good match with the curriculum. They also found the technologies difficult and expensive. The objective was to respond to these needs by introducing gamified learning relying on computers as well as mobile and VR/AR games and apps at school and by providing teachers with concrete digital games and VR/AR applications that are accessible and flexible to meet the needs of the curricula for selected subjects. To achieve this, two teacher training courses were organised that developed and implemented teaching scenarios. Teaching scenarios to be integrated into the school's curriculum were developed. Lessons were tested with teachers and students to ensure the quality of the materials being trialled.

Outputs: During the project, a publication intended as a practical guide for teachers was created. Materials were produced to motivate new teacher groups to use games and digital applications in teaching. Broad dissemination of the results to achieve a wider effect. Multiplier Events were organised as part of the campaign to disseminate and use the information.

Innovations: Research findings on the use of computer games and VR/AR applications compared to the curricula in several European countries. Creating a pedagogical background based on a summary of the VEGA study explaining the pedagogical principles of using digital games and virtual applications as effective learning tools.

Permanent practices: Using instruction based on computer and mobile games as well as virtual and augmented reality applications, and integrating teaching methods into the curriculum.

Project home page: VEGA Project – Blue Beehive

Pro Youth Empowering youth workers and youth in the protection 2020–3-FI01-KA205-092491
Strategic partnership in the field of youth

Priorities: The project dealt with honour violence, including honour crimes, forced marriages and gender-based conflicts and violence.

Objectives: The aim of the project is to collaborate on developing working methods that support young people experiencing honour violence or a threat of such violence. The target groups were professionals and authorities working with young people and young people themselves. The project prepared a knowledge base, tools and methods for professionals working with young people. With a multicultural approach, the project created practices and practical tools for young people and youth work professionals alike to promote better understanding of and more effective combat against honour violence and conflicts.

Indicators: Surveys in each country addressed to young people and professionals.

Methods: Methods were developed for the professional use of social workers, youth workers and the police. A tool was also created to make it easier for young people to find help and support when faced with honour violence or a threat of such violence. Experts working with honour violence and conflicts from each partner country participated in the project. The participants worked together to develop methods that improved professionals' ability to support young people affected by honour violence and conflicts. The project collaborated with local organisations, authorities and communities in each partner country.

Outputs: The project produced material for young people and professionals (Pro Youth handbook for professionals, Pro Youth professional training material for police officers and social and youth workers, You are not alone - an online tool helping young people find local support and assistance). The project team's online meetings and international project meetings. Replication events organised by project actors, local seminars in Italy and Jordan and a final seminar in Finland. Study visits to Italy and Jordan. Testing of the material in each partner country.

Innovations: Pro Youth handbook for professionals, Pro Youth professional training material for police officers and social and youth workers, You are not alone - an online tool helping young people find local support and assistance.

Permanent practices: Introduction of new methods in participating organisations. Both professionals and young people can access the material digitally.

Project home page: Pro Youth - kansainvälinen kunniaan liittyvän väkivallan hanke - Suomen Setlementtiliitto

Maritime Engine Room Simulator On Line
2020–1 FI01 KA226 HE 092597 Strategic partnership

Priorities: The project focused on developing maritime education through online teaching. The main emphasis was on the introduction of innovative practices of the digital age in higher education.

Objectives: The main objective was to increase the use of online teaching in maritime education while strengthening international connections and supporting students participating in exchange programmes. Additional objectives were developing online study modules on engine room research for shipping, study assessment modules and ERS special software as well as creating an engine room simulator to support online teaching.

Indicators: Testing of students' theoretical knowledge in assessment modules.

Methods: This cooperation required a partnership between companies and educational institutions, most of which represented higher education institutions that already engage in regular business cooperation. Students' theoretical knowledge was tested in assessment modules, and their knowledge was challenged in practice by the Engine Room Simulator (ERS) Online software.

Outputs: The project created eight online study and assessment modules on maritime engine systems and equipment on commercial vessels, for which an online training programme for teachers was also developed. In addition, the Maritime Engine Room Simulator Online software with 21 video exercises and a 30-page business guide for operators in this field in six languages were produced. Major steps forward in eLearning were taken in Finland, Ukraine, Lithuania, Türkiye and Spain, especially thanks to the simulator. This was significant, as the Netherlands, the United Kingdom and Finland are the only countries in the world where some of the supervised training included in maritime higher education studies can be completed using a simulator. Six replication events were planned as part of the project, one in each partner country.

Innovations: The project responded to the concerns of the International Maritime Organization (IMO) and the International Association of Maritime Universities (IAMU) over the pandemic putting at risk updates of maritime education and sufficient compliance with the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) Code, which sets minimum requirements for seafarers. The project identified a skills gap between traditional maritime education and the needs of the sector. The project generated initiatives and enthusiasm relating to the opportunities offered by a digital and virtual teaching environment as well as cooperation between trainers, students and digital solution developers. During the project, an international alliance of top experts also emerged.

Permanent practices: The networks formed in the course of the project activities will continue their activities and cooperation. Some Ukrainian students moved on to continue their maritime studies in Klaipeda, Lithuania. The MERSol project's results will be widely used in maritime education and development centres (MET).

Project home page: https://ec.europa.eu/programmes/erasmus-plus/project-result-content/71330ef3-9e60-4b59-b68b-d4d482f931de

Learn to Change Collaborative Digital Storytelling for Sustainable Change
2020–1 FI01 KA226 HE 092760 Strategic partnership

Priorities: The project focused on deploying inclusive pedagogy and materials as well as digital learning and teaching in higher education pedagogy.

Objectives: The objective of the project was to support instructors and students in applying open source code digital tools, applications and platforms more extensively and creatively to enrich higher education. The project aimed for a transition towards a more sustainable direction in European tourism and services sector education. Another objective was supporting teachers in developing their digital abilities and to offer their students more diverse and inclusive learning experiences. The backdrop to the project was higher education students' need to make digital learning more relevant, interactive and participatory, especially taking the distance learning period during the pandemic into consideration.

Indicators: Interview and feedback information provided by students, teachers and industrial partners was analysed. Based on the interviews and feedback, an action plan was drawn up for developing materials that support long-term cooperation on digital storytelling.

Methods: The project created, tested and finalised easy-to-use online learning materials in cooperation between educators, students and business partners to promote a sustainable transformation in learning, tourism and lifestyles. The project collected best practices for digital learning and instruction as well as co-creation and cooperation. The project organised three learning, teaching and training events, five replication events and several multi-stakeholder co-creation workshops online.

Outputs: Based on the best practices, an inclusive pedagogical framework was created for collaborative digital storytelling, and a digital toolkit with open tools and learning material to support trainers were developed. Virtual mobility experiments across cultural boundaries were conducted by participating in partners' lessons remotely, this way testing different digital tools and solutions for collaborative learning and instruction.

On this basis, a digital toolkit and digital storytelling modules were planned, which consisted of online assignments suitable for both mobile and desktop environments. The assignments were tested with over 600 students, and they were finalised and published as open learning materials on the project website. The project piloted and published 48 eLearning assignments as open learning materials. A work plan was also created to guide students, teachers and industrial partners in the long-term use of the materials. Blog posts, theses, presentations for academic events and professional and academic publications were produced to disseminate the results.

Innovations: An effective, multidisciplinary pedagogical approach to collaborative digital storytelling in higher education. Open learning materials on the project website.

