

Training design and delivery framework

WP3.1

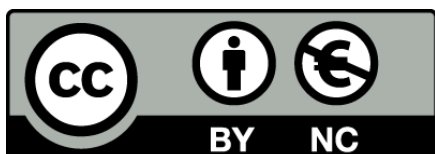
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Introduction

Talentjourney provides inspiring and motivating training process and will face the needs and requirements of the modern society and economy.

One of the most important factors is to educate key actors (VET teachers, company trainers, company experts etc.) to understand the impact of constantly changing society and economy. According to this also teaching methods and contents have to be verified more frequently. It is also important to keep in mind that changes should aimed to be permanent instead of temporary.

All trainings will be provided with newest inspiring pedagogical methods. Trainings will challenge participants to think creative and innovative ways but also forces to use critical thinking and problem-solving. Providers of this programme will be provided with best possible support to achieve top educational goals. Purpose of this framework plan is to provide support and guidance through whole process of planning new training form start until to very end of the training.

Motivation

Creating new courses and moving to new pedagogical methods can be frustrating and scary. Well-designed is half done.

Framework describes how to create course structure step by step. Structure is created in parts. This is to keep the relevant and most important information always clearly visible for new learners and those who are interested of the course. Following this framework will lead to course structure that gives the teacher free hands to create structured course but still implement own style teaching methods to the mix. Structure is to help not to harden of the creation of new courses. This structure guide and

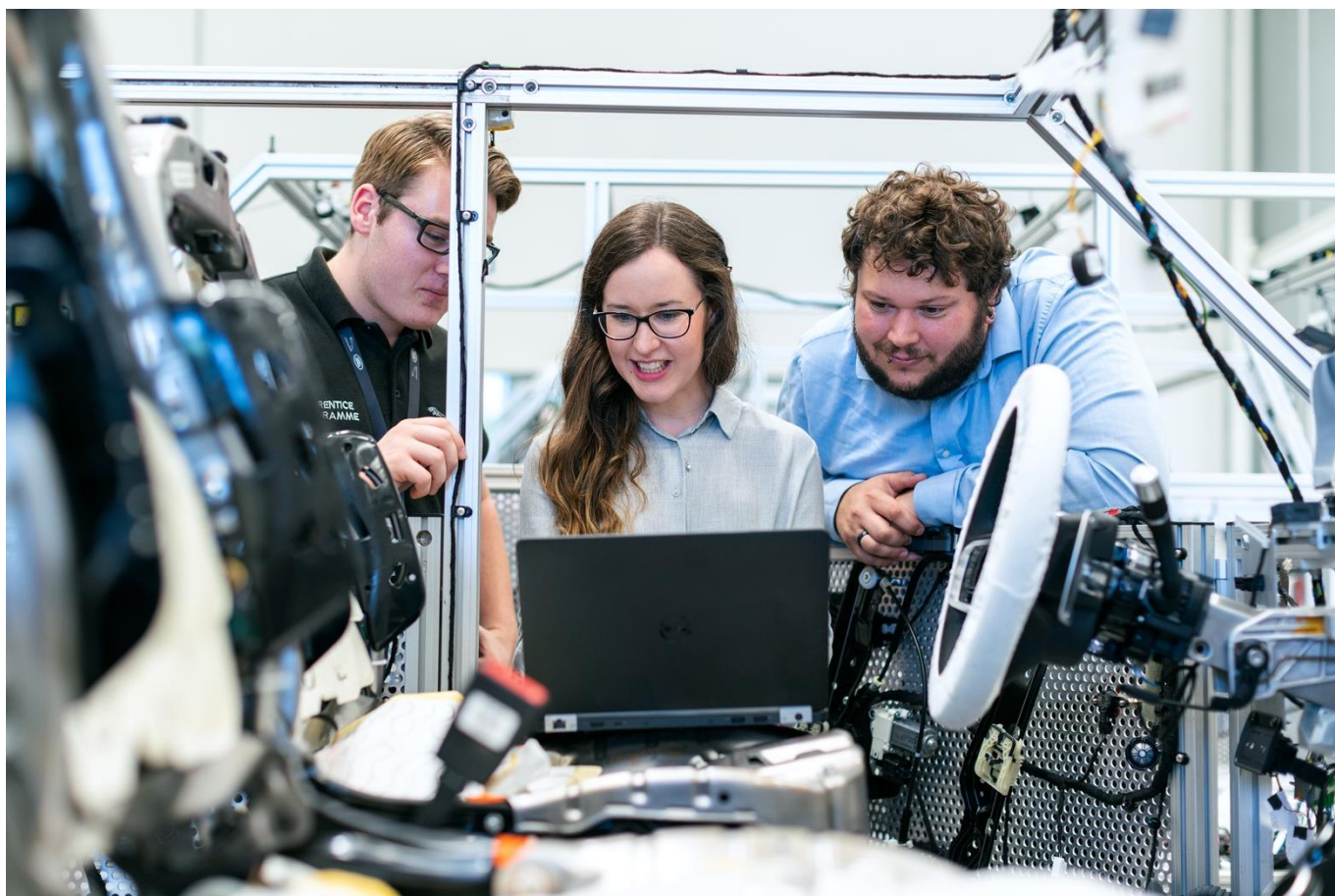
framework can also be used to update old materials and course structure.

