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Intellectual Output 2 Future of Jobs

Counsellors Study and Training Exchange Programme (C-Step)

Didactical Framework

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Preface

Industry 4.0 or the Fourth Industrial Revolution is driven by technological innovations that have profound effects on both production systems and business models. Although not a brand-new technology, the concept of industry 4.0, or 'Smart' technology, is new to quite a lot of people.

One of the major challenges that career practitioners face is that they don't know the landscape of the future labour market. As a result, it can be difficult to offer careers advice when the labour market is changing in such a fundamental way to include jobs, we aren't yet aware of, reduce the needs for jobs we currently have and to change current jobs in unforeseeable ways. This may mean that careers practitioners will need to focus more of their time on learning about current labour market trends, for example, which areas are growing and why, which areas are shrinking a why etc. In addition, as the future labour market is unpredictable, there may need to be increased focus on informing clients that their careers may not be linear, as many careers have historically been.

Increased mechanisation is accompanied by a changed range of tasks for employees and the development of new fields of activity and occupation. The execution of these new fields of activity and occupation requires a corresponding range of qualification and further training measures for companies, entrepreneurs and employees. Reskilling, upskilling and lifelong learning also play a role in counteracting the risk of employees becoming "incapacitated" as a result of new forms of social interaction between man and machine. In addition to requirements for new competence and qualification profiles of employees, a further (inter alia social) requirement is evident in employee data protection and data security.

Particularly with regard to the shortage of skilled workers, digitisation is emerging more and more strongly and is becoming a central topic. A central problem at this point is the fundamental speed of the digital transformation, which can only be considered retrospectively in consulting concepts. Whereby, in turn, any necessary content could be outdated. Especially with regard to digital competences, counselling concepts are currently in the process of adaptation and redesign.



Introduction

The aim of Academia+ is to support the provision of better services and guidance on competencies and qualifications by focusing on the development of training programmes that address urgent issues and current key challenges in the European labour market and career counselling. The topics for the three Counsellors' Study and Training Exchange Programmes (C-STEP) were chosen according to their importance for the current labour market: Counselling migrants and refugees, Future jobs and Demographic change.

The second C-STEP refers to the topic "Future jobs", as one of the current challenges of the European labour market and societies. By a specific transnational developed curriculum a variety of training seminars/ learning modules are provided in order to strengthen the competencies of guidance professionals and increase their knowledge in this theme as well as to improve the quality of guidance and counselling they delivered in the public employment services.

To this end, Academia+ strongly refers in these didactical guidelines to the EU project CMinaR1 (CSTEP 2 builds on outcomes and products having been developed in this previous EU-funded project), a project that dealt with creating seminars for staff and counsellors in public employment services and also for the target group of counsellors, which attend higher education courses. More specifically, in the 'CMinaR' project partners from DE, IT, SE, TK and the UK developed Higher Education courses and courses for practitioners of counselling to teach and train (future) counsellors in educational and vocational guidance.

Basing on the outcomes of the analysis of the target group's specific needs carried out in these outputs first phase as well as specifics of the Academia+ (i.e. considerably shorter training periods), the materials from the CMinaR project have been adapted to the more practical training for guidance practitioners.

That said and as mentioned above, the didactical framework presented here refers to the topic "Future jobs", issue which is of high importance in Europe in recent years. The content it refers to in this C-STEP 2, generally speaking, deals with the general situation of Industry 4.0 and the impact on labour.

Career counsellors more often have to cope with new challenges that arise from the digital transformation and the new (soft and hard) skills requested from the labour market. The client has a variety of challenges and only a few of them are connected to labour market issues. As a result, the counsellor must reflect on the complexity of the client's situation and that their challenges also refer to a variety of issues.

The following overview of topics are the product of combined aspects, which afford a didactical reflected implementation.

¹ Erasmus+ KA2 Strategic Partnership project 'CMinaR' - Counselling for Refugee and Migrant Integration into the Labour Market – Development of Courses for Higher Education and Public Employment Services". More information on the project website: <https://www.cminar.eu/>



1. Content of the C-STEP 2: Future jobs

One of the largest challenges that career practitioners face is that they don't know the landscape of the future labour market. As a result, it can be difficult to offer careers advice when the labour market is changing in such a fundamental way to include jobs, we aren't yet aware of, reduce the needs for jobs we currently have and to change current jobs in unforeseeable ways. This may mean that careers practitioners will need to focus more of their time on learning about current labour market trends, for example, which areas are growing and why, which areas are shrinking a why etc. In addition, as the future labour market is unpredictable, there may need to be increased focus on informing clients that their careers may not be linear, as many careers have historically been.