Permanent practices: Using a pedagogical framework for digital storytelling

Project home page: Learn to change (haaga-helia.fi)

Competences for the new era of user driven digital rehabilitation
2020–1-FI01-KA226-HE-092634 Strategic partnership

Priorities: The project focuses on rehabilitation at home as the pressure on the healthcare system increases.

Objectives: The objective of the project was to promote the flexibility of rehabilitation systems by developing digital rehabilitation competence among teachers, students and working professionals. The specific objectives of the project were: Developing competence in digital rehabilitation for teachers, students and professionals as well as increasing learning opportunities in digital rehabilitation through theory and evidence-based practice. In addition, the aim is to develop digital rehabilitation solutions that meet the needs of clients and relieve the growing pressure on the healthcare system.

Indicators: A survey on digital rehabilitation competence was created and implemented methodologically. Surveys, focus group interviews and stakeholder meetings were conducted during the project. Based on the results of the surveys, interviews and meetings, a material library, wiki site and framework for competences needed to adopt digital rehabilitation were produced.

Methods: The project created a framework of existing technologies and competences, an open pedagogical handbook, and a study module that can be accessed openly online for interested stakeholders. A literature review of digital rehabilitation megatrends and an overview of activities that promote digital rehabilitation, its obstacles and information gaps were completed. Students' views were identified, a review of mobile devices was completed, and the handbook was produced for the project website. A ten-credit curriculum was developed, and a two-credit MOOC was piloted as part of it. The project developed artificial intelligence to support discussions, and this development will continue after the conclusion of the project. During the project, various information and communication activities were carried out, and the main results of the project were shared at the local level.

Outputs: A survey carried out in the project identified digital technologies for home rehabilitation, anticipated new or emerging trends in rehabilitation, and reported on the impacts of the COVID-19 pandemic on rehabilitation. The results showed that sensors, robotic devices, gamification, virtual and augmented reality as well as digital and mobile applications are already widely used for rehabilitation at home. New and emerging trends include artificial intelligence and machine learning, as well as digital and mobile applications. The project examined the advantages and disadvantages of these technologies. The results show that many tools are already used in rehabilitation at home, but the technologies have their limitations, and especially AI and machine learning can be crucial in rethinking rehabilitation. The results highlight a need for feasible and effective approaches to digital rehabilitation that meet clients' needs despite emergency conditions.

Innovations: A handbook on mobile learning pedagogy was published on the project website. A curriculum for the ten-credit study module developed in the project was created and published on the project website. Course materials for a two-credit introductory course on digital rehabilitation were produced and published on the DigiCampus platform as a MOOC. A library of digital technologies was created and made available in the MOOC.

Permanent practices: The course and all materials are open to everyone under a Creative Commons licence. Other teaching materials were also developed that are available on the DIRENE website, including an accessibility guide for teachers.

Project home page: http://www.jamk.fi/en/project/direne

European Network for Virtual lab & Interactive SImulated ONline learning 2027
2020–1 FI01 KA226 HE 092653 Strategic partnership

Priorities: The project focused on assessing current practices and problems in digital instruction of life sciences based on a survey. Offering students a virtual lab and virtual team work course modules online.

Objectives: The objective of the project was to strengthen digital education in European higher education institutions and to inform decision-makers of current opinions and competence as well as the use of digital teaching methods in life sciences in higher education institutions.

Indicators: During the project, a survey was addressed to 54 teachers in 5 different countries, and the responses were analysed. The survey focused on the use of digital tools in life science instruction at higher education institutions before, during and after the pandemic.

Methods: The project studied, innovated and experimented with new eLearning course modules in laboratory exercises and team work in digital environments. Labster® simulations were tested in 35 different courses on different life science topics led by 19 teachers in 3 universities, and feedback was collected from students. An inclusive learning environment was created for teaching where students were responsible for their own learning and progress and where they were able to learn and practise important meta skills for their future jobs in a supervised and safe environment.

Lab exercises are a key element of life science instruction in higher education institutions, and the aim of creating digital environments was to complement rather than replace on-site lab exercises and to promote students' equality by providing digital means for continuous learning. Virtual team work modules were integrated into seven different courses at four universities, and feedback was collected from students and teachers during the study on how teachers can best support student collaboration in virtual environments.

Outputs: The project examined how a virtual lab and virtual team work can be integrated into course modules to measure students' learning in order to achieve better learning outcomes and experiences on digital courses as students' learning paths are understood better, consequently providing teachers with information about how they can improve their instruction or course modules.

A systematic literature review of empirical publications was conducted to assess the use of Learning Analytics (LA) in a virtual laboratory environment. LA and Social Network Analysis (SNA) were then introduced in digital team work on five courses for 240 students at four universities using the Discord® platform for communication. An international web conference was organised to disseminate the results through a number of oral presentations and/or conference manuscripts published at https://ceur-ws.org/.

Innovations: A digital environment enables learning together, regardless of the students' locations and backgrounds. Creating personalised learning experiences for students based on real-time Learning Analytics integrated into eLearning course modules.

Permanent practices: Updated, analysis-based recommendations for good digital pedagogy practices in the introduction of virtual course modules. Ultimately, the project sought to be a trail-blazer.

Project home page: https://sites.utu.fi/envision2027/

Sector specific skills development in Coastal and Maritime Tourism
2020–1 FI01 KA203 066457 Strategic partnership in higher education

Priorities: The project focused on strengthening the competence needed in the tourism industry in maritime operating environments by developing higher education in the coastal and maritime tourism (CMT) sector. The project emphasised the need to direct higher education into a much more thematic direction and to stimulate regional economy and boost job creation and preservation in coastal communities.

Objectives: The objectives of the project included increasing understanding of the skills and qualifications needed in this sector to tackle skills gaps and disparities, developing a curriculum focusing on themed learning outcomes to strengthen the strategic and structural cooperation between higher education institutions in CMT education, and increasing the use of innovative digital technologies, methods and tools as well as open learning materials to develop CMT skills.

Indicators: Achievement of the project's objectives was evaluated at project meetings.

Methods: A fundamental change was wrought in teaching to develop sector-specific skills by improving the quality and promoting the digitalisation of themed higher education in the coastal and maritime tourism sector, as investing in people is a prerequisite for sustainable and competitive growth in this sector. Professional profiles describing knowledge, skills and qualifications were created for key occupations in the CMT sector. The purpose of this was to increase understanding of the sector-specific skills and qualifications needed to tackle skills gaps and disparities. A themed curriculum for coastal and maritime tourism with course descriptions was created to strengthen the strategic and structural cooperation of higher education institutions in CMT education. Open digital learning opportunities and open learning materials were tested in teaching to support the curriculum.

Outputs: The project created European professional profiles which describe the required knowledge, skills and qualifications for three key occupations in the coastal and maritime tourism sector. A common European curriculum for education in coastal and maritime tourism was developed to strengthen strategic cooperation between higher education institutions, and eLearning opportunities and open digital learning materials were created to put the curriculum into practice. The curriculum consists of four courses of five credits each, comprising a small specialisation area/course (20 credits) in coastal and maritime tourism.

Innovations: A new curriculum for coastal and maritime tourism studies was developed, and opportunities for eLearning and open digital learning materials were made available.

Permanent practices: Open digital learning opportunities and open learning materials have been used in teaching. The courses in coastal and maritime tourism developed in the project have been put into practice.

Project home page: http://www.skills4cmt.eu

Digital Career Stories
2020–1 FI01 KA226 HE 092733 Strategic partnership

Priorities: The project focuses on developing innovative art, story and design based methods that strengthen the digital and creative skills of students in the cultural and creative field, support the building of professional identities and career planning, and are suitable for both online pedagogy and contact teaching as well as higher education institutions' study and career counselling.