We strongly recommend using latest technology to gain experience that today's generation is expecting. Using technology and social media like WhatsApp, YouTube etc. is crucial. Although use of technology and new pedagogical methods are important the human factor should not be forgotten. As all material and guidance are online it is more than important to provide face to face time and support for the learner.

Demanding times like Corona pandemic has made face to face meetings difficult or impossible, latest videoconference tools like Webex, Zoom, Teams etc. should be always available for learner to easily communicate with the trainers.

Training materials should be always easily accessible. Services like Youtube provide close captions easily to be added into video training materials. This also meets the EU's accessibility directive that is coming to effect in 23rd of September.

Materials in general should be always available online to provide 24/7 education experience. Trainers should always look for possibility to use VR, AR and gamification tools to saturate otherwise traditional online materials. Training should be also thought as multidisciplinary trainings to provide broader views on the subject. The multidisciplinary groups are great way to network and share thought to different fields. This kind of the learning groups are the future. Gaps between different educational fields have started to disappear or getting hazy at least.



Photography title



Training design *and* **Delivery method**

This is how courses main content should be structured.

First part is gathering courses basic information

Design needs to have key components

- Topic of the course
 - For example: IoT in nutshell
- Training program lifetime
 - For example: 6-8 weeks, including introduction
- Short description what learner will gain by completing course (learning objectives)
 - For example: IoT in nutshell will introduce participant to IoT on general level. IoT is one thing that has changed and will continue changing our daily lives and industry. Upcoming technology 5G is one that is going to just accelerate IoT industry. This course will give participant a clear understanding how the technology works and how it is already implemented in our daily lives.
- For who is the course intended for
 - For example: Master students
- Cost of the course
 - If course is free for anyone it should be mentioned (in the frame of the project courses are free)
- Location
 - If this is an offline course describe where the course is physically kept
- Lecturer
 - Provide your full name, institution and LinkedIn or other professional profile to give learners easy way to widen their professional network

Detailed course structure and content

This part contains more specific information about the course.

Detailed information will contain details like software that will be used and if course needs some preparation before it begins.

- Detailed description of the course
 - Contents of each course should be divided in modules to keep every section simple and straight forward. This also enables possibility to keep small quiz type assessments between each section.

For example: Orientation (this can be also separate section) and Module 1: IoT basics. What does IoT mean and how it can be used for.

Module 2: IoT solutions. Where in our daily life IoT can be already seen.