Increased mechanisation is accompanied by a changed range of tasks for employees and the development of new fields of activity and occupation. The execution of these new fields of activity and occupation requires a corresponding range of qualification and further training measures for companies, entrepreneurs and employees. Reskilling, upskilling and lifelong learning also play a role in counteracting the risk of employees becoming "incapacitated" as a result of new forms of social interaction between man and machine. In addition to requirements for new competence and qualification profiles of employees, a further (inter alia social) requirement is evident in employee data protection and data security.

Particularly with regard to the shortage of skilled workers, digitisation is emerging more and more strongly and is becoming a central topic. A central problem at this point is the fundamental speed of the digital transformation, which can only be considered retrospectively in consulting concepts. Whereby, in turn, any necessary content could be outdated. Especially with regard to digital competences, counselling concepts are currently in the process of adaptation and redesign. Consulting is subject to the digitisation process in two respects: On the one hand, consulting and an entrepreneurial consulting offer is always strongly dependent on the current development in the respective companies. A constantly differentiating entrepreneurial requirements practice requires a holistic approach and focus, both for companies and for consulting. On the other hand, consulting itself as an entrepreneurial offer on the market is subject to digitisation processes, especially with regard to the current corona situation, digital consulting is increasingly coming into focus. In this respect, consulting is of course always confronted with the challenge of designing one's own meaningful concepts that incorporate and think along with digital processes. Both for the consultancy itself and as an indispensable development of its target group.

The contents and the learning outcomes of each Unit are described consecutively:

Unit 1: Industry 4.0 and the impact on labour

The second online training day from the first Counsellors Study and Training Exchange Programm (C-STEP) in the Academia+ project is focused on the topic „Industry 4.0 and the impact on labour“. Thus, the session will be focused on Industry 4.0, what it means, what are the trends, how has it already been incorporated, what will the future world of work look like in the Future and what we can learn from industrial revolutions about skills needed can be covered.

Therefore the unit should cover basic concepts about industry 4.0 - introduction to Industry 4.0 and historical approach to industrial revolutions. Furthermore the unit should focus on the new trends for industry 4.0, how has it already been incorporated, what will the future world of work look like in 2030 – 2050, and what we can learn from industrial revolutions and the skills needed that can be covered. This will be the basis for Industry 4.0 and the impact on labour.

By focusing on the above mentioned contents unit 1 aims to meet the following **learning outcomes**:

Understand what is Industry 4.0 and the historical approach to industrial revolutions;

Be able to explore the trends which shape the world of work, the impact of technology and industrial revolutions;

Understand the skills and knowledge required in the workplace of the specific job role;

Understand the future of work and future of counselling.

Unit 2: Challenges and opportunities for companies within Industry 4.0

The fifth online training day from the first Counsellors Study and Training Exchange Programm (C-STEP) in the Academia+ project focused on the topic „Challenges and opportunities for companies within Industry 4.0“. The unit points to the Challenges of the Industry 4.0, the change and resilience towards the digital transformation and some possible barriers on the process.

This unit will also cover the challenges of the staff and structure of the company such as investing in a skilled workforce, keeping pace with new technologies, competing for a skilled workforce, training, gaps between skills needs and supply, inequality of skill/employment access, motivation of employees to follow the development, prevention of social exclusion, labour mobility, as well as challenges of Industry 4.0 related to competition, which are the main challenges and ways in which careers practitioners can help overcome them.

Furthermore, the unit focuses on Industry 4.0 opportunities new businesses, new business models and new products/services and organization of work.

By focusing on the above mentioned contents unit 2 aims to meet the following **learning outcomes**:



Analyse challenges arising from change and resilience towards the digital transformation;

Analyse the challenges for the staff and the structure of the company;

Understand the main challenges and ways in which careers practitioners can help overcome them

Identify the opportunities for new businesses/ Business models and new products/services

Unit 3: Upcoming trends

This online training day from the first Counsellors Study and Training Exchange Programm (C-STEP) in the Academia+ project focused on the topic „Upcoming trends“. Thus, the session will be focused on the new jobs and competencies which characterize the new world of work. In particular, topics such new business models and new approaches for emerging markets, new professions and working condition, new job and skill demands and the most emerging and declining occupations and skills.