Objectives: The objective of the project was to strengthen the resilience and faith in the future of students in the arts, cultural and creative field by inspiring them to re-evaluate their opportunities and career strengths in a digitally supported professional self-assessment as well as to step up the participating educational organisations' cooperation on developing and introducing new art, story and design based methods in online pedagogy. The project additionally aimed to enable the internationalisation and networking of students of arts and culture and to develop their digital skills in online and hybrid workshops focusing on professional reflection and cooperation through art, story and design based methods.

Indicators: Feedback from students was collected after each experiment for evaluation purposes.

Methods: The project tested the DICO method in workshop environments with concrete manual methods. The project partners planned the piloting activities together, and each partner experimented with different methods locally with their students.

Outputs: The project developed the digital career story methodology, which combines art, story and design based methods that can be adapted to online pedagogy and contact teaching as well as higher education institutions' study and career counselling. In addition, a toolkit named DICO Toolkit for Digital Career Stories was created to present the theoretical and methodological foundations of the methodology/working methods developed in the project, the practical application of the methodology including plans for sample workshops, and learning activities and materials that can be used both on digital platforms for online learning and in classroom environments as well as evidence-based assessment of the results. New, creative teaching methods were introduced by participating teachers in the project. The digital and online pedagogy skills of students and teachers were improved. Students' professional self-knowledge and self-appreciation improved. Based on the pilots and their evaluation, a toolkit was produced to present and disseminate the digital career story methodology. The teachers in charge shared their experiences of and expertise in methods of their field with their colleagues from other partner schools at project meetings and training events.

Innovations: Digital career stories and other creative and artistic work produced by students and teachers in pilot workshops. Toolkit produced on the basis of the pilots and their evaluation.

Permanent practices: Participants have started using new digital and creative teaching methods and methodologies.

Project home page: https://riviste.unimc.it/index.php/cap-cult/issue/view/148

Digital and hybrid teaching and learning of practical skills in higher education
2020–1 FI01 KA226 HE 092515 Strategic partnership

Priorities: The backdrop to the project is the increased use of digital information and communication technologies and the needs for virtual teaching and learning resulting from the COVID-19 pandemic.

Objectives: The objective of the project was to assess and support the digital teaching skills of teaching staff in the healthcare and social services sector for the part of practical skills and to build up teachers' knowledge of and pedagogical skills in supporting students' practical learning outcomes in digital environments. The project also aimed to create a network for developing online pedagogy in the healthcare and social services sector at six universities in six different countries by mapping experiences, current activities and practices of using digital online technology in subject-specific practical instruction, education and learning. The objective was to develop new models and concepts to support hybrid and digital teaching methods and to promote the use of digital pedagogy skills and new online and ICT tools by sharing resources, expertise and best practices as well as to develop and put into practice guidelines on best practices for the teaching of practical skills, education and learning in the healthcare and social services sector.

Indicators: Teaching staff responded to a self-assessment survey on their digital and hybrid skills and teaching competence. Based on the survey results, a description of teaching staff's digital and hybrid teaching competences was prepared using a standardised EduDigiComp questionnaire. Teachers and students participated in testing, assessment and development processes. Focus Group interviews at partner universities.

Methods: In spring 2020, the project collected experiences of distance learning, which had been developed rapidly due to the pandemic, and the learning of practical skills in higher education institutions. A literature review provided new knowledge of the use of digital teaching and learning methods in the health and social services sector for learning practical skills. Experiences of the strengths and limitations of on-going digital and hybrid pedagogy activities in partner universities were collected in spring 2021, based on Focus Group interviews in partner universities.

Outputs: The data collected in partner universities provided an overview of current practices, general and UAS-specific digital pedagogical competences, new innovative online models, and tools for partner universities' teaching staff. Six hybrid and online simulation or laboratory teaching scenarios based on distance learning were prepared, in which students had to work on their practical skills and learn practical knowledge. The scenarios were tested with teachers and students of each partner university in a pilot study. Based on the testing, it was noted that rather than in students' skilled use of technology alone, the answer lies in the teaching staff's competences, not only in the vocational skills of the sector but also competence in pedagogy and ICT use. A checklist was drawn up to support the selection of a digital and/or hybrid curriculum.

Innovations: In the healthcare and social services sector, learning practical skills has proven particularly challenging from the perspective of online pedagogy. Well-functioning technical resources and qualified teaching staff are essential for high-quality education. Digital technologies enable new pedagogical approaches that encourage active and student-centred learning. Hybrid models, which combine contact teaching and online pedagogy, are usable.

Permanent practices: Scenarios which describe new solutions for the teaching and learning of practical skills and which can be used in the daily teaching work in practical fields were compiled into a guide.

Project home page: DITEPRACT: Digital and hybrid teaching and learning | Arcada

Digital VET for all co-existing in the digital era
2021–1 FI01 KA220 VET 000025516 Cooperation partnership

Priorities: The project focuses on supporting VET teachers in the changing digital environment. The backdrop to the project was concerns over the fact that VET providers often lag behind in labour market changes, while the COVID-19 pandemic accelerated the digital transformation, also affecting vocational education and training. Teachers' need to develop their digital skills is stressed while rapid technological advances require a faster response to changes in the labour market.

Objectives: The objective of the project is to improve teachers' digital readiness and capacity while supporting the acquisition of digital skills by students. The project also aims to address inclusiveness and equality in virtual teaching and learning environments. The objective is to provide teachers with a virtual space for sharing information about inclusive teaching methods. Overall, the project aims to bring together European VET teachers online to experiment, create and share virtual and digital experiences and practices.

Indicators: Feedback rounds after face-to-face and virtual meetings. A steering group monitored and evaluated the progress of the project and goal achievement at its meetings on a regular basis.

Methods: The activities included two face-to-face meetings in addition to monthly online meetings and three learning, teaching and training periods. In the final stages of the project, several replication events were organised on-site and virtually in the partner countries. Feedback rounds were organised after physical and virtual events, and the project steering group continuously monitored the progress of the project and the achievement of its objectives.

Outputs: As a result of the project, new approaches and training methods were produced in a digital and virtual environment. The project improved the digital skills of students and teachers, introduced new technologies, and created new teaching and learning methods. The project also aimed to respond to the priorities of the European Commission's Digital Education Action Plan, in particular by promoting digital skills and competences.

Innovations: Developing digital and virtual approaches and training methods with new virtual elements. Promoting sustainable and accessible methods and approaches in vocational education and training.

Permanent practices: The project partners took inclusion into consideration by making digital teaching methods accessible to all students regardless of their age, background or abilities, promoting sustainable methods and approaches. A new teaching approach is used in hybrid studies in VET that contains virtual elements, such as virtual preparation, guidance and communication related to mobility periods.

Project home page: Digital VET 4 all – Project (digitalvetforall.net)

APPENDIX 2. Questionnaire sent to Erasmus+ KA2 project actors

Questionnaire on innovative project practices in Erasmus+ partnerships for cooperation focusing on the digital transformation addressed to persons responsible for the projects

Dear persons responsible for Erasmus+ partnerships for cooperation,

Welcome to participate in an electronic preliminary survey on Erasmus+ partnerships for cooperation focusing on the digital transformation and in a workshop that will be organised in April. This survey and the autumn workshop provide an opportunity to share experiences and innovative practices, learn about best practices and network with other people responsible for similar projects.