Module 3: IoT DIY study. Today it is possible to get ideas and blueprints for all sorts of gadgets. This part will teach the home made possibilities of IoT.

Module 4: IoT and data. Data is crucial part of IoT. This part teaches how few small IoT products will create their own ecosystem and what kind of data those may produce.

Module 5: IoT and Industry study. Industry has many IoT solutions already in use and some of those are standardized. In this part course will dive into industries most used solutions.

Module 6: IoT and wearable technology. It is almost certain that one day almost every human being will carry some wearable technology with them in the near future. This part will study what kind of technology already exists and what future will bring with it.

- Learning method
 - For example: project type working in groups
 - Other possible methods: self-learning, video lectures, virtual classroom, contact teaching, hands on project etc.
- Assessment
 - Grade based system or Pass / Failed
 - For example: in the end group made project work is returned by the end of given deadline and will be assessed by teacher of the course.
 - Badges
- More complex assessment (group work)
 - For example: in the end group made project work learner will be assess each other by grading fellow learners by their contribution
- Software used
 - For example: Tinkercad is the main tool on this course
- Cost of software
 - For example: Tinkercad is free software
- Other educational material
 - For example: All material will be available online for all participating students
- Why to choose this course
 - For example: The IoT's major significant trend in recent years is the explosive growth of devices connected and controlled by the Internet. The wide range of applications for IoT technology mean that the specifics can be very different from one device to the next but there are basic characteristics shared by most.

The IoT creates opportunities for more direct integration of the physical world into computer-based systems, resulting in efficiency improvements, economic benefits, and reduced human exertions.

The number of IoT devices increased 31% year-over-year to 8.4 billion in the year 2017 and it is estimated that there will be 30 billion devices by 2020. The global market value of IoT is projected to reach \$7.1 trillion by 2020. (Source: Wikipedia)

- List or description of skills and knowledge that will be gained
 - For example: Basic knowledge of IoT's basics, connectivity of smart devices, 5G-networks and more

- Requirements
 - For example: This course has no requirements / IoT in SM (provide link to this course to give easy access) must be completed before joining this course

Looking for trendy approach

When designing the course, one should pay attentions to headers. Headers themselves should be inspiring and easily interpreted

When designing a course all the material should promote itself. It is important to pay attention how easy, self-explanatory and motivating the headers and the contents are.

It is important to keep in mind what kind of group the course is targeted for. Here are few examples how to create more inspiring headers.

Regular approach:

Who should take this course?

Instead of making headers like this one should target the core message of the course instantly. Not just by saying who should attend but instantly tell that **YOU** need this course.

Trendy approach:

An online course that prepares you for the future

It is better to promote course already in the header text. Future technology especially in one thing that most people are interested in and want to be on culmination point or at least aware of what is happening on that sector. So that is why future and preparing are mentioned on header.

New and existing training methods

There are many ways to train. Here are described old and new ways to teach but also how old methods can be improved with newest digital tools.

Regular training methods include:

- Lecturing
 - Online/offline
- Group work
- Assesment
 - Quiz
 - Multiple choice exam
 - Open-book and take-home exams

- Problem or case-based exams
 - Essay exams
 - Oral exams
- Doing tasks

New training methods include

- Lecturing
 - Virtual classroom
 - Video conference type of classroom (Webex, Zoom, Google Hangouts, Teams ...)
 - Virtual Reality (VR) environment
 - Augmented Reality (AR) as a training tool
- Group Work
 - Company collaboration
- Project type of work
- Industry or job related tasks
- Activating lectures
 - Moodle H5P-plugin
- Self-reflection
- Feedback

Delivery framework under construction

This document is the first draft of the final plan. Making this framework is learning process itself also.

This plan will be refined as the process moves on. Also some headers may change their position during the process. This first draft may change drastically from this version versus final version. Framework will be influenced by the newest pedagogical methods and stakeholder feedback about the framework.