Furthermore, the unit focuses on new technologies and industries they will influence, the new technologies that will have an influence on the way of working in this 4th industrial revolution and influence of the virtual technologies in their daily job as career counsellors.

By focusing on the above mentioned contents unit 3 aims to meet the following **learning outcomes**:

Identify new jobs and competencies which characterize the new world of work.

Analyse new business models and new approaches for emerging markets and identify new job and skill demands

To know new technologies and ways of counselling in view of the new trends in the labour market and potential impact on employment demographics

Unit 4: New skills and competences

This online training day from the first Counsellors Study and Training Exchange Programm (C-STEP) in the Academia+ project focused on the topic „New skills and competences“. The unit points to the meaning of soft skills, as a core competencies on the current Industry 4.0 (interdisciplinary skills for future workers) and they gain some input of these skills, and ESCO and new hard skills (technological skills) which are relevant to develop in the current/future labour market based on the effects of digitalization in the labour market.

Upskilling/retraining of staff

This unit will also cover the issue of Upskilling/retraining of staff - digital literacy, retraining and learning different skills, Lifelong Learning, work-based learning and digitalization of industry and updates on education in the view of the 4th revolution.



By focusing on the above mentioned contents unit 4 aims to meet the following **learning outcomes**:

Understand the meaning of soft skills, as a core competency on the current Industry 4.0

Learn about ESCO and new hard skills (technological skills)

To know about upskilling/retraining of staff

Be aware about the updates on education



2. Structure Plan

The first online training week (C-STEP 2) is divided in four learning units, with 360 minutes classroom teaching/lessons each day (340 minutes for teaching and learning plus approx. 20 minutes for wrap up, questions by the lecturer/open questions from the participants or final discussion within each learning units).

The overview of topics addressed in the learning units that make up the CSTEP2 are presented into the following flowsheet of the one-week online training:

Table 1: Overview of the learning units in C-STEP 2

Learning Units	Unit 1. Industry 4.0 and the impact on labour	Unit 2. Challenges and opportunities for companies within Industry 4.0	Unit 3. Upcoming trends	Unit 4. New skills and competences
Contents	1. Introduction to Industry 4.0 and historical approach to industrial revolutions 2. Drivers of change 3. Business & Technology - A summary lecture on embedding Health and Wellbeing into Business Models and Processes 4. Future of work and future of counselling 5. National strategies/support activities 6. Wrap up and final discussion	1. Challenges: Change and resilience to it 2. Challenges: Staff and structure of the company 3. Challenges: Competition 4. Opportunities: New businesses/ Business models and New products/services 5. Opportunities: Organization of work 6. Opportunities: Thoughts of the participants 7. Wrap up and final discussion	1. New jobs and skills 2. New technologies and industries they will influence 3. virtual study visit “Hirschtec - Agency for digital workplace 4. The Influence of Digitalization on Career Guidance 5. Wrap up, open questions and final discussion	1. New soft skills - The soft 2. New hard skills Upskilling/retraining of staff Updates on education Wrap up and final discussion

All learning units are structured to fit in the one-week-C-STEP. The lessons can follow the pictured schedule pattern in Table. 1. A different structure of the whole C-STEP 2 is possible.



3. Didactical principals for procedure of learning units

The target group's specific needs can be put to the formula that, practitioners in career guidance and counselling need practical knowledge, skills and experience to fulfil their job properly². As this is clear in the sense of the expectations of the participants, the didactical principals must refer to general principals of adult learning and vocational training. Besides the content-based knowledge pointed out above in chapter 1, following an international competence model on Career Guidance and Counselling (CGC)³, the online training refers in general to a competence-based approach (Cedefop 2009) and addresses the following questions:

What CGC key competencies guidance professionals (career counsellors, practitioners, advisers, etc.) have/need on his/her professional practice?

What CGC key competencies guidance professionals (career counsellors, practitioners, advisers, etc.) have/need for his/her successful career development?

What knowledge and core competencies can the practitioner learn from these topics for her or his practical work?

How can practitioners reflect transnational topics of the learning units on a national level for her or his practical field?

How can the participant of the online trainings bring in important topics derived from a national perspective?

How can counsellors transfer the acquired knowledge and competencies by this training to their professional practice? What can I take to my professional practice?

How is the didactical mixture of inputs and active work in groups, online study elements and so on with reference to the lecturers and to the participants?