The Finnish National Agency for Education aims to examine what persons who were responsible for concluded Erasmus+ partnerships for cooperation focusing on the digital transformation think about the potential ideas and innovative practices of those projects. A report will be published on the results with the aim of mapping potential innovations as well as encouraging and inspiring applicants to adopt new kinds of approaches. The results of the survey will be used in the workshop organised for the persons responsible for the projects in April.

Erasmus+ supports the planning and development of digital competence, the development of the digital skills of teachers and staff, digital literacy, high-quality education contents, user-friendly tools and secure platforms. The aim is to engage all learners, teachers and trainers, youth workers and young people in the digital transformation. The programme helps to enhance cooperation on digital education in Europe, increase critical understanding of the opportunities provided by digital technology and promote active citizenship. The opportunities provided by digitalisation are used increasingly in international cooperation. Online learning supplements physical mobility and the periods abroad, and information and communication technology is increasingly used in cooperation between project partners. Increasing virtual cooperation is considered important in terms of the development of methods and learning. It also makes it possible to reach an increasingly wide target group both in the European Union and outside it.

With this short questionnaire, we would like to examine the experiences and thoughts those involved in the Erasmus+ programme have regarding how the digital transformation has been promoted and what kind of innovations have been developed in the projects. We would like you to respond as openly and honestly as possible to questions that are important in terms of your project. Responding will take around 10 to 15 minutes. Your participation is very important. You will be asked about your preliminary interest in participating in the workshop to be organised in the spring at the end of the questionnaire. Participation in the workshop in the spring will be free of charge. The Finnish National Agency for Education will be responsible for the participants' travel costs and treat the participants to lunch and coffee. Please complete the survey no later than 9 February 2024 to ensure that the results will be ready for the workshop in April. Your response is extremely important to us.

Mandatory questions have been marked with an asterisk (*)

Background information

Name of organisation*

Organisation type*

- ❍ municipal education/cultural/youth services
- ❍ day-care centre
- ❍ comprehensive school
- ❍ general upper secondary school/ comprehensive school
- ❍ vocational institution
- ❍ university
- ❍ university of applied sciences
- ❍ liberal adult education
- ❍ association/ NGO
- ❍ company
- ❍ other, please specify

3. Project type *

- ❍ KA 201 Strategic partnership in the general education sector
- ❍ KA 202 Strategic partnership in vocational education and training
- ❍ KA 203 Strategic partnership in higher education
- ❍ KA 204 Strategic partnership in adult education
- ❍ KA 205 Strategic partnership in the field of youth
- ❍ KA 219 Strategic partnership between schools
- ❍ KA 229 School exchange partnership project

4. In which year was funding granted for the project?

- ❍ 2017
- ❍ 2018
- ❍ 2019
- ❍ 2020

5. When did the project end?

- ❍ 2018
- ❍ 2019
- ❍ 2020
- ❍ 2021
- ❍ 2022
- ❍ 2023

6. What is the primary target group of the project? *

- ❍ teachers/trainers/youth workers/other personnel
- ❍ learners/students/children/young people
- ❍ the world of work
- ❍ an NGO
- ❍ other, please specify
- ❍ all equally important

Objectives

7. What need did the project aim to respond to?

8. What kind of competence related to the digital transformation was sought during the project?

9. What parties participated in planning the project and setting the objectives?

Implementation

10. What concrete means were used to promote the digital transformation?

11. In your opinion, which of them was the most significant/most innovative one?

12. Please describe the method/ idea and the related development process briefly.

13. How have disadvantaged persons been taken into account in the project?

Results

14. What kinds of methods, practical applications or competence related to the digital transformation were developed with the help of the project?

15. How were the competence, concrete methods and practical applications created in the project used?

16. Did the project generate a new idea that you think could be developed further? If it did, what was it?

17. Have any permanent operating methods and innovative practices that support the digital transformation been created? If any have, what are they like?

18. What kind of impacts has the project had on everyday work, competence and professional development?

19. What kind of additional value did international cooperation provide to the project and the organisation?

20. How could the opportunities provided by Erasmus+ be used better to promote the digital transformation?

Workshop due to be organised for persons responsible for Erasmus+ partnerships for cooperation in April

21. Are you interested in participating in the workshop that the Finnish National Agency for Education will organise for persons responsible for Erasmus+ partnerships for cooperation in April? *

❍ Yes
❍ No

22. Would another person from your organisation possibly also be interested in participating in the workshop? *

❍ Yes
❍ No

23. What kind of topics would you like us to discuss in the workshop?

APPENDIX 3. Key outcomes of the workshop for Erasmus+ KA2 project actors

Programme of the workshop

WORKSHOP 15 APRIL 2024/ ERASMUS+ KA2 PROJECT ACTORS
Preliminary programme

Venue: Hotel Scandic Grand Central, Vilhonkatu 13, 00100, Helsinki.

09:00–09:30 Morning coffee

09:30–09:45 Opening remarks and introductions, Anita Varsa, EDUFI (shared meeting room/ Armas-Lindgren)

09:45–10:00 Presentation of the report and initial results, Minna Laatu, EDUFI (shared meeting room/Armas-Lindgren)

10:00–11:00 What did we learn? (4 small group rooms, (Armas-Lindgren, Eero, Eva-Lisa, Juho)
Short introductions of the results of the Erasmus+ partnerships for cooperation in small groups
- Democratic life, common values and civic engagement
- Digital transformation

Facilitators: Project Specialist Osku Haapasaari and Research Coordinator Riikka Saarimaa, University of Turku, Finland Futures Research Centre

11:00–11:15 Break

11:15–12:00 Relevant approaches, potential development ideas, innovative practices
The small groups present their experiences and thoughts to the whole group (shared meeting room/Armas-Lindgren)
- Democratic life, common values and civic engagement
- Digital transformation

12:00–13:00 Lunch (Grand Brasserie, glass terrace)

13:00–14:00 The digital meaning society is coming – which strong and weak signals are relevant to competence needs and civic engagement? Professor Emerita Sirkka Heinonen, University of Turku, Finland Futures Research Centre (shared meeting room/ Armas-Lindgren)

14:00–14:45 Development ideas, promotion of cooperation and further plans in small groups (4 small group rooms, (Armas-Lindgren, Eero, Eva-Lisa, Juho)

14:45–15:15 Next steps, summary and feedback (shared meeting room/Armas-Lindgren)
- A summary of the discussions conducted and ideas discussed during the day
- Participants' feedback on the workshop and possible further measures

15:15–15:45 Coffee and conclusion of the event

WELCOME!

Content and methods of the workshop

Objectives of the workshop:
• to offer an opportunity for the persons responsible for the projects to share experiences and innovative practices
• to deepen the results obtained in the survey phase of the report
• to learn about best practices, and
• to network with other persons responsible for similar projects.

Themes of the projects discussed in the workshop: **active citizenship and digital transformations**

Advance preparations
Laptops for the small groups.
The participants have been granted access to the HowSpace platform in advance and they have been asked to introduce themselves on the platform. Equipment for making notes (paper and pencils) will be available in the workshop, but the primary tool for recording thoughts will be HowSpace.

General instructions for working in small groups
Those assisting the work of the small groups have three main tasks:

1. Making sure that the basic principles of group work are equality and dialogue and giving everyone an opportunity to present their views and express their thoughts. Each group will naturally have more talkative and more reflective participants.

2. Guiding the group so that there will be time to discuss all the questions within the given time frame. Plenty of time has been reserved for the work phases, but when the discussion is lively, people sometimes forget to keep an eye on the time. However, if any of the questions stimulates a lot of discussion, it is possible to use more time for discussing it than the other questions.

3. Recording the main thoughts arising during the discussion on the HowSpace platform of the event. The participants can also be asked to write their thoughts down on paper, and the supplementing information can be recorded on the HowSpace platform after the work phase has ended.

The participants sit in groups around tables. Each group has 6–8 participants.

The persons leading the work of the small groups participate in the work the groups and can offer their own views and experiences to start the discussion.

After the work in small groups has ended, the groups share the results of their work with the other participants. The group chooses a person to report the results from among its members (preferably a project actor).

Programme	Description
09:00–09:30	Morning coffee
09:30–09:45	Opening remarks and introductions, Anita Varsa, EDUFI, Meeting room Armas-Lindgren)
09:45–10:00	Presentation of the report and initial results, Minna Laatu, EDUFI
10:00–11:00	Work phase 1: What did we learn? Short introductions of the results of the Erasmus+ partnerships for cooperation in small groups. (by theme) The participants are divided into groups by theme and the groups are seated around tables. Each group has two participants from EDUFI. The work instructions are given at the beginning of the work phase and the facilitation questions are delivered to those assisting in the workshops before the start of the event. The group chooses a person to report the results from among its members (preferably a project actor).
11:00–11:15	Break
11:15–12:00	Work phase 2: Relevant approaches, potential development ideas, innovative practices Participants return to the shared meeting room (meeting room Armas-Lindgren) The small groups present their experiences and ideas to the whole group.
12:00–13:00	Lunch, restaurant Grand Brasserie
13:00–14:00	The digital meaning society is coming – which strong and weak signals are relevant to competence needs and civic engagement? Professor Emerita Sirkka Heinonen, University of Turku, Finland Futures Research Centre, meeting room Armas-Lindgren
14:00–14:45	Work phase 3: Development ideas, promotion of cooperation and further plans, working in small groups (by sector) Once more, the participants are divided into groups and sit together with representatives of their education sector or beneficiary party. The work instructions are given at the beginning of the work phase and the facilitation questions are delivered to those assisting in the workshops before the start of the event.
14:45–15:15	Summary and feedback • A summary of the discussions conducted and the ideas discussed during the day • Participants' feedback on the workshop day and possible further measures Next steps, Anita Varsa EDUFI, Minna Laatu EDUFI Feedback
15:15–15:45	Coffee and conclusion of the event

Summary of the workshop, main topics of discussion and main points of view

ERASMUS+ KA2 PARTNERSHIPS FOR COOPERATION/ WORK IN SMALL GROUPS
MORNING 15 April 2024
WHAT DID WE LEARN?

GROUP 1

What did we learn? What project outputs, ideas or practices will remain/remained in use after the end of the project? Did these outputs, ideas or practices emerge spontaneously or were they a planned part of project implementation?

- The methods were developed further in the context of a Master's degree programme, and many of them have remained in use after the project. A highly effective project consortium in which cooperation will continue after the project, and a follow-up project is being developed. Compared to other projects, we discovered how much you can do on Zoom or Teams.
- The project will continue working, and we will start building intensified cooperation and planning a new project based on the cooperation established during it. One consortium partner is also involved in the CBHE activity. The project kept well to the project plan, which helped pave the way for future activities. The article produced in the project lays the foundation for developing digital skills in the future. The project has resulted in really good project administration models that we have kept using and have also been able to use in other projects. How to establish effective cooperation in an online environment. Project communication and its significance were also highlighted, and the timing and channels of the communication. A new consortium was put together for the project, but we also involved the partners from the start in directing work packages, and the coordinating higher education institution only took on the last work package in the project implementation.
- We had a good team working together on the project, the partners shared the same culture. The cooperation has led to a Nordplus project. We no longer conduct administrative meetings face to face. Digital team work was really rewarding, and good practices were created for this. Learning analytics shows where more involvement by the teacher is needed in order for learning to progress better. The benefits of the virtual lab also came up, even though it was no substitute for an authentic lab, and it gave us the impetus to try out a VR lab and possibly take the lab work to the next level.
- Everything we did in the project was based on the plan and is still in use. The project was based on an earlier project in which we learned to share good practices, providing a basis for understanding that digital development involves some of the same needs. This led to a good project application. A steering group member from each organisation, who brought the results of the project directly to the steering group was also involved. This meant that separate deployment was not needed, and commitment was secured from the start. The staff's Teams skills had been improved already before the project, which made it possible to move teaching directly to Teams during the COVID-19 pandemic. It was good to rely on previous partners. Each partner is not doing exactly the same thing, but the reference model for developing the partners' implementations is the same.

If you were to highlight one thing that you have learned during the implementation of the project, what would it be?

- Keeping an open mind, listening and discussions, through which the project's sticking points can be identified
- Before starting the project, it is a good idea to read the budget carefully to avoid unpleasant surprises. And make it clear what you can achieve with the budget

- Art projects with participants from different higher education institutions carried out digitally are quite possible. There are many forms of art where a different form of communication is used. Different higher education institutions around Europe share many of the same challenges and issues.
- A systematic approach is important, and making it clear for all project partners how things are done and where information is stored. Everyone had their own responsibilities, and we worked together on online documents and, for example, the final report.
- In the role of the coordinator, we have asked the Finnish National Agency for Education questions concerning the bureaucracy. EDUFI had an open mind, and we considered the possibility of making changes. The threshold for asking questions should be kept low.

Did you have setbacks or challenges in the implementation of the project and if you did, how did you overcome them? What would you have done differently during the implementation of the project? Base your answer on your personal experiences.

- You should pause from time to time and look at your project, and decide how you can carry it out with the resources you have
- The launch of the project was delayed a bit, and the different holiday periods created challenges. The schedule must be planned well to avoid wasting time as the project period is quite limited.
- Allocation of personnel resources is important in projects, and it must be realistic and adequate. It is also good to prepare for changes in personnel and ensure their commitment.
- We encountered substance-related challenges, with a commercial company being involved in the project. We wanted to use learning analytics and had to negotiate with the company to get access to the data. We found an alternate way.
- The partner organisation was unable to influence the digital systems to which they had access, and decisions were made outside the organisation. Some countries were lagging behind in digital development, and we had to look for alternative ways of doing things in those partner organisations.

GROUP 2

What did we learn? What project outputs, ideas or practices will remain/remained in use after the end of the project? Did these outputs, ideas or practices emerge spontaneously or were they a planned part of project implementation?

Teaching in life sciences is developing rapidly, and we wanted to incorporate this in the instruction as it is the world the students live in.
Practices that we still use:

1) virtual labs, students get a grasp of lab work in advance or during a pandemic.
Challenge: for licensing reasons, we could not give access to everybody

2) Group work platforms were launched, which are important for developing working life skills, and it is also important to learn to assume responsibility for everyone

3) How could learning analytics be integrated into digital platforms?
> this was finally implemented on the Discord platform, as the first attempt with a commercial company failed to turn out a product that could have been used.

Life sciences themselves as well as health and other technologies, including AI use, are developing at an enormous rate right now. It is important that instruction in the field brings this knowledge and expertise to learners.

If you were to highlight one thing that you have learned during the implementation of the project, what would it be?