How an online training involves the acquisition of new digital skills by career counsellors, both for their training and for their work?

² The model based on **Lifelong Guidance** entails the assumption of new methods, forms of organization, resources and innovative materials which involves the confluence of different core competencies in professional work (Schiersmann, et al., 2012).

³ The development of **common European Competence Standards (ECS)** for the academic training of career practitioners in Europe and how to implement and establish such competences in the practice is required. Hence, quality standards of guidance services and the professional profile of guidance practitioners should be framed according those ECS for the academic training of career practitioners (NICE, 2016).



Critical reflection

As all participants are predetermined by a specific culture and have been raised in and by a specific socialisation due to professional, public and political discourse on common topics especially in issues of migration, refugees and integration of new immigrants, we have to create first of all an awareness of the impact of all of the implicit subjective knowledge each participant brings along to the online training. All participants need a critical reflection on her or his perspectives, experiences and points of view.



4. Anticipated learning outcomes

The participants should develop the following competencies and close knowledge gaps within the C-STEP 2 or afterwards with the help of the online sources:

Participants should understand what is Industry 4.0 and the historical approach to industrial revolutions;

Participants should be able to explore the trends which shape the world of work, the impact of technology and industrial revolutions;

Participants should understand the skills and knowledge required in the workplace of the specific job role;

Participants should understand the future of work and future of counselling.

Participants should be able to analyse challenges arising from change and resilience towards the digital transformation;

Participants should be able to analyse the challenges for the staff and the structure of the company;

Participants should understand the main challenges and ways in which careers practitioners can help overcome them

Participants should be able to identify the opportunities for new businesses/ Business models and new products/services

Participants should be able to identify new jobs and competencies which characterize the new world of work.

Participants should be able to analyse new business models and new approaches for emerging markets and identify new job and skill demands

Participants should be able to know new technologies and ways of counselling in view of the new trends in the labour market and potential impact on employment demographics

Participants should be able to understand the meaning of soft skills, as a core competency on the current Industry 4.0

Participants should learn about ESCO and new hard skills (technological skills)

Participants should know about upskilling/retraining of staff

Participants should Be aware about the updates on education



5. Organisational aspects

The participants of the online training vary a bit between our partner countries of the EU project due to different structures in the organisational structure. The following characteristics are common though:

Modality: online training

Use of common platforms: Zoom, MS Teams

Temporality: each training unit is developed in one week

Schedule: the online training week (C-STEP) is divided in four learning units, with 360 minutes classroom teaching/lessons each day

Group size: 100 participants enrolled

Sex of participants: Mixed group

Educational background of participants: university degree (career guidance studies, pedagogy, psychology, psycho-pedagogy, sociology, law, economics, etc.), Vocational Educational Training (VET), etc. The participants have some kind of experience in career guidance and counselling (either theoretical or practical, or both).

Profession/professional role: career counsellor, guidance practitioner, career guidance specialist, adviser, teacher, lecturer of career guidance, trainer, etc., and guidance professionals which are part of the Academia Network⁴.

Organisation/Institutions of origin: Public Employment Services, Vocational Educational Training centres, Euroguidance Network, Universities, Psycho-pedagogical offices/departments, Associations, NGOs, Social services, etc.

⁴ <https://www.euroguidance.eu/international-mobility/academia>



6. Methods and material

Due to the COVID-19 crises, the first C-STEP “Counselling migrants and refugees” has been converted into a four-day online training taught by a series of webinars⁵.

With the intention of performing an active, interactive and dynamic methodology with the class participants, so that the entire group is kept on board without the risk of possible dropouts due to lack of interest or motivation, lack of awareness, etc., various are the activities and dynamics addressed in these learning units.

The four units that make up the first CSTEP are a whole day online training, which combines input sessions with group work and self-learning sessions as well as plenary discussions. Thus, a mix of lectures, presentations, videos, group work, practical examples, text analysis, reflexive exercises, conference meeting tools and group work tools are proposed.

All the material are provided via the Moodle learning platform of Academia + project. More information on: <https://www.academiaplus.eu/moodle/course/view.php?id=6§ion=1>

The Moodle Structure

Moodle was chosen as the platform on which all the material is provided. One of the advantages of Moodle is a clearly arranged overview with which the material can be presented.