- The most important thing in a global project is first to genuinely find out about conditions in the partner country.
- You must enable the partners to gain more ownership, we should have a more facilitating role, the activity should be driven by the partners' needs.
  For example, in the local culture nothing happened before the project manager issued an order.
- Doing things together was the key. Everyone had some competence that others did not possess.
- Digitalisation, environment platform tools. A clear understanding of what you do with them.
  The tools change and evolve but understanding the goal is important.
- Project related to honour violence: Finland, Jordan and Italy.
  NGOs from all countries involved, from Finland also the police and the Finnish Agency for Health and Welfare
- The outputs were important, but so were encounters and visits, too.
  - A guide for interventions, occupational well-being issues were examined
  - Website for young people (initially an app)
- Libraries and the adult education centre worked together.
- Providing a learning environment in the library was a statutory duty under Finnish law, but the same activities were partly produced.
- It was noted that coordination was important to involve the most challenging students (those at risk of exclusion, older persons) in the activity.
- Digital accessibility: streaming and distance learning became part of daily life.
- Permanent cooperation with the library continued after the project: cooperation in form of events and lectures, book tips for preparatory education.
- Going outside your own four walls.
- Cooperation and planning have continued.
- The project made it possible to get to know other Finnish actors who are already collaborating
- Different lessons were learned from international partners. For example in Denmark, library pedagogues work in pairs, and we gained a lot of ideas from this.
- When you leave home, you can see things from a new perspective
- Successes were achieved in global cooperation: for example, patient guidance was an unknown concept in Bangladesh and Vietnam, and we felt that they understood it. Philosophical thinking, how to treat patients and how ownership should belong to the patient.
- Students' inclusion is also needed in learning.
  We also managed to operate remotely, even if the partners had no previous experience of international cooperation.
- Combining digital platforms and tools with art-based methods: how work in which contact teaching is in a large role can be carried out on a digital platform, and this is linked to professional identities: learning to see your potential. Career guidance activity.
- The emergency period resulted in cancelling activities: pressure to change plans and resort to hybrid approaches.
- Group formation and the planning and implementation of workshops remotely – positive experiences were gained.

Did you have setbacks or challenges in the implementation of the project and if you did, how did you overcome them? What would you have done differently during the implementation of the project? Base your answer on your personal experiences.

- The first meeting should be F2F to help understand the partner's situation and needs.
- From EDUFI's perspective, projects have progressed surprisingly well despite the challenges posed by the global situation.
- When writing up the project, the cooperation should be even closer, enabling everyone to have a say.
- Trust between project actors is important. More young people should have been involved in the development work.
- If the partner has not been involved in planning the project, you may not agree about things, which will increase the workload enormously.
- Document the cooperation methods and what has been agreed well to ensure a shared understanding.
  Recording meetings (on video), which makes it possible to check what has been agreed, and if there are problems with the connection, it is easy to go over things again.
  Engaging everyone in preparing the project application is important but sometimes challenging.
- The partner network may not always operate as desired. What has been written down may not always reflect the way we think.
- It is important to involve the partners in planning the project.
- Longer-term cooperation is needed, a two-year period is too short for project cooperation.
  We were challenged by rapidly changing situations but we coped with them.
- We could not find the kind of virtual world suppliers we needed. We spoke different languages. Getting the message across was difficult.
- Choosing a business life partner, and partners in general, is important.
- It was great that everyone saw the need for digital skills and platforms.
- The possibility to experiment with different and new things was also important, helping us find out if it was possible and helping others to develop, too.

GROUP 3

What did we learn? What project outputs, ideas or practices will remain/remained in use after the end of the project? Did these outputs, ideas or practices emerge spontaneously or were they a planned part of project implementation?

- A toolkit for people engaged in youth work. A mobile app was also completed and may be deployed after linguistic challenges have been solved.
- Workshop implementation: Engine room simulation. A question bank that we still use was created.
- Different operating and work models. A Moodle platform as a tool for training packages. Will need to be updated in the future.
- All teaching materials and pedagogy models are being used all the time. There was a clear need for the project, and the outputs corresponded to the project plan.
- The project has provided resources for development work. The projects also complemented previous projects and each other.
- The outputs have included tools and methods for making sustainable development ideas visible in the daily life of vocational education and training.

- Among other things, recycling at the institution has been developed, and a Moodle course on sustainability was produced for common studies. A Sustainable development path was also developed. Also combined with VASKI project activities.
- The end result was operating models for dealing with different themes in class.
- Tampere Adult Education Centre develop a path model for improving the digital competence of the organisation and staff. A framework for personal appraisal discussions was created and is still in use today.

Did you have setbacks or challenges in the implementation of the project and if you did, how did you overcome them? What would you have done differently during the implementation of the project?

- Challenges related to work culture and factors in the field of youth work. The pandemic also influenced this situation.
- The pandemic, war in Ukraine, earthquakes
- Consistency of outputs and possibility of tailoring
- Making project partners' roles clear, common terminology. Change of coordinator. Personalisation of the project.
- A personal competence development plan model for the personnel that serves as a framework for personal appraisal discussions. Models and activities developed in the project are still used in staff development.
- Making sustainable ideas in VET and global education part of daily life. The themes had been highlighted in the partner institution's facilities. As a by-product, sorting of waste and recycling have developed in the institution. A compulsory Moodle course on sustainability themes was developed for the institution. A sustainable development path was developed, which provides optional courses. The project has been developed further in workshops where the inclusion of sustainability in qualifications has been discussed. Cooperation between different projects has been strengthened.
- Teaching materials for blended learning story telling is still in use. The project has developed a pedagogical approach.
- A engine room simulation related to vessel maintenance. Development work focusing on renewable fuels continues.
- Putting together an electronic toolkit and a possible mobile application to resolve situations related to honour violence among young people.
- Turnover of project actors.
- Dependence of the project on specific persons (Coordinator replaced during the project).
- Project partners' reliability and shared values.
- It is important to define the roles of all project partners precisely in the early stages of the project. Creating a common understanding of the project's objectives and expected results.
- The war in Ukraine and the earthquake in Türkiye affected the arrangements for the final meeting.
- Due to the pandemic, there was no possibility of meeting in person.
- Differences in work culture between countries. Youth work in Finland is highly organised.
- Terminological differences were a challenge. This is why we defined common terms.

If you were to highlight one thing that you have learned during the implementation of the project, what would it be?

- We learned a lot about the features and terminology related to the theme in different countries. In the beginning, it is important to define common terminology.

- There were many changes in the course of the project, and we coped with them.
- We used virtual co-creation methods. The teaching staff coordinated the activities, and some of the teachers acted as researchers in the project and monitored the achievement of its objectives. The project partners' commitment must be ensured from the beginning of the project. Shared leadership is the key.
- We dealt with the challenges created by the pandemic flexibly and agilely.
- The project taught us a lot about the digital transformation and remote work. Despite the difficulties, we continued updating the plans. New operating methods were introduced. Flexibility in carrying out the project and perseverance.
- Engaging the management in organisation-level measures.
- Implementing the project's co-creation workshops (stakeholders) virtually. Shared leadership perspective of a virtual team. This way, the commitment of each person in the team could be secured. Drivers of development.
- War in Ukraine: approval of changes to project activities
- Honour violence.
- The perspective of internationality and different cultures. Defining shared terminology.

GROUP 4

What did we learn? What project outputs, ideas or practices will remain/remained in use after the end of the project? Did these outputs, ideas or practices emerge spontaneously or were they a planned part of project implementation?