The chosen structure on Moodle follows generally the respective structure of each day of the online training. Every speaker with his or her session have their own section on the course page. One can find the presentations, videos, exercises, sample solution etc., always in the respective section of the speaker. The files can be found there, they are always numbered in ascending order. So the session can be worked through like a learning module. There are longer input presentations, exercises on various aspects and also smaller contributions from the speakers.

How to use the documents on Moodle

The provided documents are always available as PDF files to ensure a usage on most devices. Videos are inserted as a stream directly from the Moodle page so one does not need a separate flash or media player. Sometimes it is added a YouTube link on the page or on the additional material. In most cases, when the speakers have shown a video on their session, can be found this on the video (recording of the session) was prepared on Moodle. So the external YouTube link is additional; maybe if one wants to watch it again or with different subtitles. Can be found the links for the YouTube videos in every presentation as one works trough them.

⁵ <https://academiaplus.eu/c-step-1/>



In general, there are 7 different types of documents on Moodle.

Table 2. Documents on Moodle

Moodle learning platform of Academia + project	
Videos	Each session has at least one video that consists of the recording of the online training day. As these are made available directly on Moodle, every participant/ interested party can access the videos directly on the platform. No extra software or similar is necessary, so that easy access can be guaranteed
Presentations	On every session can be found the presentation used by the speakers in the online training. Depending on whether it is a coherent input presentation or a working session with smaller input presentations, can be found one document with the whole presentation or a splitted presentation. These include a smaller input session from the speaker or preparations for a group work or an exercise. These documents are always named with 'presentation' and the specific name of this short session
Exercises	In different sessions the speakers prepared some exercises and group work. These documents are named with 'exercise' and the specific name of this exercise and they contain two different didactic levels. On the one hand they are prepared for participants and interested people who want to work through the material for themselves. For those there is a small introduction into the exercise and the numbered tasks one has to do. Furthermore there is also a note how one needs to save/ share or send the outcome of this exercise. Depending on the situation one can share his/her screen or present his/her outcome or result on Padlet, Sticky notes, etc. On the other hand can be found a didactic level prepared for potential trainers, speakers or lecturer who want to host further education/ training, maybe in their own institution or company. For those people and for such use of the material can be found italic additional information in the exercises which are marked with 'Editorial note'. These notes includes hints, tips and instructions only for lecturer or teacher. For the most part these are didactic hints or assistance, which software can be used for the presentation of the work results, etc. These notes also contain information on what needs to be prepared in advance of the session/ training. As an example if one as a trainer want his/her participants to share their work results on a Whiteboard or with sticky notes, can be found a recommendation about the software we and the speakers used in the online training
Sample solutions	Safeguarding of work results is extremely important for the success of a further education session/ training. When your participants come from different countries, backgrounds or at least cities/ companies etc. you will receive a huge mass of productive work results and outcome. In addition to the exercises we provide a specific sample solution. On one side the sample solution is provided on the Moodle platform are the main work results of our participants from the online training. According to privacy policy it's needed to blurry all personal data etc. On the other side, these sample solutions are only intended as additional information. They are not all-encompassing or to be seen as the only solution of the exercise
Additional material (links, texts, handouts etc.)	According to the respective session of the speakers it is provided additional material like links, additional texts or handouts. If additional material be available for the specific session, it will be referred to at the respective place in the video or presentation



Preparation before the unit

It is important for a good start to the training, whether it takes place in presence or online, that there is enough time for getting to know each other. In the Moodle structure the first part of the session is an introduction part where the participants introduce themselves and get a first overview about the schedule for the session. After a short introduction made by the speaker it is also necessary to establish some rules for the session. Especially for an online training with many participants some specific rules of conduct can structure the session and thus contributes to the success. It is necessary to mute/ turn off all the microphones while the speaker is talking. Otherwise, the connection will deteriorate, background noise and any interference will cause anxiety and poor understanding. Depending on the number of participants it is also necessary to turn off the video signal while the speaker is presenting. More video signals means more data consumption, which may affect the quality of the conference. In small groups or for group work and discussions in several groups it's useful to switch on the video signal.

While using the common platforms (Zoom, MSTeams, etc.) there are two different options for asking questions while an input session. On the one hand one can use the chat. It is very helpful to collect and channel the questions during a longer input session. The questions asked in the chat can then be answered in special Q&A sessions. On the other hand, Zoom and MSTeams provide different actions for participants who want to say or ask something. There is a raise your hand symbol with which you can indicate that you have a question or want to say something. The little hand will then pop up at the speakers desktop so he/she knows that someone wants to say something.

References