- The digital youthcard.eu tool developed in the project is still in use. A few municipalities use this tool in Finland. In other countries it is used less, and they are also lagging behind in digitalisation. The project had an inexperienced coordinator from Europe, youth work is uncoordinated elsewhere in Europe.
- We still use a workshop-based method. The students in the workshops come and go, the teachers stay. In the anti-racism project, teachers were sent to different countries, the impact of the activity was considered, internal growth in the project was lacking. The operating model must be considered in advance.
- With schoolchildren, you need to consider basic things, such as their first trip abroad. Student union and board activities are developing. We are considering how teachers expand and target children's inclusion and participation as widely as possible. Alternative implementations where digital tools are not possible, for example in Hungary, in which country a digital escape room was implemented live without digital devices.
- Higher education as the target group, other organisations had different target groups, and communication remained superficial. The outputs were achieved, but the localisation of the output in Finland meant that the entire output had to be rewritten for Finnish purposes. The developed model was mainstreamed in our organisation.
- Miro in use, iterative construction. The pandemic forced us to improvise, and all meetings were organised by hybrid means. We learned about hybrid work.
- For the Toolkit, information was collected on how to promote the accessibility of digitalisation in higher education institutions, but we realised that it is not worth reinventing the wheel. The partners' job descriptions should be as accurate as possible to ensure that the results promised in the application can be achieved.

Did you have setbacks or challenges in the implementation of the project and if you did, how did you overcome them? What would you have done differently during the implementation of the project? Base your answer on your personal experiences.

- It is important to have a personal relationship with project partners. It is vital to know who you are dealing with, and building trust with new partners takes time. This is why carrying out projects with familiar partners is easy.
- The selection of partners at the planning stage of the project is important, commercial actors hamper project work, and the content often remains poor. The concentration of projects on a small group undermines their impact.
- You can never talk too much about the objectives of the project. It is important to open up concepts and objectives. This is vital at the beginning and throughout the project period. The project partners may be very different and speak different languages. Ensuring that everyone understands the objective in the same way affects the quality of the project.
- At the application stage, being realistic is important, and you should not make excessive promises in the hope of getting funded. It is advisable to describe what, for instance, website maintenance means. The persons writing up the project may be different from the implementer.
- Objectives that are too ambitious can hamper the activity, it is important to make the concepts clear. Rather than excessive focus on Finland, European-wide objectives and activities are needed.
- Collecting feedback and changing the direction of the project if necessary
- Putting the group of project partners together based on strengths and competences. If the aim is to develop digitalisation, you need to ensure that all partners have adequate hardware for the project.

Other observations:

- Digitalisation and inclusion cannot always be separated

GROUP 5

What did we learn? What project outputs, ideas or practices will remain/remained in use after the end of the project? Did these outputs, ideas or practices emerge spontaneously or were they a planned part of project implementation?

- Teaching methods, new ideas for instruction from international cooperation (incl. roundtable discussions between students and politicians in a partner organisation – this method has also been used later), new competence, new networks
- Guides with practical exercises; articles used in training; a MOOC course
- A MOOC course was produced in the project (included in the curriculum, an optional course at the University of Eastern Finland). Not initially included in the project plan, but as the pandemic hit, the project was modified and the MOOC was produced.
- The network of project partners, in which everyone has their specific competences. A well-functioning network.
- Introducing a common platform in all partner organisations.
- If you were to highlight one thing that you have learned during the implementation of the project, what would it be?
- How important it is for students to have opportunities to work on concrete problems and with actual working methods in addition to theoretical studies
- The practices for project activities and delivery of education vary between higher education institutions in different countries. Despite this, cooperation is possible.
- Those engaged in excessive numbers of projects should be avoided as partners.
- As a compulsory course for geography students, a free-choice course in the project partners' organisations

Did you have setbacks or challenges in the implementation of the project and if you did, how did you overcome them? What would you have done differently during the implementation of the project? Base your answer on your personal experiences.

- Different school culture in different countries. Despite this, the collaboration went well.
- The teaching and study cultures of the higher education institutions involved in the project differed from one another (student-centric vs. a lecturing teacher). Discussions helped to understand different working methods.
- The project generated new ideas that it would be important to work on together in the future, for example in the context of artificial intelligence and distance learning.

ERASMUS+ KA2 PARTNERSHIPS FOR COOPERATION/ WORK IN SMALL GROUPS AFTERNOON 15 April 2024

DEVELOPMENT IDEAS, PROMOTION OF COOPERATION, FURTHER PLANS

GROUP 1

Development ideas, promotion of cooperation, further plans. What kind of thoughts did the future change in competence needs presented in the talk we heard this afternoon evoke?

- There is no more faith in future – the future is seen exclusively in a gloomy light – also affects engagement with instruction/education
- Focusing on opportunities instead of threats
- The pace of change is enormous, how to keep up with the change
- What will the basic skills of adults be in the future? How can these needs be met and people reached?
- Reducing student numbers and how remote/digital teaching can be used without, for example, closing down small village schools and local schools
- Good experiences have already been gained of organisation of online teaching in different fields. The pandemic has made new experiments necessary. New experiments before something forces you to change, such as a pandemic.

What kind of needs for change do you identify in your sector?

- An interesting link in today's news relevant to the themes we discussed in the workshop: https://yle.fi/a/74-20081956
- Encouragement and teaching of active citizenship – active children grow up to be active adults. Teaching of civic skills (learning about ways to exert influence)
- Futures research should also be included in curricula.
- The learning outcomes and basic skills deteriorate, and there are huge differences in students' knowledge and skills
- What skills do we wish to prioritise in the future and how will resources be allocated to them
- Digital skills vs. mobile skills – young people's skills are not as good as we often think.
- If information is not easily accessible, people will not make an effort to find it
- How to make the effort of learning more rewarding. How can we also engage those who are not prepared to make sustained efforts – the rewards of gamification in language learning as an example
- Resilience will become more significant in the future. Even now, young people's ability to adapt to new situations may be poor, so how can it be supported in the future

- Reduced resources for liberal adult education, for example, while the needs stay the same
- People need places where they can create, do things with their hands and experience togetherness, and this is something liberal education offers
- Erasmus+ projects translate the significance of language proficiency, for example, into concrete terms and promote commitment to learning

GROUP 2

Development ideas, promotion of cooperation, further plans. What kind of thoughts did the future change in competence needs presented in the talk we heard this afternoon evoke?

- Cross-sectoral, multidisciplinary cooperation is important
- Talking about values in your sector is important
- Vocational education and training: the importance of general knowledge and ability, feeling of being able to exert influence through such as tutor activities and other forms of participation, democracy education
- Getting rid of mobile phones in the classroom
- How can we support young people's growth and life online?
- Future working life skills? The list given in the presentation is already reality today
- Where is the intrinsic value of general knowledge and ability and the joy of learning? Should they be reinvented?
- Continuous learning, is everything done from the perspective of usefulness alone
- Education vs. general knowledge and ability
- Empathy and cooperation skills were also emphasised, associated with general knowledge and ability
- Futures thinking should also be extended to schoolchildren
- Who will make the future? > Today's children, will they be the producers of the future, or is it an intrinsic educational and cultural value?
- Occupations are changing, but are they disappearing? For example, a video cannot replace a teacher
- Values remain fairly unchanged, what kind of values do we want to promote and pass on?
- Participation must be practised, for example in leisure activities, experiences of being able to exert influence are important
- Boring routine tasks can be done by robots and artificial intelligence
- Narrowing of the education base?
- There are people who will not or cannot develop their general knowledge and ability, what does this mean? How can we stop people from being excluded in society?
- How can we offer activities in which all young people are welcome, regardless of their background and identity? For example, education and youth services could consider the future together across the sectoral boundaries, not only internationally but also locally.
- Self-knowledge skills are important. Experiences of success, belonging and participation are important

GROUP 3

Development ideas, promotion of cooperation, further plans. What kind of thoughts did the future change in competence needs presented in the talk we heard this afternoon evoke?

- Digital learning is influenced by infrastructure, learning difficulties, and linguistic and cultural issues. An extensive field. It is good to have a wide range of competences from hard technology to cultural and social issues onboard.
- Immigrant students seemed marginal in partner countries. No research or analysis has been conducted. Collecting success stories could be interesting. They could indicate which factors create opportunities for success and provide examples. Belgium, Romania, Spain and the United Kingdom >there are immigrants but no research evidence or knowledge of whether they drop out or do well.
- Learning difficulties as a general theme, the coordinator was interested in immigrants' competence, above all. Writing the handbook was challenging for the partners as the contexts were so different.
- Enables wonderment and learning.
- The importance of the location and landscape for older people should be considered? There could be more cross-border cooperation. Cooperation in the healthcare and social services sector and, for example, geography could be possible.
- An age-friendly society will not be exclusively created by healthcare and social services professionals. How can we secure the involvement of engineers, technology, business, culture, urban planning, etc. in an age-friendly society?
- Communication can be used to describe the alternative, but you need to think about how you can inspire others as well.
- Project partners were more inclined to talk about cooperation with architects and engineers. In Finland, cooperation has mainly focused on specific issues.
- Who is responsible for deciding what kind of language proficiency you need to work in Finland?
- In the case of immigrants, what kind of responsibility do higher education institutions and working life have for the teaching and learning of languages, and what is the learner's responsibility?
- Should employers also carry some of this responsibility? Should those with a Finnish background make a conscious effort to listen better to people who do not speak the language perfectly?
- In addition to substance issues, more attention is being paid to generic skills.
- Such skills may include digital skills and, for example, the ability to take learning challenges into account.
- In curriculum work, it is important to note that today's students will be in working life for another 40 years.
- Benchlearning, 'portable skills', have been increasingly highlighted.
- Should a module in futures research be part of studies in all fields?
- Students should also have a willingness to think about the future based on the worst case scenario. Finding solutions for the worst case scenario >Active participation.
- It is a good idea to let students choose the type of scenario they want to find solutions for. Motivating, can also be applied in other contexts.

GROUP 4

Development ideas, promotion of cooperation, further plans. What kind of thoughts did the future change in competence needs presented in the talk we heard this afternoon evoke?

- An inspiring contribution. It touched upon many themes that concern our work: Future operating environments for Master's degree students, a study unit on sustainability for UAS students, futures awareness, reflection on the growth of students' identity work in the Academy of Fine Arts: consideration of continuous self-reflection.
- In project cooperation, there are many areas that could be developed together.
- Competence in meanings is central in the arts sector – this should increasingly be considered in education in the field
- The perspective of marketing and communications. The presentation contained a lot of routine stuff about marketing – the market has tools for change, and marketing has so much to offer for designing meanings and recognising emotions and experiences.
- The marketing perspective has not always been so well received by different fields of science.
- In marketing, impact is measured all the time
- Strategic continuity and impact in project work, projects with a period of 2 to 3 years?
- Strategic planning for years ahead, how can it be done in this financial instrument? Combining projects meets the needs and is very successful in an international environment. >When one project ends, the future should be considered systematically within it.
- The growing need for rehabilitation arises from megatrends (demographic change, climate change, digitalisation).
- Black swans – for example, the pandemic changed a great number of things in rehabilitation and left its permanent mark. How do you sell the idea to the funding provider and in your own organisation?
- Rehabilitation: the importance of peer groups – rehabilitation is always a process of change. What opportunities do different digital platforms open up? How can we use them as part of rehabilitation?
- Digitalisation is a tool: the project is necessary because digitalisation is only a tool.
- Thinking a long way ahead is something that you must change in your own and the project team's mentality.
- Media criticality and media literacy: you must be able to assess and analyse, and to distance yourself
- As digitalisation evolves, things change rapidly – as more information becomes available, it must be possible to change the project plan if a new trend is emerging.
- The future does not make headway at an even pace in international projects, the differences may be great and big leaps may be taken elsewhere at a different pace from us. For example, this can be seen in East African countries.
- Weak signals: we engage in development from the perspective of what we wish to promote. Do we close our eyes to weak signals that are negative?
- Digitalisation vs. downshifting: e.g. digital Luddites – is this a rising trend? People already refuse to use certain platforms, for example citing information security. --> People start looking for personal solutions more individually.
- Social media is becoming fragmented
- I am no longer afraid of change: I have the patience to listen better than before.
- Cooperation between fields is a must – without business cooperation, you cannot learn.
- The slow pace of the change is frustrating, for example in the field of climate change, and large companies must be engaged in combating global warming, in particular.
- The importance of flexibility in a rapidly changing world.
- Have we made things too rigid? What if such a big change occurs that, for example, the project plan must be rethought?
- Innovation cooperation, how can you know its results in advance?

GROUP 5

Development ideas, promotion of cooperation, further plans. What kind of thoughts did the future change in competence needs presented in the speech we heard this afternoon evoke?

- Values and futures research (neutrality and ethics of research? Who supervises them?)
- Futures research is based on personal values.
- Impartiality of futures research?
- Universal values are a weighty foundation for futures research. Strong reflection of values is needed. Ethical aspects of futures research. Research ethics.
- Multidisciplinarity and cross-sectoral cooperation open up views and highlight the value of multidisciplinarity in instruction. From the perspective of instruction, these should be taken into account. What is the future need for formal qualifications?
- Education based on traditional subjects may come to an end in the future – basic skills may be classified in a new way. How can we educate students for occupations of the future?
- Enabling learning will be emphasised more in the future
- A precondition for the digital transformation is developing different and diverse literacy skills.
- The changing job descriptions of the future will require micro-competence modules
- Job descriptions already require a new approach to staff training.
- Student administration should also be developed in agile ways – a lot of 'rigidity' still remains that does not enable flexible development activities (old structures)
- How can disinformation be controlled?
- Futures research should be taught from basic education onwards.
- Futures thinking should be included in the curriculum
- Formal instruction will change and education based on a traditional division into subjects is already on the line.
- We must consider what skills are needed in the future and plan the instruction accordingly.
- Adaptation to new situations. Different modes of teaching should be enabled.
- Working life is changing, and education must also change.
- We think about things from different perspectives in different parts of the world
- Smaller study units will be necessary
- In the future, possibilities to organise cross-institutional studying and international modules
- Structures remain rigid. The system should allow flexibility in studies and study units.
- A shared digital platform has been built for higher education institutions, technical challenges have been encountered in its implementation.

What kind of needs for change do you identify in your sector?

- Multidisciplinarity
- Multiprofessionalism
- More flexible structure for education administration
- More flexible and individualised curriculum structure.
- Is it possible to get funding for this?
- In the higher education sector, the students should increasingly take control of their learning
- Identification of prior learning and using it for current studies.
- Diverse competence is a competitive advantage in the labour market

APPENDIX 4. List of information sources

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Erasmus+ and European Solidarity Corps Inclusion and Diversity Strategy
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Finland's National Inclusion and Diversity Strategy for Erasmus+ and European Solidarity Corps programmes

Environmental Responsibility Strategy of Finland's National Agency for Erasmus+ and European Solidarity Corps programmes 2021–2027

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Online
ISBN 978-952-13-6963-6
ISSN 1798-8926

Finnish National Agency for Education
www.edu.fi